



**KÜHN**

RARE BOOKS & ART

**London · Paris 2022**  
**Complete List of Books**

Firsts London's Rare Book Fair  
Saatchi Gallery, 15.-18. September  
<https://www.firstslondon.com>

Livres Rares & Arts Graphiques Paris  
Grand Palais Ephémère, 23.-25. September  
<https://salondulivrerare.paris>

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**Agricola for the popular market**  
**Lavoisier's copy**

**AGRICOLA, Georgius.**

Georgii Agricolae, De ortu & causis subterrancorum lib. V.; De natura eoru(m), quae effluunt ex terra lib. IV., De natura fossilium lib. X., De veteribus & novis metallis lib. II., Bermanus, sive de re metallica Dialogus, Interpretatio Germanica vocum rei metallicae. Additio Indice foecundissimo, Plurimes jam annos à Germanis, & externarum quoque nationum doctissimis Viris, valdè defiderati & expetiti; Nunc veroin rei metallicae studiosorum gratiam recensiti, in certa capita distributi, capitum argumentis, & nonnullis icholiis marginalibus illustrati, à Joanne Sigfrido Philos: ... - Wittebergae: Sumptibus Zachariae Schureri Bibliopolaе, Typis Andreae Rudingeri, 1612. 8vo (170 x 105 mm) [24], 1014 pp., [56] Bll. (bound with:)

**AGRICOLA, Georgius.** De Animantibus subterraneis liber. Hactenus a multis desuderatus, nunc vero in gratiam studiosorum seorsim editus, in certa capita divisus, capitum argumentis & nonnullis marginalibus exornatus. A Johanne Sigfrido.... Wittebergae: Typis Meisnerianis, Impensis Zachariae Schureri, 1614. [8], 80 pp., [12] Contemporary vellum, title on spine, fine copy. Inside front cover with Ex Libris of the chemist Antoine Lavoisier (Beretta, pp. 295) GBP 4.000.-

Scarce selected works of the German mining expert Georg Agricola, revised by the German physician Johann Sigfrid. This (third Latin) edition of „De Ortu“ was brought together and edited by Johann Sigfrid (1556-1632) who has renumbered most of the sections and made the text simpler than Agricola's original text, as he used it for lectures at the University of Helmstedt. He also added Georg Fabricius' work on metals from 1565 to Agricola's works.

Bound here with is Georg Agricola's De Animantibus, a short treatise on animals known to exist in the subsurface, first published in 1549. The work is a compendium of what Greek, Latin, and Medieval authorities wrote about these animals, but, unlike many of his contemporaries, Agricola supplemented those writings with his own observations, and he posed questions about the existence of some of the fanciful beasts described by his forbearers. Of special interest to paleontologists and zoologists is an "index" at the end where Agricola groups animals by their form of locomotion - walking, crawling, swimming, flying, burrowing - as well as the occasional use of binomens, following in the footsteps of several contemporary herbalists.

The German physician, mineralogist & mining expert Georgius AGRICOLA (1494 - 1555) studied from 1518 to 1522, medicine and chemistry at Bologna, Venice and Padua. He then taught the classics at the Municipal School, Zwickau, Saxony. In 1527, he moved to Joachimsthal, Czechoslovakia, where he opened a medical practice. In this locality, with the mining activities of the surrounding area impacting his daily life, Agricola began to study mining techniques and mineralogy. After an appointment in 1533 as official historian for the principality of Saxony, which included an annual stipend, Agricola moved again. He relocated his medical practice to Chemnitz in Saxony. There he became a civic leader which led to his being elected mayor of the town in 1546, 1547, 1551, and 1553. Agricola was one of the extraordinary scientists of his age. His texts on medical diseases suffered by miners were innovative for the time, and for his works that dealt with mining and mineralogy, he was labeled „The father of mineralogy“ by no less than Abraham Gottlob Werner.- Agricola Bibl. 704; BL 990.a.3.(1.); Hoover Collection no. 16; not in Ward/Carozzi; VD17 14: 643489P

## Botanical Garden - Green-House

### ANTOINE, Franz de Paula.

Photographische Blätter aus dem Wintergarten des k.k. Hofburg-Gartens in Wien. Aufgenommen von Franz Antoine, ... (Wien, ca. 1875) Folio (440 x 325 mm) Title-Page with mounted photograph and 20 boards with mounted albumin photographs (235 x 200 mm). Mounted within gilt and black ruled frame on heavy boards preserved within original cloth folder with title: Photographische Blätter Franz Antoine. The title page sun faded and one or two photographs slightly faded, otherwise very fine tonality of the photographs. GBP 16.000.-

Exceedingly rare album with early photographic plant still life's of a famous greenhouse & botanical garden in Vienna. Probably printed only in 50 copies. Of the 20 photographs in the portfolio, fifteen show views within the Wintergarten; four show large trees displayed within the entrance saloon; and one shows a specimen of *Welwitschia mirabilis* displayed on a glass table in front of a painting of the same species in the wild (faded).

The Austrian Horticulturist, gardener and amateur photographer Franz Antoine the younger (1815–1886) had studied botany in the botanical gardens of Vienna under Joseph Franz von Jacquin. For some years he had travelled through Europe to study modern developments in gardening. From 1847 onwards he worked as a court gardener. He received international reputation for his "Wintergarten..." and was honored by the kings of Bavaria and Prussia. From 1865 he was director of Royal Gardens to the Austrian/Austro - Hungarian monarchy. He was an authority on the botanical family of Bromeliaceae, and was also an avid photographer. As a member of the Zoological-Botanical Society in Vienna, he gained great recognition as an amateur photographer, producing mostly large-scale plant studies. His photographs of still life's, plants and scenes of Vienna were presented at photography exhibitions in Vienna (1864, 1873) and Paris (1867). Also the Albertina in Vienna has a large stock of photographs of plants by Franz Antoine, which belong to the earliest and best of this genre. The original, classical greenhouse was built from 1823 to 1826 after designs by Ludwig von Remy. The back wall of the building was part of the then Vienna city wall. After the greenhouse had been demolished at the turn of the century, in 1902–1906 a new green house influenced in its ornamentation by Art Nouveau was built after designs by the court architect Friedrich Ohmann. In 1861 he was a co-founder of the Photographic Society.- Starl. Lexikon Fotografie Österreich, 1839-1945; Hannavy. Encyclopedia of Nineteenth-Century Photography 1287. For his method of photography: Franz Antoine. Ueber die Methode, Pflanzen photographisch darzustellen und zu vergrößern, in: Zeitschrift für Fotografie und Stereoskopie 5, 1862; For a printed work on the Wintergarten by Antoine (1852) see Pritzel 196. Nissen BBI 44; Czeike I, 605. Cf. Bobins 1024 and Mayer, Bibliotheca Viennensis 948 (normal edition in half cloth or cloth bindings).

