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Chelsea Old Town Hall , London  
**Fair List**

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**Apollonius Pergae.**

Apollonii Pergaei Conicorum Libri Quatuor, Serenissimo Principi Joanni Gastoni ab Etruria dicati una cum Lemmatibus Pappi Alexandrini et Commentariis Eutocii Ascalonitae: Quae olim Primus vulgavit omnia Federicus Commandinus Urbinas, e graeco a se conversa, expurgata mendis, et commentariis illustrata: nuperrimè autem in lucem prodeunt, ab aliis etiam erratis longè plurimis, quae, ut primùm edita sunt, identidem irrepserunt, vindicata. 2 parts in one.- Pistorii: Ex nova Typographia Stephani Gatti, 1696. Folio. (290 x190 mm) Contemporary full vellum binding, title label on spine. pp. (10, including first blank and title, 260 pp.; (4), 76 pp. with numerous geometric illustrations within the text. EUR 1.200.-

Rare edition, corrected and amended. Later revision of Commandino's text.

The first complete translation of Books I - IV was published by Giovanni-Battista Memmo at Venice in 1537, but this was considered to be very faulty. It was replaced by the version of Federico Commandino, whose services to the restoration of ancient mathematics are without rival. His translation, which appeared in 1566, not only provided a Latin translation of Conics I-IV with Eutocius' commentary, but was based on a profound understanding of the text, which is revealed in the many corrections which he introduced and in his own notes. It was the form in which the Conics was studied for the next 150 years, during the time when its influence on working mathematicians was perhaps the greatest. Our edition here is based on that. While Apollonius' first four books of the Conics were available to medieval and Renaissance scholars, the last four books had been missing since antiquity. In fact, the entire second half of Apollonius' work on conics might still be missing today had it not been for the ancient Arabic translators of classical Greek geometrical texts, who preserved seven of the eight books in their translations. Credit here for the survival of Apollonius' work should be given to the mathematical interests of Borelli and Viviani. In 1658 they tried to restore Apollonius' books. While the first half of Apollonius' text is based on work carried out by his predecessors (Euclid, Aristaeus, Menaechmus) the later books do seem to consist largely of his original ideas. In these books, Apollonius dealt with normals to conics, and in Book V in particular he discussed extremal normals, their maximum and minimum lengths. He was interested in the lines of maximum and minimum length that can be produced from any point to a curve.- Riccardi, I, 362-5; Loria, St. delle Matematiche, 61; Brunet, I, 347.

**minerals and fossils**

**Baier, Johann Jacob.**

Monumenta rerum petrificatarum praecipua Oryctographiae Noricae supplementi loco iungenda interprete filio Ferdinando Iacobo Baiero. *Nuremberg, Georg Lichtensteger, 1757. [bound with:] Baier, Johann Jacob. Oryctographia Norica sive rerum fossilium et ad minerale regnum pertinentium in territorio Norimbergensi eiusque vicinia observatarum succincta descriptio ... Nuremberg, Wolfgang Schwarzkopff, 1758.* Together two works in one vol., folio, pp. [iv], 20, with fifteen engraved plates, six double-page; pp. [iv], 65, [3], with a large engraved title-vignette, and eight engraved plates; short tear to lower blank margin of one plate; a few notes in pencil; a very good, clean copy in 19<sup>th</sup>-century red sheep-baked marbled boards; spine rubbed, head of spine a little worn. EUR 4.950.-

Excellent copy of this work on fossils by the Nuremberg physician and geologist Johann Jacob Baier, originally published in 1708 with six plates only, and here bound after the first edition of his son, Ferdinand Jacob's, important supplement. 'Baier was the son of Johann Wilhelm Baier, professor of Protestant theology at the University of Jena, and Anna Katharine Musaeus. After private tutoring he matriculated in 1693 at University of Jena, where he dutifully studied philosophy, classical languages, mathematics, medicine, and natural science. During 1699 and 1700 he travelled in northern Germany and in the Baltic Sea provinces to Riga and Dorpat, enriching his knowledge by conversations with

other scholars and by examining collections and visiting libraries. In 1700 he finished his studies and was awarded the degrees of M.A., Ph.D., and M.D ... He settled in 1701 as a practicing physician in Nuremberg. In 1703, during the War of the Spanish Succession, Baier was director of a field hospital for the soldiers of the Nuremberg contingent. The following year he was awarded a professorship at the medical faculty of the University of Altdorf in Nuremberg which he held until his death. He was twice elected rector of the University. In 1708 he became a member of the Leopoldina (Academy of Natural Scientists) and in 1730 was chosen its president.

### **Early travel to Syria, Turkey, Palestine & Egypt**

#### **Billerbeg (Billerbeck), Franz von.**

Epistola continens Hodoeporicon navigationis ex Constantinopoli in Syriam, Palaestinam et Aegyptum: et Montem Sinai &c. item de Persico Bello & circumcissione Mahometis filii Imp. Turcici, aliisque rebus Constantinopoli superiore aestate actis. [Rostock, Stephan Möllemann ?], 1583. Kl.-4to (190 x 150 mm). Mit rautenförmiger Titelvignette, sechszeliger Ein-gangsinitiale u. zwei kleinen Schlussvignetten. [8] Bl. [= Sign.: A-B4]. Contemporary (maybe little later) marbled wrappers. EUR 9.000.-

Editio princeps of this important travel account from the Ottoman empire in the years 1580-1582. Anonymously printed most probably on the press of Stephan Moelleman in Rostock. The anonymous author was Franz or Franciscus de Billerbeg, born into a noble family in Pomerania, well educated and skilled in history. Dated 1 October 1582 he dedicated his text to his former preceptor, the Lutheran professor and historian David Chytraeus (1530-1600) at Rostock, an important researcher of the Eastern churches. To him Billerbeg already had sent his first epistolary dispatch of 9 July 1581 which he had written in Constantinople. Printed as 'Epistola Constantinopoli, recens scripta, de praesenti Turcici Imperii statu' in 1582 it contains the traveller's description of the most important personalities of the Ottoman empire and their war with Persia. Here, as the highlight of his two year stay with the Ottomans, Billerbeg reports the long travel to Syria, Palestine, and Egypt. He was only the second Lutheran - after Salomon Schweigger whom he had met in Constantinople shortly before Schweigger travelled home to Germany - who undertook such a journey to the Near East. Between 1 September 1581 and 23 April 1582 Billerbeg travelled the Dardanelles Strait to Chios, Ephes, Rhodes and via Cyprus to Tripoli. Then he visited Damascus, the Judea and Samaria area, Jerusalem and the Gaza. Through the Egyptian desert he reached Mount Sinai and Cairo and finally Alexandria, from where he shipped back to Constantinople. He arrived in time to become an eyewitness of the magnificent festival held on the occasion of the circumcision of the crown prince, Mehmet. The description of the festivity ends the account. In August 1582 Billerbeg left Constantinople and travelled through Bulgaria, Serbia and Hungary to Vienna where he died in 1587. The two subtle vignettes at the end were - in contrast to the title vignette and the initial which were also used by Jacob Lucius Jacob the elder - belonged to the press of Stephan Möllemann (latinized Myliander) who printed in Rostock during fifty years until 1610. In 1579 Lucius became printer of the university in Helmstedt and it is likely that the octavo edition of Billerbeg's text was printed by him. Further single Latin editions appeared in 1586, 1589 and 1597. But the 'Epistola continens Hodoeporicon' was additionally included in the second volume of Johannes Lonicer's 'Chronicorum Turcicorum' of 1584 and in Michael Neander's 'Orbis terrae partium succincta explicatio' of 1586. A German edition followed in 1584 (Neue Schiffart) and an English translation was printed at London in 1584 (Most rare and strange discourses, of Amurath the Turkish emperor that now is). A excellent copy with wide margins of this rarity (most libraries have only the 11 pages much smaller printing).- VD 16 (Online Kat.), ZV-2037 (beide Ex. mit 11 Bl.); Yerasimos, Les voyageurs dans l' empire Ottoman (1991), 338; Röhrich, Bibliotheca Geographica Palaestinae, S. 209; vgl. Göllner 1801 (nur Ausgabe v. 1586); D. Benga; David Chytraeus als Erforscher und Wiederentdecker der Ostkirchen (2006), S. 163ff. Nicht in Blackmer und Atabey.

#### **(Books; Natural history Book Collection)**

Catalogue d'une collection de livres sur les sciences naturelles, Géologie, Zoologie, etc. Provenant de Cabinet de M. Am. B\*\* avec table alphabétique.- Paris: J. F. Delion, 1864. 8° (230 x 140 mm) (4), 176 pp. Original wrappers, used, spine partly defective. EUR 300.-

Auction catalogue of a geological & zoological library. The same auction house was selling Georges Cuvier's and Etienne Geoffroy Saint-Hilaire's library and also that of Antoine Jean Letronne. I found no hint which geological library was sold here, not Amedee Burat or Ami Boue, not Alexandre Brogniart or Auguste Bravais.