KVK: We could locate only four copies world-wide: Utrecht (16 plates, dating 1875); ÖNB Vienna (17 plates, dating 1880); Univ. Vienna (17 plates); Royal Horticultural Society London (18 plates, dating 1875)

### the very rare Comin de Trino printing of the 'commentator', Ibn Rushd's Aristotle

### ARISTOTELES, AVERROES, AVICENNA (ed. Marco Antonio Zimara)

Aristotelis Stagiritae Omnia, quae extant Opera, nunc primum selectis translationibus, emendationibus ex collatione graecorum exemplarium, scholiis in margine illustrata, novo etiam ordine digesta : Additis praeterea non nullis libris nunquam antea latinitate donatis... 12 Vols.- Venice, Comin di Trino di Monferrato, 1560 (- 1562). 8vo (174 x 117mm). In a red morocco binding 'a la Duseuil'

GBP 20.000.-

An exceptional complete copy of the extremely rare MARCO ANTONIO ZIMARA edition of Aristoteles works with extensive commentaries by AVERROES, as well as on Avicenna's *Canticum de Medicina*. With the additional and thorough Thesaurus or Index by Antonio PISO, published two years later at the same press and almost always absent. The philosophical writings of Ibn Rushd are divided into two groups, the commentaries on the works of Aristotle, and the personal writings, which are entitled *Faṣl al - Maqāl*, *Kitāb al - Kashf*, and *Tahāfut al - Tahāfut*. As a commentator on Aristotle, Ibn Rushd attempted to restore the Stagirite's own thought, and to supplant the Neoplatonic interpretations of al-Fārābī and Ibn Sīnā. Ibn Rushd regarded Aristotelianism as the truth, inasmuch as truth is accessible to the human mind .... Ibn Rushd's *al - Kulliyāt*, or Latin 'Colliget', his commentary on Ibn Sina's *Urjūza* or 'Canticum de medicina', and his short tract 'De theriaca' here form most of the ninth volume of Comin de Trino's edition. Several editions of Aristotle's Works with Averroes' commentaries and edited by the great Italian philosopher

and scholar of Aristotle and Averroes, Marco Antonio Zimara, were printed in the mid-sixteenth century, including three by Giunta, in 1550-1552 ('the culminating point of the printing history of Averroes'), 1562, and 1574-1575. All of these differ in make-up and contents, with 'modifications and additions of text and commentaries' (Dag N. Hasse). Comin de Trino's edition, the rarest of the four and predating by two years that issued by Giunta in 1562, equally differs from those preceding and following, with Averroes' *De spermate* and the important Middle Commentary (Talkhīs) to the first seven books of Aristotle's *Metaphysics* first appearing here. Antonio Poso's incredibly exhaustive index of over 1000 pages, published by de Trino in the year of the 1562 Giunta edition and rarely found present in the sets recorded, is here bound without a separate title or preliminaries. Beginning with leaf 'A', his work forms the final, twelfth, volume of this beautiful set.- Provenance: late 16th or early 17th inscription in ink 'Di Gir[olam]o Fanti can[oni]co senese' to the title pages of volumes 5, 7, 8, 9, 11, and to the blank verso of the final leaf of Pasio's Index volume, carrying Comin de Trino's beautiful, final printer's device.- Adams A 1746 (Aristotle) and P 1980 (Posius); BM Italian p. 537 (Posius only); for Zacharie Morel and his distinctive arms see Guigard vol. 2, p. 376 and Olivier 2333; outside Europe OCLC locates one copy in Colombia, at the Pontificia Universidad Javeriana, and three copies in North America, at University of Southern California, Pennsylvania, and Toronto; German library holdings appear to be of partial sets or individual volumes only, perhaps with the exception of the copy at Göttingen University Library.

### **ARISTOXENES.**

*Aristoxeni musici antiquiss. Harmonicorum Elementorum libri III. / Cl. Ptolomaei Harmonicorum, seu de Musica libri III. / Aristotelis de obiecto auditus fragmentum ex Porphyrij commentarijs. Omnia nunc primum latine conscripta & edita ab Ant. Gogavino Graviensi.- Venetijs, apud Vincentium Valgrisium, 1562 [Venice, Valgrisi, 1562]. 4to (182 x 136 mm). A-X4 (X4 blank): 165, (1) pp. Woodcut diagrams. Margins cut short. Wormtrack to outer blank margin of the beginning twelve leaves. Late 17th or early 18th century calf, restored. Looks like a re-cased copy. GBP 5.000.-*

First edition of Gogava's important recension of early mathematical text on harmonics, including Aristoxenes, Ptolemy and Aristoteles. The editio princeps was published in Leiden in 1616.

„The theoretical discussion of music naturally occurred in the context of other Greek philosophical inquiry and was influenced by it. Aristoxenus of Tarentum took part in this discussion on all levels, but most importantly in the context of music theory. His contribution was to turn musical science – almost single-handedly – from an exploration of the relationship of numbers into an investigation of the way in which sound could be arranged and understood as music. His vindictive nature was infamous, yet his musical knowledge was so extensive and his authority on the subject so unchallenged in antiquity that he earned the title ὁ Μουσικὸς. This reputation was justly founded both on the breadth of his musical research and on the depth of his investigation into harmonics and other specific areas ... Arguably, Aristoxenus can be seen as the founder of musicology and as the person who established music theory as an independent subject.“ (S. Gibson, *Aristoxenus of Tarentum and The Birth of Musicology*, NY 2005, pp. 1f.)– Hoffmann I 375; Adams A-1973.

### **Ibn Sina's Qanon as lectured in the 14th cent. Italy**

#### **(AVICENNA; Abu- Ali al-Husain Ibn Abdallah Ibn-Sina); GENTILE da Foligno.**

Primus [- tertius] Avic(enna). Canon cum argutissima Gentilis expositione : habes lector candide Gentilem Fulgi. e corruptissimo castigatissimum ... : auctoritates insuper generaliter allegatas secundum singula capitula sive commenta particulariter positas : auctoritates inquam Hypo. Gal. Arist. ejusve commentatoris Aver. Rasis Sera. Avicen. Halyab. : Mesue Jesushaly Alcanamosali Avenzoar Haly Albucasis Alberti Trusiani Conciliatoris plurimorumque aliorum ex modernis & veteribus : ad hec multas questiones tractatus ac consilia nunc primum impressa : duplicem quoque dubiorum indicem ... : hanc operam quantulancumque hilari fronte Politus & viventibus & posteris navavit ... (Edited by Bassanus Politus, comm. by Gentilis de Florentia and others). 4 parts (part one to three, part two of five) in 1 Vol.- Pavia, Giacomo Pocatela (Jacob de Burgofranco) for L. Castello & B. Morandi, 1510 - 1511. Imp. Folio. (435 x 310 mm). ff. 192 num., 6 nn.; 4 nn., 73 (recte 70) num.; 8 nn., 240 num.; 6 nn., num. ff. 241-503 (= Secunda pars Gentilis super Tertio Avic.). With 4 repeated woodcuts on the title and 3 (two identical) printer's marks. Blind-stamped pigskin of the early 18th century over wooden boards and with clasps, both covers with supralibros of the