### **Saussure's copy**

#### **De Luc, Jean-Andre.**

Recherches sur les Modifications de l' Atmosphere. Contenant l' Histoire Critique du Barometre et du Thermometre, un Traite sur la Construction de ces Instrumens, des Experiences Relatives a leurs Usages, et principalement a la Mesure des Hauteurs & a la correction des Refractions Moyennes. 2 volumes.- Geneva: [no publisher], 1772. 4to (272 x 215 mm). (4), VIII, 416 pp.; XI, (1), 489 pp., (1) with half titles, tables, one of which folding, 7 engraved plates, 5 of which folding, occasional spotting, browning and staining. Contemporary decorated paper boards, old manuscript labels, rubbed & stained. Uncut copy on strong paper. EUR 2.400.-

First edition of an important work by a major figure in meteorology who, in these *Recherches sur les Modifications de l'atmosphère* (1772) and his later *Idees sur la Meteorologie* (1786-1787) proposed significant advances in the design of meteorological instruments. **A fine associate copy.**

The book is an encyclopaedic compendium on the design and theory of barometers. There is a detailed history of the device along with a commentary on fourteen different designs. In conjunction with this detailed exposition De Luc reviews and criticizes the theoretical work of the principal 17th and 18th century commentators on hydrodynamics (as it relates to barometer design and theory). No less than D. Bernoulli and Leibniz come under Deluc's scrutiny. It is in the context of this discussion that he introduces the idea of latent heat into physics (later rigorously defined by Black). Deluc's treatise touches on many key problems of instrument design and dramatically illustrates the practical and theoretical issues. „The barometric controversy between **H. B. de Saussure**, professor of philosophy at Geneva, and Deluc is one of lasting scientific interest. In *Essais sur l'hygromètre* (1783, p. 282) Saussure stated that some of Deluc's findings were based on specious reasoning and inadequate experimentation: “Mr. Deluc supposes that pure air is heavier than air mixed with water vapor... This supposition explains well why a lowering of the barometer is a sign of rain....” Saussure, experimenting with closed containers, had found little difference in weight between dry air and humid air, and considered the differences quite inadequate to explain the large variations in barometric pressure that occurred at ground level in Europe. Modern meteorology has proved that Deluc was right, whereas Saussure was groping toward the influence of air masses and of the passage of cyclonic depressions and anticyclones.“ (DSB).

Jean-Andre De Luc (1727-1817) was a swiss chemist, meteorologist, and geologist who made several firsts in scientific discovery. He first used the term „geologie“ (1778), and interpreted the six days of Mosaic creation as epochs of geological time. He was first to provide correct measurement of the heights of mountains by the effects of heat and pressure on a thermometer and to publish the correct rules for equivalent heights to barometric pressure. Along with other meteorological instrument ideas, he invented a hygrometer using gut as the medium for measuring the humidity of the air and became involved with French scientist Horace de Saussure (1740 - 1799) in arguments over evaporative theory. He noted the independence of vapor pressure to atmospheric air pressure before John Dalton (1766-1844); described the chemical and electrical effects of the electric pile; and shared with Joseph Black (1728 - 1799) the discovery of latent heat.- DSB IV, 27 - 29; Pogg. I, 545.

Provenance: H(orace) de Saussure (old signatures on half titles); later inscription on title: G. B. Jain; later signatures on front pastedown: Vicomte G. de Leusse; Ex Libris: Svante Arrhenius. Some old annotation on rear pastedown of vol. II. and within text.

### **first illustration of steam engine**

#### **Della Porta, Giovan Battista.**

I tre libri de' spiritali ... cioe d' inalzar acque per forza dell'aria. Naples: Gio. Iacomo Carlino, 1606. 4° (198 x 146mm). 98 pp., (2) with woodcut printer's device on title, numerous large woodcut illustrations and diagrams within text. Title slightly wormed at bottom margin, marginal soiling and staining, F1-2 with small paperflow at bottom margin. Contemporary Cartone alla rustica, front cover stained, rear cover discolored, endpapers browned. Fine copy albeit. EUR 4.500.-

Rare. Enlarged translation of della Porta's work of 1601, a commentary and critique of Hero's works. This work draws heavily on Hero's concepts of pneumatics and hydraulics to suggest various engineering innovations. The Pneumaticorum of 1601 here appears in the Italian translation of Porta's student Juan Escrivano, with the addition of a third book. This edition was the „first to contain the illustration celebrated in the history of the steam engine“ (Zeitlinger). In his address to the author, Escrivano explains that the translation is for mechanics 'che quasi sono tutti idioti'. It is a work on the mechanics of water and steam.

„On page 75 is the **famous woodcut of the machine for raising a column of water by steam pressure**, the condensation of the steam producing a vacuum into which the water flowed. The machine used steam pressure of expanding air. Porta's machine was not made use of often, and it remained for Guericke and Boyle in the mid-seventeenth century to reinvestigate the means for producing vacua, using air suction pumps. As in Porta's other books, the woodcuts in this work achieve a high degree of clarity and artistic excellence.“ (Neville Historical Library II, 325) Della Porta also looked back critically on experiments by Hero of Alexandria, using diagrams taken from early manuscripts. Della Porta explored various ideas for steam powered machines following the example of Hero of Alexandria. In antiquity, Hero fashioned marvelous automata using steam, air pressure, and hydraulics. Pneumatic engineering is but one example of della Porta's larger enterprise of “Natural Magic,” in which he attempted to make visible the effects of causes that are hidden but natural.

„The biggest influence on (Renaissance) garden waterworks was the translation from greek of Hero's work on pneumatics. Giorgio Valla translated some of Hero's writings into latin in 1501, but the first complete latin translation of all of Hero's works by the mathematician Federico Commandino appeared in 1575 as *Spiritualium liber*. Yet, Hero's ideas regarding water-powered automata and waterworks only became truly influential with the publication of Italian versions of his *Pneumatics*. The first of these, by the famous architect, engineer and stage designer Giovanni Battista Aleotti in 1589, including both Hero's designs and Aleotti's own ideas, inspired by Hero. After this date, more authors began publishing books of designs inspired by Hero's *Pneumatics*, rather than translations of it, and the most famous garden water automata began appearing in Europe. In 1601 Giambattista della Porta published a critique and commentary upon the works of Hero and the Alexandrians called *Pneumaticorum libri tres*, which one of his students translated into

Italian. The most influential work of the period was arguably: *Les raisons des forces mouvantes avec divers machines tant utiles que plaisantes* by Salomon de Caus, publ. in 1615, this work draws heavily on Hero's concepts of pneumatics and hydraulics to suggest various engineering innovations." (Kevin LaGrandeur. *Androids and intelligent networks*, pp. 44).- SBN locates only three copies. DSB XI, 97; Middleton 5; Osler 3722; BL/STC 17th-century Italian Books II, 701; Riccardi I(ii) 310; Wolf, *History of Science I*, 544; Wellcome I, 5208; Sotheran Cat. 682, 3717 („Rare“ in 1908)

### **Di Marzio, Quirino.**

*Fundus oculi. Diagnostica oftalmoscopica.*- Rome: Salomone, 1937. Folio (340 mm) with 100 chromolith. plates with 212 color drawings. Original cloth. EUR 900.-

Re-issue from original sheets of this rare and famous atlas. The plates "which have been reproduced from original oil paintings by calcolithography. The pictures are reproduced in the upright image as seen by the ophthalmoscope of Gullstrand. The courses of many of the conditions are presented, so that a comprehensive picture is given. A brief description of the fundus lesion and a brief history, including the results of roentgen examination and examination of the visual fields, which explain the relation to general disease, accompany each drawing." Cfr. Garrison and Morton (5988.1): "The first atlas of ophthalmoscopy published in Italy, **considered by many to be the most beautiful atlas ever published.**"

### **Ernst Brücke's copy**

### **Ehrenberg, Christian G.**

*Die Infusionstierchen als vollkommene Organismen. Ein Blick in das tiefere organische Leben der Natur.* 2 volumes (text & atlas).- Leipzig, L. Voss, 1838. Folio (473 x 340 mm). xviii, (4), 547 pp., (1), with one engraved separate atlas-title and 64 hand-colored engraved plates. Contemporary green half cloth folder with ties and mounted original wrappers, uncut and unbound sheets as delivered before book binding. Ties missing. Ex Libris Ernst von Brücke. EUR 4.000.-

Ehrenberg's most important work: "The Infusoria as Complete Organisms", an important and early publication on the now-obsolete class *infusoria* (minute aquatic creatures) by Ehrenberg, one of the leading experts on the subject: 'With the microscope he discovered single-celled fossils that built up geological strata; he gave exact descriptions of and discriminated among the shells and skeletons of freshwater and marine animals, thereby becoming the founder of micro-geology and micropaleontology in Germany' (DSB IV, 291).

First and only edition, the work is illustrated by finely-engraved and hand-coloured plates. The excellent plates are all after Ehrenberg's own drawings.

"Ehrenberg's great contribution to biology was his work on the infusoria, the results of which were published originally in a number of brief essays and afterwards in the important and splendid work entitled 'Die Infusionstierchen' printed in 1838. The result of this and other works of his was that the number of known Infusoria was considerably increased, and their classification essentially advanced" (Nordenskiöld p. 427).

The German biologist, microscopist and scientific explorer Christian Gottfried Ehrenberg (1795 - 1876) was one of the founder of micro-paleontology - the study of fossil microorganisms.

Ehrenberg studied at the Univ. of Berlin (M.D., 1818) and was associated with the university throughout his career. He took part in a scientific expedition (1820-25) to Egypt, Libya, the Sudan, and the Red Sea under the auspices of the University and the Prussian Academy of Sciences. The expedition's only survivor, he collected about 34,000 animal and 46,000 plant specimens. With German explorer and naturalist Alexander von Humboldt, he participated in 1829 in an expedition, sponsored by Tsar Nicholas I. of Russia, to Central Asia and Siberia.

Ehrenberg identified and classified a number of terrestrial and marine plants, animals, and microorganisms collected on expeditions. He proved that fungi come from spores and demonstrated the sexual reproduction of molds and mushrooms. He was the first to study in detail the anatomy, habits, and life history of coral, and he identified planktonic microorganisms as the cause of bioluminescence in the sea. Ehrenberg discovered the microscopic fossil organism content of various geologic formations and noted that certain rock layers are composed of such single-cell fossils.

Ehrenberg advanced the view that all animals, from the most minute to the largest, possess complete organ systems, such as muscles, sex organs, and stomachs; he believed his concept of "complete organisms" (later refuted by French biologist Felix Dujardin) disproved both the theory of spontaneous generation and the validity of the traditional arrangement of animals in a simple-to-complex series. Arguing that a single "ideal type" may be applied to all animals, he worked toward a comprehensive system of classification, in which he used social behaviour as an important criterion, but he placed humans apart from other animals on the basis of intelligence.

For nearly 30 years Ehrenberg examined samples of water, soil, sediment, blowing dust and rock and described thousands of new species, among them well-known flagellates such as *Euglena*, ciliates such as *Paramecium aurelia* and *Paramecium caudatum*, and many fossils, in nearly 400 scientific publications. He was particularly interested in a unicellular group of protists called diatoms, but he also studied, and named, many species of radiolaria and foraminifera. After his death in 1876, his collections of microscopic organisms were deposited in the Museum für Naturkunde at the University of Berlin. The "Ehrenberg Collection" includes 40,000 microscope preparations, 5,000 raw samples, 3,000 pencil and ink drawings, and nearly 1,000 letters of correspondence.- Provenance: Ex Libris Ernst

(von) Brücke, famous physiologist.- Garrison & Morton 111; Nissen ZBI, 1244; Brunet II, col. 954; Marc Ratcliff. The Emergence of the Systematics of Infusoria. In: *The Quest for the Invisible: Microscopy in the Enlightenment*. (2009)  
Provenance: Ernst von Brücke (1819-1892), German physiologist who helped to introduce physical and chemical methods into medical research.

### **Eschenbach, Christian Gotthold.**

Kunst-Magazin der Mechanik und Technischen Chemie; oder Sammlung von Abbildungen und Beschreibungen erprobter Maschinen zur Vervollkommnung des Ackerbaues, der Manufakturen und Fabriken. Herausgegeben von ... 7 installments in 2 Vols. (= all publ.).- Leipzig: bey Johann Conrad Hinrichs 1802 - (1807). Quarto (240 x 195 mm) (4), 38 pp.; (2), 44 pp., (2); 59 pp., (1); 54 pp.; (2), 54 pp.; 48 pp.; 70 pp. with 46 (one partly color.) fold. engraved plates. Blue contemporary paper-card boards with labels, one label missing, rubbed and soiled, cover with water-spot, inside the second vol. is a water-stain in the white borders of twenty pages, else clean. The titles of the installments 3, 4, 6, 7 not bound with. EUR 1.400.-

Interesting journal describing in seven installments different machines and useful inventions, in agriculture, machinery, & economics, sometimes translations from english or french journals. The 46 plates show the different inventions. There are descriptions of different mills, wheelbarrows, distilleries, spinning machines, wa-shing machines, pumps, screw thread, bridges, oven and furnaces, gilt or silver metals, machines for beer brewing and coloring, movable kitchen, metal pen, to make chocolate and coffee, methods for watering gardens, methods for water pipes, description of a new thermometer, Chinese lacquer, et al. The articles are mostly not attributed to any author. To include: **Benjamin Franklin**. Beschreibung eines rauchverzehrenden Sparofens,...; Beschreibung einer ökonomischen Maschine zum Austrocknen der Ländereyen, so wie auch zu dem bey dem Brückenbau nöthigen Ausschöpfen des Wassers; **Madame Gacon-Dufour**. Mittel, die Bienen bey der größten Kälte zu ernähren; Chaumeton. Mittel gegen Bienen- und Wespenstiche, **Damart**. ueber die Reinigung des Oehles ..., **Palmer**. Die Ersparnisse der Brennmaterialien, ...; **Boreux**. Beschreibung einer beweglichen Küche,...; **G. Palmer**. Beschreibung einer metallenen Schreibfeder,...; **Boreux**. Neuer Versuch, stillstehende Gewässer zur Bewegung der Räderwerke in Fabriken ... zu nutzen; **Brogniart**. Auszug aus Brogniart's Werke über die Farben, welche aus Metalloxyden gemacht ...; **Jourdan le Cointe**. Zeichnung und Beschreibung einer neuen Sparküche,...; **Boreux**. Grundriß und Beschreibung einer beweglichen Sparküche,...; **Anderson**. Abbildung und Beschreibung einer Leiter und eines Korbes, womit man Personen und Sachen bei Feuersbrünsten retten kann; **Boreux**. Neues Verfahren, Schokolade zu bereiten und zu kochen; **George Thomas Döker**. Oekonomischer Apparat, um in drei hölzernen Tonnen,... eine große Quantität Wasser sieden zu lassen; **B. Casimir Puymarin**. Anweisung, einen neuen Kitt für Terrassen zu bereiten, ...; **Boreux**. Neue Wässerungsmethode, oder Darstellung der einfachsten und wohlfeilsten Art, Wasser zur Wässerung der Gärten,... in die Höhe zu heben; **Anweisung**, auf eine dauerhafte und wohlfeine Art Wasserbehälter, Bassins, Cisternen, Wasserleitungen und Gartencanäle anzulegen; Der Franklinische Ofen vervollkommnet von den Bürgern Darnod und Schmidt; **Bardel/Chaptal**. Neu erfundnes Mittel, durch Dämpfe zu bleichen; **C. F. Richter**. Beschreibung und Abbildung eines Thermometer-Stabs zur Bestimmung der Temperatur unter der Erde; **C. F. Richter**. Abhandlung über die Verbesserung des Wassers; **J. R. Champion**. Beschreibung eines neuen mechanischen, die Kraft verstärkenden Mittels; et al. An interesting article comes from George Palmer (ca. 1746 – 1826), also known as George Giros de Gentilly, named Palmer), an English dye chemist, colour theorist, inventor, and soldier, who lived a double life between England and France. This article describes methods to prevent **counterfeiting paper-money** by adding dyes to the paper. This article was also published separately in 1803.

Christian Gotthold Eschenbach (1753-1831) founded the chemical laboratory at the University of Leipzig and became the first professor of chemistry there. He translated the works of several scientists, including Brugman, Fourcroy, Priestley and LaMetherie.- Kirchner 3923a; Ferchl 145.

### **Euclid (ed. by Foix Candale)**

Euclidis Megarensis mathematici clarissimi elementa geometrica, libris XV. Ad germanam geometriae intelligentiam e diuersis lapsibus temporis iniuria contractis restituta, adimpletis praeter maiorum spem, quae hactenus deerant, solidorum regularium conferentiis ac inscriptionibus.... Authore Francisco Flussate Candalla (François de Foix Candale).- Paris, Jean Le Royer, 1566. Folio (345 x 220 mm) 10 nn., 204 num. Bl. (errors in foliation: leaf 3 numbered 4; leaves 28-29 numbered 27-28; leaves 200-203 numbered 100-103) with numerous woodcut diagrams within text. Contemporary polished calf with minor restorations to surface of covers, gilt printed title, gilt spine in compartments, gilt printed heraldic sign (Jacobus Malinfentus) on covers. title and front-fly with more modern inscription, Ex Libris verso title (browning recto), water-stained in lower right corner, Bl. 43-46, 119-123, 158-162 heavier, little spotted throughout, but still a very fine copy. EUR 3.000.-

Important first edition of Euclid revision by François de Foix Candale after Zamberti and Campanus, the third revision of the latin Euclid in France after Fine and Pelletier. This translation marks the first appearance of the so called 16th

Book, *De solidum regularium comparatione*. The author added books on the polyhedra by himself which had have some influence on **Descartes'** mathematical thinking and **Kepler's** theory of planetary motion (1597, 46). Candale „restored“ Euclid's fifteen books following the terminology of Zamberti's translation, both drawing for his proofs on Campanus and Theon except where mistakes in them made emendation necessary.

The first publication of a Greek-based Latin Elements as an integral whole was that at Venice in 1505 prepared by Bartolomeo Zamberti (b. ca. 1473). His translation derived from a strictly Theonine Greek text, a factor which has Zamberti attributing the proofs to this Alexandrian redactor (cum expositione Theonis insignis mathematici). The work also contains translations of the minor Euclidean works (which were also, in part, in Valla's encyclopedia). Zamberti was most conscious of the advantages he believed to accrue from his working from a Greek text. This enabled him, he claimed, to add things hitherto missing and properly to arrange and prove again much found in the version of Campanus. Indeed, his animus against his medieval predecessor is far from gentle: his Euclid was, Zamberti complains, replete with “wondrous ghosts, dreams and fantasies” (miris larvis, somniis et phantasmatibus). Campanus himself he labels *interpres barbarissimus*. The attack thus launched by Zamberti was almost immediately answered by new editions of Campanus, the most notable of them being that prepared at Venice in 1509 by the Franciscan Luca Pacioli. Pacioli regarded himself as a corrector (castigator) who freed Campanus from the errors of copyists, especially in the matter of incorrectly drawn figures. In direct reply to Zamberti, Campanus was now presented as *interpres fidissimus*.