Abbot of Lambach Maximilian Pagl (gold stamped on the front cover); little stained, few light scuff marks. A few pages waterstained, but due to the heavy paper not that ugly. Overall a very fine copy of an exceedingly rare work. GBP 45.000.-

Scarce edition, beautifully printed, of an uniquely effort among scholastic medical masters: a commentary of Avicenna's Canon by Gentile da Foligno (died 1348), printed in Padua by Giacomo Pocateli - here of the books one to three, without books four and five, sometimes missing.

The Nuremberg Chronicle of Schedel described Gentile da Foligno as „Subtilissimus rimator verborum Avicenne“ (that most subtle investigator of Avicenna's teachings). Long after Gentile's death in 1348, his remarkable achievement was evidently still famous. Uniquely among scholastic medical masters, he had labored to produce a commentary covering all five books of Avicenna's *Canon*, the comprehensive, elaborately structured encyclopedia that was one of the mainstays of late-medieval academic medicine. Gentile's *Canon*-commentaries evolved over the course of his teaching career of thirty-odd years (primarily at the Perugia *studium*).

According to William Osler, Avicenna's Canon is „the most famous medical textbook ever written“ and it has remained as „a medical bible for a longer period than any other work“ (Osler, 1922). Avicenna needs little or no introduction to those familiar with the history of medicine. Known in the Arabian and Persian world as the Chief or the second doctor (Aristotle having been the first), Avicenna was an accomplished physician as well as a noted philosopher. He wrote widely on theology, metaphysics, astronomy, philosophy, law, and of course on medicine. The present work was his greatest medical compilation and „stands for the epitome of all precedent development, the final codification of all Graeco-Arabic medicine“. A large encyclopedic work on medicine, it is, for the most part, based on the writings of Hippocrates and Galen although Avicenna included many original observations and noteworthy clinical descriptions. The Canon medicinae went through many editions and was a dominant force in medical thought, practice, and writing for more than five centuries.

Gentile da Foligno (died 18 June 1348) was an Italian professor and doctor of medicine, trained at Padua and the University of Bologna, and teaching probably first at Bologna, then at the University of Perugia, Siena (1322-24), where his annual stipend was 60 gold florins; he was called to Padua (1325 - 1335) by Ubertino I. da Carrara, Lord of Padua, then returned to Perugia for the remainder of his career. He was among the first European physicians to perform a dissection on a human being (1341), a practice long that had been taboo in Roman times. Gentile wrote several widely copied and read texts and commentaries, notably his massive commentary covering all five books of the Canon of Medicine by the 11th-century Persian polymath Avicenna, the comprehensive encyclopedia that, in Latin translation, was fundamental to medieval medicine. Long after his death, Gentile da Foligno was remembered in the Nuremberg Chronicle (1493) as Subtilissimus rimator verborum Avicenne, „that most subtle investigator of Avicenna's teachings.“ A mark of the respect in which Gentile's work continued to be held, more than a century after his death, was the rapidity with which they appeared in print, from the Italian presses, beginning in the 1470s. For the originality of his thought Mario Timio suggested that Gentile could be indicated as the „first“ cardioneurologist in the history of medicine. He prepared a widely read treatise on the Black Death, recommending theriac among other prophylaxis, but died of the plague himself.

The Canon of Medicine is divided into five books: 1.) Essays on basic medical and physiological principles, anatomy, regimen and general therapeutic procedures; 2.) List of medical substances, arranged alphabetically, following an essay on their general properties; 3.) Diagnosis and treatment of diseases specific to one part of the body; 4.) Diagnosis and treatment of conditions covering multiple body parts or the entire body; 5.) Formulary of compound remedies. The first book, called Al- Kulliyat, concerns to general medical principles. It often circulated separately from the rest of the encyclopedia, especially in Europe. This book contains a definition of medicine as a science, which is distinguished in theory and practice. So, it refers to the cosmic elements that make up the cosmos and the human body, the causes of health and disease, the mutual interaction of elements (temperaments), and the fluids of the body (humours), where Avicenna systematized for the first time the teachings of Galen of Pergamum. And, concerning these aspects, the physicians have this five tools: nutrition therapy, fresh air, a balance of exercise and rest, as well as the last treatment by medications or by surgery. Furthermore, the book deals with anatomy and physiology. The Book I is divided in 4 Fen: The first one covers the study on the elements: air, fire, water and earth. The second one is on etiology and symptoms. The third one deals with hygiene, the cause of health and sickness, and the inevitability of death. And the fourth one refers to classification of therapy modes. The second book is on Materia Medica and simple drugs. It lists in 758 chapters about 800 simple remedies and medicines, in alphabetical order: plants, animal substances and minerals. In this book Avicenna took Indian and Greek sources and added his own comments, highlighting differences between recipes from different sources, and sometimes giving his own recipes. He also gave his opinion of the effectiveness of some remedies, and gave details of where particular

ingredients came from and how they were prepared. He preferred the remedies which had been tested through experience, cautioning that compounds could have unexpected or much stronger effects than might be expected from the effects of the individual components. The Book II contains seven rules for experimenting with new drugs, taken partly from Galen: The drug should not be affected by heat, cold, or proximity to other drugs. The experiment of any drug must be done on a single status; in other words it should not be tested on a patient who has complex or multiple illnesses. The drug must be tested on two contrary conditions. A drug not only should act directly on a disease but also it should be effective against a different disease by relieving its symptoms. The potency of the drug should be appropriate to the strength of the disease. One should consider the time needed for the drug to take effect. If the drug has an immediate effect, this shows that it has acted against the disease itself. The effect of the drug should be the same in all cases, or at least at most. Experiments should be performed in humans, not animals. The third book, divided in 22 Fen, refers to pathology and therapy, arranged in order of the site of the ailment from head to foot. There are also anatomical descriptions of heterogeneous organs are also given. The anatomy of the Canon is found between the Book I and the Book III. The fourth and the fifth book (not present here) refers to diseases that affect the whole body, such as fevers. It deals also about purulent ulcers, neuropathy, dislocations, fractures, injuries caused by animals (animal bites, insect bites), skin conditions and even cosmetics, etc. The fifth book deals with the preparation of about 650 remedies of diverse components (Antidotarium). It contains some very complex medicines, including preparations of theriacs, electuaries, syrups, medicinal oils, pills and ointments, etc. The book concludes with a short collection of formulations against some diseases. - Provenance: Maximilian Pagl, abbot of Lambach Monastery (1705-1725). not in Wellcome & Parkinson; EDIT 16, CNCE 3538; IA 110.585 (see Choulant / Sander) and 110.585; Durling 379; Choulant 364 (only 1-4). Sander 712: „Sur le titre de chaque partie, grand bois représ. Galenus, Avicenna et Hippocrates“ KVK: Trier (as here Canon 1-3.2.); Jena, Rostock, Wolfenbüttel; Genoa, Roma, Fermo; Yale, NY Acad. of Medicine; Becker Library; NLM.