A kind of detente was subsequently reached between the Campanus and Zamberti camps, for there was soon a series of published Elements reproducing the editions of both in toto. In any event, the printing of the complete Greek text in 1533, plus the earlier appearance of both Campanus and Zamberti, provided the raw material, as it were, for the first, pre-Commandino, phase of the Renaissance Euclid. The irony is that Campanus and Zamberti, and not the Greek *editio princeps*, played the dominant role. At Paris in 1566 yet a third French scholar, Franciscus Flussatus Candalla (= François de Foix, Comte de Candale, 1502–1594) produced a Latin Elements. Covering all fifteen books, and appending three more on the inscription and circumscription of solids, the appeal is once again not to the Greek text as such, but to Zamberti and Campanus. And when there is something not derived from these two, it seems as often as not to have been

**Candalla's own invention**. A contemporary summary view of the status of Euclid scholarship was revealed when, a few years before Candalla's expanded Elements, Johannes Buteo published his *De quadratura circuli* at Lyons in 1559. This work contained as an appendix Buteo's *Annotationum opuscula in errores Campani, Zamberti, Orontii, Peletarii... interpretum Euclidis*. Campanus was, he felt, the best of these editors, for his errors derive from his Arabic source and not from an ineptitude in mathematics. Zamberti, on the other hand, although he worked directly from the Greek, showed less acumen in geometry. Even less adequate, in Buteo's judgment, were the works of Fine and Peletier; the latter taking the greatest liberties with the text and ineptly adding or omitting as he saw fit.- STC 157. Adams E 983. Poggendorf I, 764. Thomas-Stanford 17, S. 9-10; DSB XIV, 21.

### **Buffon condensed**

#### **(Ferri, Giovanni or Ferry de Saint Constant, Jean Luc).**

Buffons Geist, oder Kern seiner Naturgeschichte. Aus dem Französischen des Herrn M\*\*\*\*.- St. Petersburg, bey Johann Zacharias Logan, 1783. 8° (185 x 105 mm) (24), 264 pp. Contemporary half calf, morocco lettering piece, red edges, fine copy. A contemporary ink note on front-fly. EUR 600.-

Very rare work on Buffon's ‚Histoire Naturelle‘ by Jean Luc (Giovanni) Ferri (Ferry) de Saint-Constant (1755 - 1830) translated from the french by the geologist and mineralogist Benedict Franz Johann von Hermann (1755 - 1815), although Holzmann/Bohatta II, 5680 cite him as author and not Ferri. But this is most probably a translation of Ferri's *Genie de Buffon*, although similar works were published by Malherbe and others. The first part is on man and ethnic groups, the second part is on specific mammals and philosophical questions like „style“. The *Histoire Naturelle, générale et particulière, avec la description du Cabinet du Roi* written between 1749–1804 by the Comte de Buffon cover what was known of the "natural sciences" at the time, including what would now be called material science, physics, chemistry and technology as well as the natural history of animals. The *Histoire Naturelle* had a distinctly mixed reception in the eighteenth century. Wealthy homes in both England and France purchased copies, but Buffon was criticized by some priests for suggesting that the earth was more than 6,000 years old and that mountains had arisen in geological time.- VD18 12572322-001; Barbier, II, 6982 (french ed.); KVK: Freiburg, Stabi München, Jena, Göttingen; OCLC: only Santa Barbara.

### **comets**

#### **Ghisilieri, Antonio.**

Predizione della cometa dell' anno 1736. Con riflessioni varie sopra le comete passate, e future ove si tratta il loro sistema, e calcolo ... Bologna: nella Stamperia di Lelio dalla Volpe, 1735. 4to, pp. [6], 246, [2], with engraved title and 10 folding engraved plates; a very clean, fresh copy in contemporary carta rustica.

EUR 2.600.-

One of two variants, this being probably the earlier version, later found bound together with the pamphlet on the comet of 1736. The Marchese Antonio Ghisilieri (1685 - 1734) was a humanist and lecturer of law at Bologna University and a vivid amateur astronomer. He defended the correctness of the Ephemerides of Flaminio Mezzavacca against Eustachio Manfredi, who had begun an alternative series of Ephemerides. This created some animosity with Antonio Ghisilieri, who considered himself Mezzavacca's heir. ‚Ghisilieri in 1731 published nearly a hundred pages of errors in

Manfredi's ephemerides, although modern computations show that Manfredi's positions were generally better' (Lankford (ed.), *History of Astronomy* p. 507. Cantamessa 3069; not in Brünig, *Kometen-Literatur*; OCLC locates copies at Zürich, Paris Observatory; Columbia; Brown, and Ohio State, of which some with the variant title *Pronostico averato fatto da monsignore Antonio Ghisilieri vescovo d'Azoto*.

### **sea-weed collector**

#### **Jürgens, Georg Heinrich Bernhard.**

*Algae aquaticae quas et in littora maris dynastiam Jeveranam et Frisium orientaliem alluentis rejec-tas. Decas Prima* - [title repeated in German: *Waßer Algen auf der Nordwest= Küste Deutschlands, besonders Jever- und Ostfrieslands, und in deren Gewäßer gesammelt*]. Parts 1 - 16 (of 19).- Hannover, Hahn [Jever, C. L. Mettecker and Hahn], [1816 - 1822] Folio (310 x 195 mm) Title, descriptions and excicate. 158 (of 160) specimens mounted or loosely inserted, a few with 2 examp-les, printed captions, stitched in original printed wrappers, preserved in solander box. EUR 2.800.-

Exceedingly scarce early nineteenth century collection of seaweeds from the German North Sea collected between Jever and Ostfriesland, compiled with descriptions by the botanist & lawyer Georg Jürgens (1771 - 1846). Jürgens was active in Jever as a lawyer and notary and held from 1829 to 1845 the office of the mayor. He devoted himself with great passion to natural history, especially botany, and made himself a name in the scientific world as an algae re-searcher. His extensive research library includes works by Carl von Linné as well as magnificently illustrated volumes on the marine algae flora was given to the Mariengymnasium Jever. The conservation and description of the library is still going on. Heft 1, 6-7 were published in 1818; Heft 2 in 1816; Heft 3-5 were distributed in 1817; Heft 8-10 in 1819; Index centuriae primae. Heft 11-16 were distributed in 1822; later parts were given out in 1824. We can trace no other copies sold at auction, the present copy being that from Eton College Natural History Museum, sold at Bonhams, 15 October 1996, lot 22; Kayser I, 617 (16 Hefte); KVK: Oldenburg; NHM London; Leiden (only complete sets); also Regensburg (as here); Leipzig (10 parts); Stabi Berlin (only register); Pavia (1 vol.; 18 parts ?); Geneve (17 parts); not in OCLC (USA)

### **Dresden - dance of death (1945 - 1947)**

#### **Kesting, Edmund.**

*Dresdner Totentanz*.- Hamburg Griffelkunst, 1992. Folio. 5 silver gelatin prints/ Blatt Silbergelatineabzüge (Negativ-Positivmontagen aus Skeletten und Bildern des zerstörten Dresden), verso mit Nachlassstempel und signiert von K. Kersting, mit Titel und 2 Textblatt. Orig.- Halbleinenmappe mit Deckelschildchen u. Schließbändern, schönes Exemplar. Fünf Photoarbeiten von 1945-1947. EUR 1.500.-

### **industrial propaganda with photographs**

#### **(Trade Catalogue; Krupp) Werden, Hugo van; (photogr.)**

Etablissement Fried.(rich) Krupp, Essen-Rheinpreussen. *Artillerie-Material. I, II, III, and Nachtrag I, II, III.* 6 Vols.- (Essen: Krupp), 1892-1896. square Folio (315 x 240 mm) Portfolios with 274 photographic images (158 images in the first three vols., then 116 photographic images on boards for the amendment) depicting artillery, field guns, howitzers, cannons, ammunition carts, gun stalls all produced by Friedrich Krupp. Original red cloth folder with gilt printed title on cover, rubbed and soiled. EUR 3.800.-

Exceedingly rare Krupp trade catalogue; portfolio's with collotypes photographs showing for the most part different canons and weapons, created for customers who were in the position to buy. From the property of the danish kings. Alfred Krupp proved to be exceptionally progressive in his use of the art of photography. With this credible medium, he persuasively presented the huge complex of his enterprise to a wide public who could hardly be familiar with the works through seeing them with their own eyes (photo panoramas).

In addition, photography made it possible to produce a variety of reproductions (of Krupp products) economically. It was a question of convincing ministries, impressing princes and presidents, and of course the pictures also had to be comprehensible and impressive for the international clientele too. In the advertising of products some-thing crucial seems to have changed after the experience of victory of 1871 and in view of the increasingly complicated business relations - on one side the tie-up with Prussia, on the other hand the necessity also to take care of interested foreign parties. First Krupp called for an increase in overall photographic production. For example, the new gun barrels were to be photographed with and without staffage figures, alone and as they were being loaded. He demanded a certain over-production and an outright dispatch campaign of albums to "States, Governors and Khans" to increase the sale of ordnance. The photographer Hugo van Werden entered the service of the firm Krupp in 1854 as a trainee official at Engineering Workshop I. Three years later he was working as a draughtsman in the Technical Office. Early in 1861 he was sent to Hanover to learn about photography. He set up the first photographic studio immediately upon his return in Essen and became the role of a court photographer for the Krupp family. In the first years the first panoramic view of the Krupp works was produced taken from the tower of the hammer Fritz building. He had to photograph the expansion of the buildings rather than idylls in private life. We do not know how long van Werden continued to take

photographs himself but he soon rose to become the manager of the whole lithographic printing office, to which the photographers were attached. The number of employees constantly rose, going up from 16 workers in 1874/75 to 52 in 1890.

### how to collect beetles & insects

#### **Kühn, August Christian.**

Kurze Anleitung Insecten zu sammeln entworfen von... Zwote verbesserte und vermehrte Auflage.- Eisenach: im Verlag der Wittekindischen Hofbuchhandlung, 1783. 8° (160 x 100 mm) (8), 182 pp. Marbled boards, title with old stamp: „NGdO“, inner front-cover with old dedication: „Der naturforschenden Gesellschaft des Osterlandes zu Altenburg von (?) Rochlitz, Sept. 1845“. EUR 800.-

Second enlarged edition, a short manual on the technique to collect and store insects by the practical doctor August Christian Kühn (1745 - 1807) who worked in Eisenach / Thuringia. He wrote on entomology and mineralogy and was praised for his work by Schröter. Included is a list with books on insects & butterflies useful to the amateur and a price list of a dealer of butterflies called „D. Gladbach“ with specimens to choose after Rösels work.- Jöcher III, 396; Cobres 404.26 (1773 ed. with only 112 pp.)

### Eudiometer invented

#### **Landriani, Marsilio.**

Ricerche fisiche intorno alla salubrità dell'aria ... Milan: G. Marelli, 1775. 8° (204 x 135 mm) (2), XIII, (1), (2), 92 pp. with engraved title page, two engraved head-pieces, and three folding engraved plates by G. Cattaneo, partly affected by worming. Clean and fresh, printed on strong paper. Carta rustica, inner cover with Ex Libris: Bibliotheca Sormani Andreani Verri. EUR 2.800.-

Rare first edition of this important work in the history of chemistry, his first book which translates as: Physical investigations on the salubrity of air, in which he described a new instrument, the eudiometer, to measure the purity of air, which was later improved by Volta with the addition of spark wires.

Through the 18th century, a bewildering variety of 'airs' was discovered. In Twickenham, Stephen Hales used a water trough to collect 'nitrous air' (nitric oxide) produced by nitric acid's reaction with metals, keeping it from the atmosphere with which it otherwise gave acrid orange fumes. In London, Henry Cavendish isolated 'inflammable air' (hydrogen) from the reaction of metals with acids. Combustion was crucial to these studies, but it was poorly understood. A substance of fire, phlogiston, was invoked to explain the process: materials rich in phlogiston burned in air until the air became saturated with phlogiston and combustion ceased. 'Phlogisticated air' (N<sub>2</sub> and CO<sub>2</sub>) was isolated by Daniel Rutherford and Black. By keeping careful track of the volumes of gas he was mixing, Joseph Priestley made a remarkable observation: when 'nitrous air' mixed with ordinary air in the presence of water, there was a startling one-fifth contraction in the volume. Priestley believed he had found a way to measure the 'goodness' of the air. This finding caused a huge stir across Europe. In Milan, Priestley's work was read avidly by Marsilio Landriani (1751-1815), the son of a patrician lawyer. Landriani devoted himself to 'pneumatic studies' under Pietro Moscati, professor of surgery at Milan's main hospital. As Landriani wrote in his book, there was so much to be discovered that even a beginner such as he might contribute. What intrigued him was that measuring the 'goodness' of air might explain both the origin of disease and another enduring mystery – the motion of mercury in Evangelista Torricelli's barometer.

He repeated Priestley's experiment. But rather than using clumsy gas jars, Landriani designed a compact system. He mounted a glass bulb above a graduated glass tube of similar volume linked by a stopcock. The tube sat in a movable bowl of water, and could be sealed at the bottom with a waxed plug attached to a metal spiral. After filling the apparatus with water from the top, nitrous air was drawn into the bulb by removing the plug at the bottom. Next the water was allowed to fall to the bottom of the tube, drawing in a slug of air. With the device stoppered, the slow mixing of the gases caused the water to be drawn back up the tube giving the change in volume. Landriani proudly named it an eudiometer, from the Greek for 'wholesome-ness of air'. But as Landriani wrote up his work, Moscati became aware that the Tuscan court physicist Felice Fontana in Pisa had built a very similar device. Crestfallen, Landriani presented Fontana with a copy of his book, fawningly pointing out his priority. Fontana generously conceded. But in spite of Landriani corresponding with Priestley and sending him an eudiometer, it was the better-connected Fontana's version that was noticed abroad. However, Landriani's friend A. Volta went one step further. He equipped an eudiometer with spark wires to study gas combustion. Though he noticed 'dew' on the glass after exploding 'inflammable air', it was Cavendish and Lavoisier, working in dry glassware, who realised water was being produced; it was the dawn of a new chemistry. Landriani's work brought him acclaim in Italy and the chair of experimental physics at the Brera 'Gymnasium' in Milan, and he remained a lively correspondent with scientists across Europe. Between 1787 and 1788 Guyton de Morveau and Antoine-Laurent Lavoisier tried to convince Landriani to change over to the new chemistry, but he never was able to decide between phlogiston and oxygen. But his attachment to phlogiston theory left him marooned in a scientific time warp; he eventually switched to an unsuccessful career in diplomacy. During his career he enjoyed a popularity comparable only to that of Alessandro Volta and Spallanzani, of all Italian scientists of that time.- Neville, Historical II, 10; not in Duveen, Edelstein, Ferguson, Osler, etc.; Blake 255; Bolton 601; DSB VII, 620-21; Ferchl 295; Partington III, 323; Wellcome III, 443.

## images of Africa

### **Lauckhard, C(arl) F(riedrich)**

Geographische Bilder aus Afrika. Mit Illustrationen in Farbendruck. Bearbeitet und herausgegeben von C. F. Lauckhard.- Darmstadt, Verlag von Bauerkeller's Prägeanstalt, Jonghaus & Venator, (1854). Atlas with title-page and 10 illustrations on 8 boards. Title-page mounted to first plate. Original printed publisher's folder, rubbed and soiled, plates partly brown spotted and little dust-soiled, else still fine. EUR 1.000.-

Very rare atlas on african people, landscape and animals, without the text of 63 pages. Published by the teacher and preacher Carl Friedrich Lauckhard (1813-1876), working in Weimar.- Klotz, Bibliographie 3944.2 (9 Illustrationen).- KVK: only Braunschweig (only text, dating 1920 ?) ; COPAC: Cambridge (62 pp., 8 plates); British Library (only atlas, dating 1855); OCLC: only Evanston (lacking the plates)

### **Levaillant, Francois.**

Histoire naturelle d' une partie d' oiseaux nouveaux et rares de l' Amerique et des Indes. Vol. 1 (all published).- Paris (and Amsterdam), Didot jeune for J. E. Gabriel Dufour, 1801 (-1802). Large 4to (328 x 247 mm) IV, 152 pp., with half-title, 49 engraved plates printed in colors by Langlois and hand-finished with 3 additional hand - colored lithographed plates (Théorie des Ressemblances), tissue guards, the last plate shaved touching caption, browning and some spotting to title, some spotting to plates. Contemporary quarter red morocco, gilt lettered on spine, rubbed, upper hinge slightly weakened. EUR 5.000.-

Only edition. This work was intended as a companion to Levaillant's Histoire naturelle des Oiseaux d' Afrique, but only one volume was completed, consisting of monographs of the Bucerotidae (Hornbills) and the Cotingidae (cotingas). The book was originally published in 8 livraisons and was sold in three variants: Folio with colored & uncolored plates (570 mm); Quarto with colored plates; Quarto with black plates. The text and image is identical in all variants.

„French colour-printing of this period... has never been surpassed' (Fine Bird Books). Strangely, although the printer's name is given on the plates, for personal, professional or political reasons no mention is made of the artist(s) who produced the original drawings. The artists for Levaillant's other works were J. Lebrecht Reinold, Jacques Barraband and Auguste Pelletier. The first of these is perhaps the most obvious candidate for the present work, given that the author considered it as a supplement to his Oiseaux d' Afrique, which contained plates after Reinold.