### **The foundation treatise on the embryology of the higher animals**

**BAER, Karl Ernst von.**

Über Entwicklungsgeschichte der Thiere. Beobachtung und Reflexion. 3 parts in one vols.- Königsberg: bei den Gebrüdern Bornträger, 1828 - 1837 (Vol. I - II.1) and Königsberg: Wilhelm Koch, 1888. 4to (245 x 215 mm). XXII, (2, errata), 271 pp., [1]; [4], 315 pp., [1]; (6), (3), 320 - 400 pp. including 7 engraved plates (4 hand - colored, all on stubs) and one folding letterpress table to pp. 225, a few text woodcuts. Late 19th century half calf over marbled boards, rubbed and soiled, a few spots here and there, else a good and complete copy in its first binding. GBP 6.500.-

Exceedingly rare, especially when complete in three parts as here - a landmark in the history of embryology and genetics. First edition of the „foundation treatise on the embryology of Higher animals“ (Horblit 9a).

**With Rudolf Virchow's book-plate.**

In *On the Development of Animals* (1828-1837), he argued that the embryos of all animals develop from a simple and homogeneous stage to a complex and heterogeneous one. Suggesting that the younger the embryos of different species are the closer the resemblance between them, he showed that during embryonic development general characteristics of animals appear before traits specific to a species.

Karl Ernst von Baer (1792-1876) studied the embryonic development of animals, discovering the blastula stage of development and the notochord. Together with Pander and based on the work by Caspar Friedrich Wolff, he described the germ layer theory of development (ectoderm, mesoderm and endoderm) as a principle in a variety of species, laying the foundation for comparative embryology in the book *Über Entwicklungsgeschichte der Thiere* (1828). In 1826, Baer discovered the mammalian ovum. In 1827 von Baer became the first person to observe human ova. Only in 1876 did Oscar Hertwig prove that fertilization is due to fusion of an egg and sperm cell.

His discovery that embryonic homologues such as the fin of a fish and the hand of a man begin as nearly identical structures was cited later by Darwin to support his theory of evolution. von Baer formulated what became known as Baer's laws of embryology: General characteristics of the group to which an embryo belongs develop before special characteristics; General structural relations are likewise formed before the most specific appear; The form of any given embryo does not converge upon other definite forms, but separates itself from them; The embryo of a higher animal form never resembles the adult of another animal form, such as one less evolved, but only its embryo.

„Continuing the work of his friend and collaborator Christian Heinrich Pander, Karl Ernst von Baer observed the formation of the germ layers and established the germ layer theory. He described the way in which the layers formed various organs by tubulation, and he emphasized that the development of the embryo is from the apparently homogeneous to the obviously heterogeneous. In this he finally refuted the long held and much discussed theory that

embryonic parts might be preformed in the egg. The publication of this book provided a solid basis for the further systematic study of mammalian development.“ (Grolier Medicine, p. 215).

After the publication of volume I, there was a delay of nearly 10 years while the publisher waited for Baer to complete volume II. In 1837, at the insistence of subscribers to the work, the first part of volume II was published with an explanatory note stating that the author had submitted copy only slowly during the period from 1829 to 1834 and had then ceased to respond to the publisher's inquiries about his progress. The final portion of the text was published only in 1888, 12 years after Baer's death, when it was edited by Ludwig Stieda, who also wrote a biography of Baer. With his discovery of the mammalian ovum a search ended that had begun over 150 years earlier when Harvey propounded that all animals come from eggs.

„In his more extensive work ‚De ovi mammalium et hominis genesi‘ published in 1827, Baer gathered together with great knowledge and scrupulous care all the known facts of embryology and followed in detail the development of the classical subject of embryological research, the hen's egg. He proceeded from this to study the embryological development of the vertebrates in general and subsequently to propose four basic principles which provided a sound basis for the foundation of a new branch of science‘ (PMM 228b). - PMM 228b; Horblit 9a; Heirs of Hippocrates 869; Norman 101; Garrison-Morton 479; Grolier Medicine, pp. 215; Wellcome II, 84; Norman Sale no. 912 ( \$ 6.900.-) Provenance: Dr. Schwink; **Rudolf Virchow**; Dr. Nützel; Michael Lührs.

### „New Perspective“

#### **BALDWIN, Thomas.**

Airopaidia: containing the narrative of a Balloon Excursion from Chester, the eighth of September, 1785, taken from minutes made during the Voyage: hints on the improvement of balloons, and mode of inflation by steam: means to prevent their descent over water: occasional enquiries into the state of the atmosphere, favouring their direction: with various philosophical observations and conjectures, to which is subjoined, mensuration of Heights by the Barometer made plain: with extensive tables. The whole serving as an introduction to Aerial navigation: with a copious index.- Chester: printed for the author, by J. Fletcher; and sold by W. Lowndes,... 1786. 8vo (205 x 125 mm) (4), IIII - VIII, (1), 360 (e.g. 361) pp., (1, blank) with four partly fold., partly colored engraved plates. Modern brown calf period style binding, one plate little restored, lightly brown-spotted. GBP 2.500.-