„Francois Levaillant (1753-1824) was born in Paramaribo, the capital of what was then Dutch Guiana. His parents were keen naturalists, and used to take their son into the jungle to collect. Levaillant soon began to shoot and stuff birds, and commenced his own „cabinet“. After the family's return to Europe in 1763, he became friendly with Jean-Baptiste Bécœur (1718-1777) the owner of one of the largest collections of birds at that time, and who is said to have been the inventor of arsenical soap which was until recently used in the preservation of birds skins. In 1777, Levaillant was in Paris, where he spent three years studying birds in the great private collections of his day, particularly the large collection of Mauduyt de la Varenne. In 1780 he went to Holland where he met Jacob Temminck, treasurer of the Dutch East India Company, and an enthusiastic aviculturist. The latter was so impressed with the young man that he provided him with money and send him to South Africa to collect. Levaillant made in 1780/3 two expeditions, one estwards and one northwards from the Cape, returning to France in 1784 with a collection of 2.000 bird skins, a huge number by the standards of the day. However, he found that there was now no-one in the capital interested in purchasing his collection, so he was obliged to sell a good many of them to collectors in Holland, particularly Temminck, and set about writing the memoirs of his journeys. The resultant book (1790) was a tremendous success, and subsequent english and german translations made this flamboyant, charismatic ladykiller the toast of Europe. Encouraged, he began to think of the first of his series of huge illustrated works, the Histoire naturelle des oiseaux d' Afrique (1796-1808)... Although highly priced, this work had a wide sale. Drunk with success, Levaillant now launched out on three works at the same time, to be illustrated by the popular artist, Jacques Barraband. No-one before had attempted anything so ambitious, but at this stage of his career every-thing Levaillant touched seemed to turn to gold. ... By 1808, however, Levaillant's reputation started to decline and after the sixth volume of Histoire naturelle des oiseaux d' Afrique interest began to fall away. In 1818, he was to be found living in an attic, and soon he left Paris and retired to a small country house, where he died in poverty.“ (Walters, Hist. of Ornithology 2003. pp. 83 ff).- Anker 301; Fine Bird Books, p. 90; Nissen IVB 557; Sabin 40731; Zimmer 392. Provenance: De Goederen, Amsterdam, 15 Oct. 1955.

## photographical cloud atlas

### **Loisel, Julien.**

Atlas Photographique des Nuages.- Paris: Librairie Astronomique G. Thomas, Ed., (1911) Folio. (343 x 260 mm) pp. (4), 10 plates with 20 photographs on glossy paper, (4) Contemporary publ. half cloth., title stamped: Upsala Meteorologiska Observatorium, and ownership inscription of Hildebrandsson. EUR 800.-

Rare cloud atlas with fine Provenance: given by Hugo Hildebrand Hildebrandsson (first cloud atlas) to Upsala Observatory. Praised for its sharp photographs but criticized for not following the International Cloud Classification: “We have here some very beautiful reproductions showing even the minute details of cloud structure. When such remarkable photographs are available, we are almost reconciled to the absence of color in the pictures. [...] The author,

unfortunately, has not followed the International Cloud Classification, and this fact will militate against the general use of this otherwise most acceptable atlas. It is a pity, when international agreement has accepted a certain cloud classification, to have authors adopting and advocating an independent scheme." (R. DeC. Ward (1914). *Bulletin of the American Geographical Society*: 457).

### original manuscript sun dials

#### **Luchini, Domenico (fl. 1710 - died 1737).**

‘Practica compendiata, e facilissima per la costruzione degli orologi solari nelle aliezze del Polo Gr. 42.43.44.45 colle Tavole delle Latitudini e Longitudini per le hore italiane, babiloniche, ed astronomiche all uso ultramontano et antiche ò Ineguali s’insegna ancora la fabrica, ed uso dell’ orologio universale portatile, detto equinoziale, come ancora ne i Quadranti, e Emisferi, e Riflessi. Di D. Domenico Luchini da Pesaro. 1730’. Apparently authorial manuscript with frequent cancellations, emendations and insertions, some on inserted slips. [Rome], 1730. Small Folio. Title, introductory letter and explanatory text on 141 pages, catalogue of cities with their latitudes on 5 pages, and series of 16 extensive tables for the calibration of Italian sundials and lunar dials at the different degrees of latitude, of azimuths and other astronomical measurements, on 370 pages, index, and figures of sundials eight pages. Altogether approximately 535 pages, variable sizes, approx. 275 x 200 mm. Contemporary leather-backed boards, rubbed & soiled, else fine. EUR 4.000.-

Authorial manuscript, most probably an earlier version of his „Trattenimenti matematici i quali comprendono copiose tavole horarie per gli orologi a sole orizzontali, verticali, riflessi e portatili. Con le tavole de logarithmi di Don Domenico Luchini da Pesaro“ published in Rome in 1730.

The author, a native of Pesaro, was a beneficed clergyman at St John Lateran in Rome, where he died in 1737. He published the work on sundials, *Trattenimenti Matematici* at Rome in the same year as the present work, a *Tariffa overo pratica* (Tomash L138, L139) and also contributed to the calendar of the *Thesaurus sacrorum rituum* (Rome, 1738). About the *Tariffa* M. R. Williams writes: „This small commercial arithmetic presupposes knowledge of addition and subtraction. It begins with multiplication and division and then treats elementary gauging and square and cube roots. Luchini then discusses some calendar problems. After a two-page table of squares and cubes of all integers from 2 to 100, Luchini deals with the areas of rectangles, triangles and circles. At the end he recommends a set of logarithm tables as being very useful.“

A sundial is an instrument specifically designed for determining the hour of the day by projecting the sun's shadow or pinhole image on a set of hour lines. These hour lines can be marked on a flat surface (horizontal, vertical or arbitrarily inclined) or a curved surface (spherical, cylindrical or more complex). The shadow is usually cast by an upright or inclined gnomon (Greek: 'pole') but in some cases a small image of the sun is produced by a suitably located pinhole aperture (which is also termed the gnomon). In this respect a sundial has to be distinguished from the simple gnomon or the meridian line. The latter instruments only determine the exact hour of noon, or, if the meridian line is graduated with a calendar scale, the day of the year.

The history of the sundial reaches far back into antiquity and the earliest descriptions and examples date from the Egyptian Period (around 1500 B.C.). Also from ancient Greece and Rome numerous examples, large as well as pocket-sized, are preserved. Especially in the Islamic world the need for observing the daily prayer times, a number of which are mathematically defined by proscribed altitudes of the sun above the horizon, further stimulated the development of instruments for observing the time from the Sun's altitude. In medieval and early modern Europe the sundial was by far the most commonly used instrument for determining the time. From the 16th to the 18th century the steady flow of books and manuals on sundials and their use produced by mathematicians, astronomers and instrument makers attests to the popularity of this instrument and the great variety in its design and construction. Even the development of the mechanical clock from the 14th century onwards by no means made the sundial obsolete, despite improvements in the second half of the 17th century with the introduction of the pendulum and the balance-spring. Until far into the 19th century, an accurate sundial was essential for regularly checking and adjusting the rate of mechanical timekeepers.— Severino: Bibliography pp. 179; Tomash Library L138 & L139.

#### **Naumann, Carl Friedrich.**

Beyträge zur Kenntniss Norwegen's gesammelt auf Wanderungen während der Sommermonate der Jahre 1821 und 1822. 2 parts in one.- Leipzig: Wienbrack, 1824. 8°. XX, 243 pp.; XVI, 406 pp. Contemporary paper-card boards. EUR 600.-

First edition. Georg Amadeus Carl Friedrich Naumann (1797 – 1873) was a German mineralogist and geologist who was born at Dresden, as the son of a distinguished musician and composer. He received his early education at Pforta, studied at Freiberg under Werner, and afterwards at Leipzig and Jena. He graduated at Jena, and was occupied in 1823 in teaching in that town and in 1824 at Leipzig. In 1826 he succeeded Mohs as professor of crystallography, in 1835 he became professor also of geognosy at Freiberg; and in 1842 he was appointed professor of mineralogy and geognosy in the University of Leipzig. At Freiberg he was charged with the preparation of a geological map of Saxony, which he carried out with the aid of Bernhard von Cotta in 1846. Naumann was a man of encyclopedic knowledge, lucid and fluent as a teacher. Early in life (1821-1822) he traveled in Norway, and his observations on that country, and his subsequent publications on crystallography, mineralogy and geology. He was elected a Foreign Honorary Member of the American Academy of Arts and Sciences in 1873.

### **(Ornithology / Scrap-Book)**

„Kupfer zu Naturgeschichte der Vögel 1 (und) 2.“ (title on spine). Ornithological Scrap-book with 299 small engravings (around 70 x 100 mm) mounted in two contemporary paper card albums. Germany, around 1785. sq.- small Quarto (175 x 220 mm) 299 engravings of birds mounted on blank pages. With handwritten titles and subtitles in latin in ink, single leaves with handwritten notes, mainly taxonomic names, but without other images. Boards rubbed and soiled. EUR 2.000.-

Fine ornithological scrap book in use by a publisher or an artist or a collector. Collected are bird engravings of Gottlieb Friedrich Riedel. The ornithological images are from the engraver Gottlieb Friedrich Riedel (1724 - 1784) who published them in Johann Daniel Herz von Herzberg's (1720-1793) „Erste Fortsetzung des angenehmen und lehrreichen Geschenks für die Jugend; oder weitere Versuche zu einer allgemeinen Naturgeschichte“, published in Augsburg in 1785. Riedel was a porcelain painter, engraver and publisher. He received his education in painting from the court painter Johann Christian Fiedler in Darmstadt. He then moved back to Dresden, completed his knowledge with the director of the Academy, Louis de Silvestre and was from 1743 to 1756 porcelain painter in the Meissen porcelain factory. After the outbreak of the Seven Years War, he settled first in Höchst, then until 1759 in Frankenthal and finally in Ludwigsburg, where he worked in the porcelain factory as the major painter and later as „Oberfarbenlaborant“. In 1779 he moved to Augsburg. There he received a position as a teacher at an art school, which had set up a private company. In Augsburg he became a publisher and worked on the natural history, which was issued by the private academy, In 1783 he published a booklet: Figure of Bones and Muscles of the Human Body for Young Artists. The editor of the printed work Johann Daniel Herz von Herzberg the younger was the son of the Augsburg engraver and art publisher Johann Daniel Herz d. Ä. (1693 - 1754) who had good relations with the imperial court. Already in 1751 Johann Daniel Herz the younger got an imperial privilege to print a collection of portraits of high personalities. However, since the costs exceeded its financial resources, the merger with other artists was made into a social association under the name of Artium liberalium Societas, to which the printing privilege was extended in 1753. With the extension of this privilege the constitution of the society of the liberal arts took place first as a private company and as protection against duplication of its products. Johann Daniel Herz the elder was elected president of the company, his son took over the management of the public publishing house. After the death of the father in 1755, Herz the younger saw himself in conflict with the other Academies of the city. As an entrepreneur he managed to win a number of foreign artists and art scholars, such as Winckelmann, Gottsched, Rugendas at least temporarily for the Academy and thus bring classicist ideas to Augsburg. Volume one begins in Linnean taxonomy with: „II. Klasse Vögel, Aves. Thiere, mit warmem rothem Blut, die aber Eier legen, die Jungen nicht mit Milch säugen, und Federn haben.“ 1. Ordnung Accipitres: Die Raub-vögel mit krummen starken Schnäbeln, kurzen starken knorrigen Füßen, und großen, gebogenen scharfen Klauen: Geier, Adler, Falken, Eulen, etc. Going on: Falco, Strix, Lanius, 2te. Ordnung: Leivrostres, Psittacus, Ramphastos, Buceros; 3te Ordnung: Pici, Upupa, Sitta, Alcedo, Merops, Certhia, Trochilus, 4te Ordnung: Anseres, Mergus, ... Phaeton, Colymbus, Lanis, Sternae, Rhinoceros, 5te Ordnung: Grallae, Ardea, etc. Taxonomic descriptions are after Linnaeus, Ebert & Leske as in other popular natural histories of the time, as in Carl Wilhelm Fiedler Wörterbuch (1792) or in Blumenbach. Handbuch der Naturgeschichte. The iconography by Riedel is partly after the welsh naturalist Thomas Pennant (1726 – 1798), who published a British zoology, and after the zoologist Georg Heinrich Borowski (1746-1801) who was professor of natural history and domestic economics at the University of Frankfurt/Oder and who published a popular Naturgeschichte in Berlin in 1781. Also mentioned are the authors Linnaeus, Frisch, Bisson, Hahn and Borrow.- Thieme-Becker XVI, 567; Wegehaupt I, 45. Nissen, ZBI 3421 (under Riedel); not in Nissen, IVB or Anker. KVK: only three copies: Natural History Museum, London; Staatsbibliothek Berlin; UB Augsburg.

Johann Daniel Herz von Herzberg hatte 1755 neben der Augsburger Stadtakademie eine eigene Wissenschaft- und Kunstakademie gegründet, die er mit dem ererbten Verlag seines Vaters vereinigte, so daß sein Unternehmen Verlag, Lehranstalt und schöngeistige Gesellschaft zugleich war. Namhafte Künstler, Gelehrte und Staatsmänner gehörten seiner Akademie an, darunter Johann Joachim Winckelmann und andere. Angesichts seiner hochtrabenden Pläne erlitt das Unternehmen jedoch Schiffbruch. Nach Auflösung der Akademie firmierte der Verlag 1790 als "Akademische Kunsthandlung" und vertrieb erfolgreich Guckkasten- und Schabkunstblätter sowie Kupferstiche in hohen Auflagen (vgl. Thieme-Becker XVI, 567). Die gute Stichqualität garantierten Stecher wie Gottlieb Friedrich Riedel, der die hier vorliegenden Illustrationen stach. Das Werk, welches in seiner Systematik Ebert und Leske folgte, sollte vor allem minder begüterten Lesern Kenntnisse über das Tierreich vermitteln, die Abbildungen wurden zu diesem Zweck den vornehmsten Werken der Zeit entlehnt.

### **Pigonati, Andrea.**

Descrizione delle ultime eruzioni del Monte Vesuvio.- Napoli: Stamperia Simoniana, 1768. 8° (205 x 145 mm) (8), XXVIII, [3] folded leaves of plates (ill., maps) (Sign.: pi<sup>4</sup> A<sup>8</sup> B<sup>6</sup>) with engraved title-vignette (bouquet of flowers), head- and tail-piece, initials, partly in different color-printing. Plates engraved by Giuseppe Alloja after Pigonati's designs. Old Wrappers. EUR 1.200.-

First edition of his description of the important eruption in 1766 of the vulcano Vesuvio which attracted world-wide interest in Vulcans. Andrea Pigonati (1734 - 1790) was a Col. Lieutenant of the Engineering Staff of the Bourbon Army

in Naples. In 1759, he was sent together with the military engineer Giuseppe Valenzuola by King Karl III. of Spain to Utica, as part of a project to populate the island. On returning from that study, he published an interesting work on this project in a very scientific & naturalistic style. In it he revealed a reformist positions that will characterize his later work. His interest was then addressed to the classical antiquities of Sicily. In a work he measured and described the ancient monuments of the island. Later he become director for the street & construction works in the Abruzzi (from Castel di Sangro to Sulmona).

### **Pini, Ermenegildo.**

Viaggio geologico per diverse parti meridionali dell' Italia esposto in lettere di ... Edizione seconda conforme alla prima fatta nell ... Memorie della Societa Italiana delle Scienze ... Milano. nella Stamperia Mainardi, (no date; 1802) 8° (214 x 130 mm) (4), 156 pp. with two fold. plates. Contemporary half calf, marbled boards, morocco label, red edges, Ex Libris on inner cover: Cazzamini-Mussi, hinges little weak. Fine. EUR 1.400.-

Very rare separate printing; the singular and most original account of his travel through Italy to collect minerals, fossils and to study vulcanology, first published in a journal. In nine letters written to a Friend (dated July to November 1792), Pini accompanies us and describes, without irony, poetry and prosaic spirit, his naturalistic journey through southern Italy, starting from Modena and arriving in Pozzuoli. This edition is really rare. Ermenegildo Pini (1739–1825), Italian mathematician & naturalist, was a member of the Order of the Barnabites, and was employed as a professor of natural history at the University of Milan. He wrote many works founded on the natural sciences. As director of the Natural History Museum he had to extend the museum collection. He used his travels to enlarge the museum's collections.- not in Ward and Carozzi; KVK: COPAC: Oxford, Edinburgh, Royal Society; OCLC: only Microforms (?)

### **a skull collector**

### **Quatrefages, Armand de; Ernest-Theodore Hamy.**

Crania ethnica. Les cranes des races humaines d' apres les collections ... 2 Vols. - Paris: Bailliere et fils, 1882. Folio ( mm) xi, [1], 528 pp.; [4], 32 pp. Atlas with 100 lithograph plates by H. Formant, plus 486 illustrations within text volume. Contemporary black half morocco. Fine copy. EUR 2.400.-

First edition of one of the most beautiful works on craniology with 100 lithographs by H. Formant from photographs, and 486 engraved text illustrations. Quatrefages' monogenist beliefs and his strong support for the idea of human antiquity led him and his assistant Hamy to undertake a study of the crania of the ancient and modern races of Europe, the results of which are published in *Crania Ethnica*. The first portion of Quatrefages and Hamy's work contains a comprehensive history of human fossil finds to date with illustrations and analysis. An important but infamous work on physical anthropology comparing the skull shapes of different races. Specimens were largely drawn from the collections of the Natural History Museum and the Anthropology Society in Paris.

Ernest-Théodore Hamy (1842-1908) was an important french anthropologist and ethnologist, who studied medicine in Paris, earning his doctorate in 1868. Afterwards he served as a préparateur under the famous Paul Broca in the laboratory of anthropology at the Ecole pratique des Hautes Etudes. In 1872 he became an assistant naturalist at the Museum national d' Histoire Naturelle, where he worked closely with Armand de Quatrefages. In 1892 he was appointed professor of anthropology at the Museum. He was founder and curator of the Musée Ethnographique du Trocadéro as well as creator of the *Revue d' ethnographie*. He was vice- president (1886) and president (1895) of the Société des traditions populaires, and a founding member of the Société des américanistes. Jean Louis Armand de Quatrefages de Bréau (1810 – 1892) was a French biologist, who was elected professor of natural history at the Lycee Napoleon in 1850, becoming a member of the French Academy of Sciences in 1852, and in 1855 was appointed to the chair of anthropology and ethnography at the Museum National d' Histoire Naturelle. Other distinctions followed rapidly, and continued to the end of his otherwise uneventful career, the more important being honorary member of the Royal Society of London (June 1879). He was an accurate observer and unwearied collector of zoological materials, gifted with remarkable descriptive power, and possessed of a clear, vigorous style, but somewhat deficient in deep philosophic insight. Hence his serious studies on the anatomical characters of the lower and higher organisms, man included, will retain their value, while many of his theories and generalizations, especially in the department of ethnology, are already forgotten.- Garrison-Morton 206; a copy was in Edell Collection of Medicine.