First edition of a fascinating account of one of the numerous balloon flights which took place all over Europe in the years following the year 1783, including the **first picture from a flying object of the Earth from above**: an image showing Chester, in which the author claims to have reached an altitude of four miles and another with the River Dee. The book included everything from an inventory of the items taken (including the weight of each item) to a florid description of his sensations as he flew: „...what Scenes of Grandeur and Beauty ! A Tear of pure Delight flashed in his Eye! of pure and exquisite Delight and Rapture: to look down on the unexpected Change already wrought in the Works of Art and Nature, contracted to a span by the NEW PERSPECTIVE, diminished almost beyond the bounds of credibility.“ Thomas Baldwin's aerial view of Chester which can be seen, together with the River Dee in the corner of this engraving based on his sketch. This is believed to be the first ever actual view of the earth from above. The first manned balloon flights took place in October 1783. Baldwin made his ascent in September 1785, less than two years later. The Italian balloonist Lunardi who had himself made a number of ascents, and was virtually responsible for introducing aerostation into Great Britain, had lent Baldwin his balloon on this occasion. Lunardi inflated the balloon, in a superior manner' and also launched a small balloon brightly decorated by Baldwin, which was to serve as a sort of pioneer. After Baldwin's safe descent at Rixton Moss he took a number of onlookers for short trips. Just a few days after Baldwin's flight „The Times“ of 15 September 1785 declared „the rage for ballooning“ to be „the folly of the age“ and urged that „some restriction should be laid on the madness of their frequent trips into the air, without one single good purpose being produced“. It is unclear what provoked this response, other than possibly that it was one year exactly after Lunardi's first flight in England. Baldwin's scientific knowledge is evident from his book. he is familiar enough with mathematics to be able to perform quite complex trigonometry, and to be able to do other calculations relating to physics. He also exhibits a good understanding of chemistry and thermodynamics as understood at the time, including how hydrogen as water gas can be produced by passing steam over hot iron, which had been discovered by Lavoisier and mentioned as a means for filling balloons in Cavallo's book (1785). The footnotes in his book indicate that he was remarkably well-read on scientific matters as he refers to many other writers who would have had a quite limited circulation and to some who wrote only in French. Baldwin invented the „Drag Rope“ to control the altitude of a balloon and he made the first sketches of the earth from the air.- Brockett, Bibl. 1203.

## Pop-Eye

### **BARTISCH von Königsbrück, Georg.**

Ophthalmouoleia (graece). Das ist Augendienst. Newer und wolgegründter Bericht von ursachen und erkenntnus aller Gebrechen, Schäden und Mängel der Augen und des Gesichtes.- Dresden, M. Stöckel, 1583. small Folio. (315 x 200 mm) 28 nn., 272 num. leaves (Bll. 255-256 in 17th cent. calligraphic manuscript), 8 nn. Bll. with wood-cut title borders, repeated on leaf 13, two coats-of-arms, full-page portrait, printers-mark and 88 nearly full leaf text woodcuts, of which two are with pop-ups, all images finely hand-colored in old coloring. Little later vellum with overlapping borders in modern folder. Two leaves in almost contemporary calligraphed handwriting. Some paper browning in places, scattered light staining, small marginal repair to white section of title, leaf 73 re-margined at top with minimal loss to pagination. Overall a fine copy in slightly later vellum, manuscript title to spine, two sections of spine repaired.

GBP 45.000.-

First edition of a rare book, especially in remarkable contemporary coloring as here, the earliest book to reliably and comprehensively discuss eye surgery and the first extensively illustrated account of any surgical speciality... a comprehensive pictorial record of Renaissance eye-surgery; two of the woodcuts show the parts of the eye in various layers as they are viewed in dissection by means of movable anatomical flaps. This is one of the earliest uses of movable flaps to illustrate a medical book. (Garrison-Morton).

First Renaissance book on ophthalmic disorders and eye surgery, published in 1583 by German physician Georg Bartisch (1535–1607), considered by many to be the father of modern ophthalmology. In his forties Bartisch put his special knowledge into this book, apparently doing the illustrations himself, and in 1583, it was printed for him by Matthes Stöckel of Dresden. The work contains a total of 92 woodcuts each depicting diseases of the eye - some using an overlay technique (Pop-up) enabling the reader to “dissect” parts of the head or eye by lifting up a series of flaps. Accompanying the images is a detailed discussion of ocular diseases, surgical techniques, and instruments used, all written in Bartisch’s native German rather than Latin, a highly unusual move for the time.

Despite his scientific calling, Bartisch was a superstitious man, believing that astrology, magic, and witchcraft played a significant part in the causes of disease. Along with detailed descriptions of surgical procedures, it contains chapters on white and black magic as well as sorcery, and includes a plate showing the Zodiac man as a guide to astrological influence on disease sites, which by the late 16th cent. was generally considered unreliable.

At the age of thirteen he began his medical career as an apprentice to a barber surgeon, and for a considerable portion of his life Bartisch was an itinerant surgeon who plied his trade throughout Saxony, Silesia and Bohemia. He eventually settled down in Dresden, and in 1588 became court oculist to Duke Augustus I of Saxony. Although Bartisch was not academically trained, he was considered a highly skilled practitioner of ocular medicine and surgery. His work reflects a tremendous breadth of knowledge based on experience and observation and mixed with an interesting component of superstition that was, of course, part of the fabric of his time and experience, superstition notwithstanding, this milestone work in the history of medicine and ophthalmology underscores Bartisch’s skill as a master of empirical learning rather than his adherence to the quackery of traditional scholars of medicine of the day. The book is organized appropriately beginning with head and eye anatomy and proceeding to strabismus, cataracts, external disease, and trauma. There is also a chapter on injuries and defects resulting from magic and witchcraft. The chapters are generally formulaic, each including a description of the disorder, followed by a discussion of the disease, a list of largely herbal prescriptions, and ultimately, surgical approaches. Bartisch based his method of eye care on an effort to understand the anatomy, physiology, and optics of the eye. His anatomical plates are famous for flaps that can be lifted to reveal the next layer. He distinguished different kinds of cataracts according to their color (white, blue, gray, green, yellow, and black). He described cataract couching and its complications, and he recommended several different kinds of eyelid surgery. He had suggestions for the management of exophthalmos (unnaturally large, wide eyes) and he recommended masks for the correction of misaligned eyes. Bartisch was strongly opposed to the itinerant oculists of the day, and he was not fond of the new fashion of using spectacles, he could not imagine how an eye that was already seeing poorly could ever see better when something was placed in front of it. Once Johannes Kepler (1571 - 1630) showed that the retina was the percipient surface, and the lens and cornea were the refracting media, the eye was gradually conceded to be an optical instrument, and the rational use of glasses became appreciated. According to Bartisch’s own claim, the remarkable illustrations were based on watercolors that he had done of his cases. Two plates bear the monogram of an unidentified Saxon print-maker of the second half of the 16th cent.: „HH“ (Nagler II, 373-74, no. 1023).- VD 16, B 558; Garrison-M. 5817; Norman 125 (uncolored, Sale no. 30; \$

36.800.-); Durling 479; Waller 756; Hirschberg § 320, S. 335 ff.; Becker Coll. 34; Wellcome 697; Grolier. Medicine 22; Choulant - Frank 234; Heirs of Hippocrates 369.

### **Tropical Fish**

#### **BENNETT, John Whitchurch.**

A selection of rare and curious fishes found upon the coast of Ceylon: from drawings made in that island & coloured from life. With letterpress descriptions.- London: printed for the author, Longman, Rees, Orme, Brown and Green, 1841. 4to (307 x 245 mm) VIII, 30 Bll. text, 30 fine full page hand - colored lithograph plates by J. Clark after Bennett's drawings, each plate accompanied by a tissue guard and a page of description. Contemporary purple publisher's cloth, spine faded.