### **Ramsden, Jesse.**

Description d' une Machine pour Diviser les Instruments de Mathematiques ... Publiee a Londres, en 1787, par ordre du Bureau des Longitudes; Traduite de l' Anglois; Augmentee de la description d' une machine a diviser les lignes droites, et de la notice de divers ouvrages de M. Ramsden par M. de La Lande ... Pour faire suite a la Description des moyens employes pour mesurer la base de Hounslow-Heath.- A Paris: Chez Firmin Didot, 1790. small folio ( 283 x 208 mm). 46 pp. with 7 folding engraved plates printed on pale blue paper, some variable browning, staining and spotting throughout, although plates much less affected, a few darker spots. Contemporary half calf over marbled boards, short split to upper joints, extremities lightly rubbed, red morocco lettering piece. EUR 3.200.-

As is pointed out in the preface to this first French edition, most copies of the first (english) edition of 1777 (not 1787 as the title wrongly states) were destroyed in a fire („consume par un incendie“) at the printer's warehouse. First french edition of „Description of an engine for dividing mathematical instruments“ of 1777, translated with comments by Jerome de Lalande after he could borrow a copy of Prof. Shepherd.

Ramsden (1735-1800) was a British pioneer in the design of precision tools. Ramsden was apprenticed as a boy to a cloth worker, but in 1758 he apprenticed himself to a mathematical instrument maker. He went into business for himself in London in 1762. He designed dividing engines of great accuracy for both circles and straight lines and produced highly accurate sextants, theodolites, and vertical circles for astronomical observatories. He also built barometers, manometers, assay balances, and other instruments. He was elected to the Royal Society in 1786 and awarded the Copley Medal in 1795. Ramsden's dividing engine allowed instruments to be made smaller while being just as accurate in measurements. The rights for a portable sextant designed by Ramsden and used for maritime navigation was obtained by the Board of Longitude in 1777 for £ 300. An additional £ 315 was paid to allow for its construction details to be used by other craftsmen. Ramsden was of a genial disposition, but at the same time he infuriated his clients with his tardiness in delivering their purchases, particularly of the larger commissions. The acrimony sometimes got out of hand. For example, Ramsden's three-year delay in providing William Roy with the theodolite for the Anglo-French Survey 1784-1790 provoked a public row within the portals of the Royal Society and in the Philosophical Transactions. In his favour it should be pointed out that many delays could be attributed to Ramsden's quest for perfection, continually refining his designs as the slightest shortcomings were revealed.- Provenance: later library stamps to title and to versos of plates.- Lit.: Anita McConnell, Jesse Ramsden (1735–1800): London's Leading Scientific Instrument Maker. 2007; Taylor, Mathematical Practitioners of Hanoverian England, 57–59, 244–245; Repsold, Geschichte der astronomischen Messwerkzeuge, 82–87

### **natural history collection visited**

#### **Rudolphi, Carl Asmund.**

Bemerkungen aus dem Gebiet der Naturgeschichte, Medicin und Thierarzneykunde, auf einer Reise durch einen Theil von Deutschland, Holland und Frankreich, gesammelt von ... Erster (und) Zweiter Theil. 2 Vols.- Berlin: bey Gottlieb August Lange, 1804. 8° (190 x 115 mm) VIII, 296 pp.; 1 Bl., 222 pp., XVI pp. Contemporary paper-card boards, two morocco lettering labels, red edges, little rubbed and soiled, else fine. EUR 1.000.-

First edition of his travel account written in letter form. During his study trip to Holland and France shortly after the French Revolution, Rudolphi visited botanical gardens, natural history collections, anatomical collections and veterinary institutions, also scientists as Gall, Cuvier, Geoffroy Saint-Hilaire and others, with extensive register.

Karl Asmund Rudolphi (1771-1832) was born in Stockholm of German parents. He obtained a medical doctorate at the German University of Greifswald in Swedish Pomerania. He stayed for a time as professor of anatomy but joined the University of Berlin soon after its founding in 1813. He was a disciple of Cuvier in his treatment of descriptive and comparative anatomy. Rudolphi founded the Berlin Zoological Museum, which became one of the finest in the world. He was a zealous yet sensitive scientist, highly regarded by his pupils and colleagues. One pupil, Johannes Müller, was eventually Rudolphi's successor; himself with an array of pupils seldom equaled in science.

Rudolphi impacted three branches of biology. His significant microscopical studies of vertebrate intestinal tissues fixed his place in comparative anatomy and made him one of the first histologists. His series Grundriss der Physiologie from 1821 which dispelled considerable mythology around human physiology and anatomy, was probably his most important work. It was Rudolphi's third field, his pioneering work on parasites, that brought him, probably unknowingly fame. Rudolphi improved earlier works by Goeze. His work with intestinal worms so broadened and stabilized the field that all subsequent work is based on it.- BM Natural Hist. IV, 1761. Waller 10996 (only vol. 1); NDB XXII, 203.

### **Molyneux's Question - english philosophy in Italy**

#### **Sarti, Cristofano.**

L'ottica della natura e dell'educazione indirizzata a risolvere il famoso problema di Molyneux (Molyneux). Opera del ....- Lucca: presso Francesco Bonsignori, 1792. 8° (222 x 143 mm). XVI, 227 pp., 48 pp. with frontispiece within page numb. Contemporary paper-card boards, rubbed and soiled. Fine uncut copy.

EUR 1.000.-

First edition of a lesser known essay on Molyneux's question by a professor at Pisa University.

On 7 July 1688 the Irish scientist and politician William Molyneux (1656–1698) sent a letter to John Locke in which he put forward a problem which was to awaken great interest among philosophers and other scientists throughout the Enlightenment and up until the present day. In brief, the question Molyneux asked was whether a man who has been born blind and who has learnt to distinguish and name a globe and a cube by touch, would be able to distinguish and name these objects simply by sight. In this formulation Molyneux's problem attracted the attention of lots of philosophers and other men of learning, such as Berkeley, Leibniz, Voltaire, Diderot, La Mettrie, Helmholtz and William James. Discussion concerning Molyneux's problem took a new turn once the English surgeon and anatomist William Cheselden (1688–1752) published an account of what a congenitally blind person had seen after his cataracts had been removed (1728). The publication led philosophers to regard the Molyneux problem no longer as a simple thought-experiment, but as a question which could be answered by experimentation. Others, however, such as La Mettrie and Diderot, regarded Cheselden's account as wholly ambiguous in its implications. They pointed out that it

was possible that the boy had been unable to make valid perceptual judgments because his eyes had not been functioning properly. They suggested that this could have been due to the fact that his eyes had not been used for a long time, or to their not having had enough time to recover from the operation. They pointed out that Cheselden had, perhaps, asked the boy leading questions. Some philosophers also believed that the results of the inquiry depended on the intelligence of the patient. Those who criticised the significance of Cheselden's account in this way (most of them were French philosophes) made proposals as to how to avoid the problems mentioned. They suggested that one should prepare the patient carefully for the operation and for the interrogation, that one should allow his eyes time to recover from the operation and that one should give him the opportunity to exercise his eyes in darkness. What is more, one should avoid asking leading questions. Some philosophers were even more radically critical of operations like that performed by Cheselden. Mérian, for example, noticed that Cheselden's observations, like all observations of blind people whose cataracts have been extracted, present difficulties because cataracts do not cause complete blindness and complete blindness cannot be cured. It could not be concluded from this that Molyneux's problem could not be solved experimentally; however, for it could be maintained that patients operated upon for cataracts are directly relevant to the solution of it. They are unable to perceive form before they are operated upon, and the essential issue at stake when posing Molyneux's problem is the ability to distinguish and name forms. This is a point of view which was taken by many philosophers.

### **Cloud atlas**

#### **Taffara, Luigi.**

Le Nubi. Parte I: testo; Parte II: Atlante.- Roma, Tipografia ditta L. Cecchini / Ufficio Centrale di Meteorologia e Geodinamica, 1916. Folio. 67 pp. with 36 text images, of which 4 are on 2 plates, showing samples of photographic images of the atlas, and 3 loosely inserted tables. Atlas with 26 plates each with 2 mounted photographic images, incl. a few images of early color photography. In Original green publ. cloth folder.

EUR 600.-

Rare Italian cloud atlas with fine photographic images of clouds, incl. a few early color photographs. The text describes the history of cloud classification from Luke Howard, the photography technique and the technique of meteorological observation. Luigi Taffara (1881-1966 Catania) began his scientific career in 1901 as a calculator for celestial photography at the Catania Observatory, Later he was at the Observatory of the Collegio Romano and in 1924 he became Assistant at the Collurania Observatory. In 1928 he moved back to Catania as an assistant and later director. He dealt with solar astrophysics and took part in several expeditions for observations of solar eclipses. He collaborated in the compilation of the Astrophotographic Catalog, and he is responsible for most of the plates made at the Steinheil equatorial in Catania. (G. Horn d'Arturo, *Coelum*, XXXIV, 1966). not in BEA