GBP 10.000.-

On the fish of Sri Lanka, a lovely copy and rare in any edition; probably the most spectacular publication on tropical fish, renowned for its accuracy and beauty. Bennett's book described thirty species of exotic fish found in the Indian Ocean in gloriously colorful detail. He produced dazzling effects that conveyed the full glory of these colorful fish to a British & European readership in 1830's.

The British army officer John Whitchurch Bennett (1790-1853) who worked as a Civil Servant in Ceylon (now Sri Lanka) from 1816 to 1827, explains in the preface of his book that he has adhered in his drawings of the fishes, strictly to nature; and, as far as his colors permitted, imitated their various hues: but, alas, in vain must be every endeavor to attain perfection. The details of his life are sketchy, but he is best remembered for the two outstanding books he wrote, reflecting the interest he had in the country and its natural resources. He served in the Royal Marines from 1806 to 1815, transferring to the British Army in 1815 as a 2nd lieutenant. In 1816, he and his wife sailed to Ceylon to join his regiment, where he later worked in junior posts within the Civil Service and was appointed Sitting Magistrate at Galle and Hambantota on the south coast of the island. When in 1827 Bennett left Ceylon, it was under a cloud: he had been accused of financial mismanagement. He was a member of the Literary and Agricultural Society of Ceylon when he proposed the publication of „A selection ... Fishes“ in 1825. The Society's members agreed to finance the production by subscription, with the government subscribing to three copies of his 'fishes' at £6, 6d. each, a remarkably high price for the time.

Bennett made his drawings from living specimens, hand-coloring them and providing the accompanying text. In the text he gives both the Latin and native name, with a description of the fish plus information on their habitat and the native use of each fish. He named the great trevally, a new fish species to science, *Scomber heberi*, in honor of Reginald Heber, Bishop of Calcutta, who had supported Bennett's ichthyological research. Scientific and local names in Singalese are given for each species. „In my drawings of the fishes I have adhered strictly to nature; and, as far as my colours permitted, imitated their various hues: but, alas, in vain must be every human endeavour to attain perfection!“ (Preface).

The completed manuscript was shipped with a payment of £73 to Rudolph Ackermann, the leading London publisher of color-plate books. The plates were first published in parts between 1828 and 1830, and the work was successful enough for further editions to be published in 1834, 1841 and 1851 (maybe only with canceled title-page).

Bennett left Ceylon in 1827 a disappointed man, recalled by an order from England. He is listed as a Fellow of the Linnean Society and as a Fellow of the Horticultural Society, with a London address in Prospect Place in 1829.

Working as a printer, he suffered bankruptcy in 1839, and was confined to the Fleet Prison.- Alwynne Wheeler 1999, Nissen ZBI 316; Peter Dance, Art of Natural history, 1990, pp. 6, Nissen, SFB 15; Wood, pp. 231; Buchanan, Nature into Art, pp. 147; Dean I, 100.

### **Modernist photographer**

#### **BRUGUIERE, Francis Joseph.**

London and beyond. 13 silver gelatin photographs from original negatives of the photographer in the possession of the editor.- Berlin: edition MK, 2021. Folio (425 x 320 mm) 13 photographs (ca. 250 x 170 mm) mounted under boards in clamshell box. One of five copies printed.

GBP 3.000.-

Only 5 boxes were made (numbered/stamped - I. to V.) and box no. I. includes the original negatives by Bruguiere from the property of Rosalinde Fuller.

„Bruguiere’s (1879-1945) earliest photographs bear the hallmarks of Pictorialist style: the idealization of scenes by soft focus, manipulation of the negative to perfect the beauty of portraits.

Throughout the 1920s his photographs moved from Pictorialist mystification to modernist abstraction. He was particularly interested in double exposure, montage, and, later in the decade, the production of abstract constructivist images made of geometric patterns of light. Spending the final years of his life in London, Bruguiere devoted himself to ceaseless experimentation in multiple exposure montage prints of persons and places, stylist modernist advertising imagery, abstract short films examining the play of light on cut paper forms, and solarized figure studies in the style of Man Ray.“ (David S. Shields) Born into a cosmopolitan family of bankers in San Francisco, Francis Bruguiere (1879 - 1945) embraced photography in the spirit of amateur idealism shared by other California pictorial photographers, desiring to marry painting with photography. Trained as fine artist, he viewed photography as a medium for investigating form, space, and mood. In 1905 Bruguiere moved to New York to commune with the figures who most shaped the pictorial movement. He met Alfred Stieglitz, was introduced to the circle who contributed to *Camera Work*, and attached himself to Frank Eugene Smith (Frank Eugene). Noting the success of other photographers, he moved in 1911 to Manhattan establishing a studio on 16 West 49th Street. Bruguiere appeared at the outset of a boom in performing arts and fashion photography driven by the theater and by the artistic ambitions of magazines as *Vanity Fair*, *Harper’s Bazaar* or *Vogue*. He became the photographer for the Theater Guild and imbibed their experimental modernist aesthetic. His expressionist production photos were the most evocative stage portraits of the late 1920s. Like the early surrealists, he was fascinated with the idea of making a film, generating a non-linear pictorial story board for the production in a set of images that was exhibited in New York (1927) and Berlin (1928) along with his watercolors and drawings. In 1928 Bruguiere moved to London with actress Rosalinde Fuller and shot a short experimental film, “*Light Rhythms*,” noteworthy for its thoroughgoing abstraction. Articulate, deeply informed, and possessed of an exquisite sense of form and tone, he was among the least witty of talented photographers. During World War II he turned aside from photography and resumed painting. He died shortly after the armistice in 1945. Lit.: Francis James Enyeart, *Bruguiere: His Photographs and His Life* (Knopf, 1977).

### **BRUGUIERE, Francis Joseph.**

The Modernist. 13 silver gelatin photographs from original negatives of the photographer in the possession of the editor.- Berlin: edition MK, 2021. Folio (425 x 320 mm) 13 photographs (ca. 250 x 170 mm) mounted under boards in clamshell box. One of five copies printed.

GBP 3.500.-

Only 5 boxes were made (numbered/stamped - I. to V.) and box no. I. includes the original negatives by Bruguiere from the estate of Rosalinde Fuller.

### **BRY, Johann Theodor (Jean Theodore) de; Mattheus MERIAN the Elder.**

Florilegium renovatum et auctum; Das ist: Vernewertes und vermehrtes Blumenbuch; von mancherley Gewächsen, Blumen und Pflantzen, welche uns deren Schönheit, lieblicher Geruch, Gebrauch und mannigfaltiger Unterschied angenehme machet, die nicht allein auß der von uns bekandter, sondern auch den alten unbekandter Welt fruchtbaren Schoß uns herfür gegeben werden ... Franckfurt am Mayn: Matthäus Merian (d. Ältere) Buchhändlern, 1641 - (1647). Folio (310 x 200 mm) 2 leaves incl. engraved front. & title, pp. 5-14, engraved double-spread broadside (Hortus A... Iohanne Swindio), 32 leaves (engraved plates for Ferrari), 144 leaves (engraved plates de Bry). The engraved plates for Ferrari are plans for gardens, garden tools, flower arrangements, containers, and plants with names in Latin. The engraved plates for de Bry are numbered 1-50, 50A, 51-142, of which 85, 86, 113, 116, 123 and 142 are folding. Plate (143) is: „Hic Flos Rosarum Pragae...“ Small folio in a contemporary brown calf, gilt spine in compartments, red speckled edges, rubbed and soiled, corners bumped. Title with ownership inscription in ink (Landberg ?), repairs at first edges, otherwise inside partly little water-stained, minor or little defects (spots on two plates), a few old repairs to folds, else a fine copy in its first binding (?).

GBP 14.000.-

Very rare complete copy of Merian’s amplified version of the opus magnum of his father-in-law, Johann Theodor de Bry, with the full suite of 177 engravings. The majority of copies are lacking at least one plate among 50A, 142

(evidently issued in 1644), or the terminal rose of Prague (*Hic flos rosarum Pragae repertus*), dated 1647. However this copy is complete.

„In 1641, twenty-one years after the death of Johann Theodor de Bry, Matthaeus Merian the Elder published an amplified version of the *Florilegium novum* of his father-in-law, entitled *Florilegium renovatum*.

Merian was born in Basel in 1593, and after studying with Dietrich Mayer in Zürich and living for a brief period in Paris, he settled in Frankfurt, where he married de Bry's daughter. A versatile artist, Merian not only continued the work of his father-in-law as an engraver, he also painted landscapes, portraits and historical scenes. His children include Maria Sibylla followed in his footsteps.

*Florilegium renovatum* is a much richer work than the earlier *Florilegium novum*, many illustrations from other sources having been added to de Bry's seventy plates. The first thirty-two plates were drawn from *De florum cultura* by the Jesuit Giovanni Battista Ferrari, which was published in Rome in 1633. Merian reproduced Ferrari's plates, reversing them in the printing process, and sometimes adding butterflies or other features or combining figures from more than one illustration (incl. images of Caspar Bauhin and Emmanuel Sweerts's *Florilegium*).

The large folded engravings of the book are entirely new, however. They present exotic and unusual plants, some of which the artist might have seen in the gardens around Frankfurt, such as the ‚*Lilium Liliorum sive 122 lilia...*‘ (plate 116) and the plate ‚*Lilium Wran. multifolium*‘ which flowered in the garden of the Princess of Stuttgart. Plate 124 depicts the *Hyiucca*, or Canadian *Yucca*, now called the *Yucca gloriosa indiana*, painted from life as this plant flowered in the garden of Remigio Fesch in Basel in September 1644.

One can readily understand the economic reasons underlying the production of works such as Merian's *Florilegium renovatum*, for authors were not always able to provide original illustrations drawn from life, and they thus resorted to copies and replicas of illustrations from other works. Notwithstanding these limitations, Merian's *Florilegium* is an admirable work, executed by an accomplished engraver.“ (Lucia Tongiorgi Tomasi)

„Neuauflage des *Florilegium* (1612-14), eines der schönsten deutschsprachigen Blumenbücher. Das „*Florilegium*“ wurde das bekannteste deutsche Blumenbuch, das auch vielfach als Muster- und Vorlagenbuch für Kunsthandwerker diente. Die Blüten und Stengelteile werden häufig getrennt von den Zwiebeln dargestellt. Matthäus Merian d. Ältere (1593-1650) hatte nach dem Tode Johann Theodor de Bry's den Verlag übernommen und er legte das erstmals 1612 in Oppenheim erschienene *Florilegium Novum* „, seines Schwiegervaters erneut vor und gab der Ausgabe ein Vorwort mit. De Bry hatte für die 87 Tafeln seines *Florilegiums* überarbeitete, seitenverkehrte Nachstiche nach Pierre Vallets *Le Jardin du Roy très chrestien Henry IV* (1608) (einige Insektendarstellungen wurden fortgelassen, hingegen Wurzeln und Zwiebeln hinzugefügt), nach dem *Hortus Eystettensis* (1613) und nach dem *Hortus Floridus* (1614) des Crispijn van de Passe genutzt. Die erweiterte Neuauflage verlegte Matthäus Merian unter dem Titel *Florilegium Renovatum* in einer lateinischen und einer deutschen Ausgabe. Bereits Johann Theodor de Bry hatte 1613 eine ‚Erweiterung oder Vortpflanzung des newlich angefangenen, schon vermehrten Blumbuchs‘ ab Tafel 55 begonnen. Die Plattengröße variiert zwischen 226-270 x 169-180 mm. Der Band zeigt 142 Abbildungen einheimischer und exotischer Gartenblumen, etliche stammen davon von Matthäus Merian dem Älteren, der die Ausgabe „noch einmahl, aber auch umb etliche unnd dreyßig Figuren vermehret“, deren Vorlagen er dem Botanischen Garten in Frankfurt verdankte. Eine weitere Ausgabe wurde unter dem Titel *Anthologia Magna* (142 Tafeln) 1626 in Frankfurt am Main veröffentlicht. Merian fügte den gestochenen Titel und die ersten 32 Tafeln mit Gartenornamenten nach Giovanni Battista Ferrari's *De florum cultura* (1633) hinzu. Der Kupfertitel zeigt fünf Frauen, die eine Stele bekränzen. Beigegeben ist außerdem eine Ansicht des Gartens Johann Schwindens (Swint) in Frankfurt a. M. Die Exemplare variieren in der Zahl und Anordnung der Tafeln. Michael Bernhard Valentini übernahm die Tafeln in sein *Viridarium Reformatum* von 1719 und selbst 1770 erfolgte ein weiterer Abdruck unter dem Titel *Recueil des plantes*.“ VD17 14:074315H; Isphording 106; Nissen BBI 274; Hunt 237 (latin text); Oak Spring Flora 16; Pritzel 1299; Wüthrich II, 18.

### **BUCH, Leopold von.**

Geognostische Beobachtungen auf Reisen durch Deutschland und Italien angestellt. (Zweiter Band:) Geognostische Beobachtungen ... Mit einem Anhang von mineralogischen Briefen aus Auvergne an den Geh. Ober - Bergrath Karsten. 2 Vols.- Berlin, Haude & Spener, 1802 - 1809. (210 x 130 mm). XXII, 1 Bl. Errata, 320 pp.; 2 Bll., 318 pp., (2, Errata) with engr. frontispiece in aquatinta in vol. II, six engraved fold. plates (numb. 1-5 and one unnumbered) and one multi-fold. geological map which should have been bound as front. to Vol. I. but is bound at the end. Contemporary black half calf marbled boards, marbled edges, a few underlinings in colored pencil, little spotted, else fine copy.

GBP 2.000.-

Rare first and only edition of this important work on vulcanism and its formation in Italy and in France; a work including the first geological map of Schlesien from the year 1797 with 10 different colours and maps of the Puy de Dôme near Clermont-Ferrand which are especially of interest.

When this eminent geologist wrote the first part of volume one on the Geognosy of Silesia, he was a zealous upholder of the Neptunian theory of Abraham Werner, with some modifications. In 1797, he met Humboldt at Salzburg, and with him explored the geological formations of Styria, and the adjoining Alps. In the spring of 1798, Buch extended his excursions into Italy, where his faith in the Neptunian theory was shaken. In his early works, he had advocated the aqueous origin of basaltic and other formations, but now he saw cause to abandon Werner's theory, and to recognize the volcanic origin of the basalts. He saw Vesuvius for the first time in 1799. Later, in 1805, he had the opportunity, along with Humboldt and Gay Lussac, of witnessing its actual eruption. It was a remarkable eruption, and supplied Buch with data for refuting many erroneous ideas then entertained regarding volcanoes. In 1802 he examined the extinct volcanoes of Auvergne in the south of France. The aspect of the Puy de Dome, with its cone of trachyte and its strata of basaltic lava, induced him to abandon as untenable the doctrines of Werner on the formation of these rocks. The results of all these geological travels were given to the world in the two volumes here.

The German geologist and paleontologist Christian Leopold von Buch (1774 – 1853) is remembered as one of the most important contributors to geology in the first half of the nineteenth century. His scientific interest was devoted to a broad spectrum of geological topics: vulcanism, petrology, fossils, stratigraphy and mountain formation. His most remembered accomplishment is the scientific definition of the Jurassic system. Buch's geological excursions, even in countries which he had repeatedly visited before, continued without interruption until a very advanced age: eight months before his death he visited the mountains of Auvergne, and on returning home he read a paper on the Jurassic formation before the Academy of Berlin. Humboldt, who had known him intimately for a period of more than sixty years, called him the greatest geologist of that period. Buch was unmarried and lived aloof from the world, entirely devoted to scientific pursuits. His excursions were always taken on foot, with a staff in his hand, and the large pockets of his overcoat filled with papers and geological instruments.- Poggendorff I 325; DSB II 557; LKG XIV, 519; Roller & Goodman I, 179; Ward/ Carozzi 361.

### **The Winter Queen's, Elizabeth Stuart, copy**

**CAUS, Salomon de.**

La Perspective, avec la raison des ombres et miroirs.- London, John Norton & Frankfurt, widow of Levinus Hulsius, 1612. Folio.

GBP 45.000.-

A wonderful, large copy, of the First Edition, third issue, of the first comprehensive treatise on perspective published in England, here bound in contemporary vellum with gilt edges and with a fascinating ROYAL Provenance: This is the Winter Queen, ELIZABETH STUART'S copy, and likely a gift from her former instructor, Salomon de Caus, who also designed hers and her Husbands Gardens at Heidelberg.

Caus book: LA PERSPECTIVE is also renowned as one of the first works to employ paper flaps or Pop-Ups.

In addition to its Unique Provenance the copy offered here is exceptional for containing the correct number of flaps or pasted-on pop-ups to a total of four plates as intended.

The text is in four parts. The first part lists geometric principles and definitions, including the fundamental law of perspective: The eye is the center of all things seen. The second part comprises 31 chapters and treats the following subjects in detail: the drawing of various objects in perspective, trompe l'oeil mural painting, anamorphosis, and the drawing of objects in oblique perspective. The third part, titled Des Ombres, examines shadows in perspective under varying intensities and directions of light. The fourth part, Des Choses qui apparoissent aux Miroirs planes, & de la raison de Telles apparitions, provides examples of mirrored objects in perspective on the basis of six theorems.

Throughout, de Caus uses a method of double projection, which suggests he was familiar with earlier theories on perspective, including those of Leon Battista Alberti (1404-1472) and the Arab polymath Alhazen (Ibn al-Haytham, d. c. 1041).

La perspective is among the earliest scientific works and the second on perspective to include paper flaps that serve an interpretive and explanatory purpose; the first was John Dee's Euclid, 1570. The distinctive regal binding of this copy, which bears the combined armorial devices of the House of Stuart and the Palatine Electorate, suggests that it was likely given by de Caus to Elizabeth Stuart after her marriage to Frederick V in 1613. The gift would have been poignant for Elizabeth, as de Caus not only instructed her in drawing, but first formalized his theories on perspective in lessons to her brother Henry, who had died in November 1612. De Caus's dedicatory epistle to Henry, signed and dated 1 October 1611 from Richmond Palace, emphasizes this provenance: Having for the last two or three years

given some lessons on perspective to you I have been emboldened to bring my lectures into the light of the French language, as it seems to me that this science has not yet been well demonstrated in this tongue”.

Work of great interest for its material on anamorphosis. As an example of technical illustration it presents a large number of perspective problems, including intricate projections and optical illusions, drawing of shadows in perspective, and mirroring of objects. Salomon de Caus (1576–1626), trained as an architect-mathematician and hydraulic engineer, was renowned not only for his garden designs with magnificent waterworks, but also for his many publications on topics relating to the arts and sciences. His most influential works include the Hortus Palatinus (1620) on his Heidelberg garden designs, and Les raisons des forces mouvantes (1615), setting out the principles of hydraulics on which the automata or trick fountains and water jokes in the seventeenth-century garden were based. Familiar with the waterworks in Italian Renaissance gardens (Villa d’Este, Tivoli, and Pratolino, Florence), ultimately derived from the just reissued works of Hero of Alexandria (first century A.D.), de Caus introduced hydraulics into the Northern European garden. His influence was widespread at the courts of the Southern and Northern Netherlands, Germany, and also England, where his younger brother Isaac de Caus worked.- VD 17 1:080353E; Ornamentstichkat. Bln. 4706; Poggendorff I, 404; Millard II, S. 268.

### **Bees, Ants, Wasps**

#### **CHRIST, Johann Ludwig.**

Naturgeschichte, Klassifikation und Nomenclatur der Insekten vom Bienen, Wespen und Ameisengeschlecht; als der fünften Klasse fünfte Ordnung des Linnéischen Natursystems von den Insekten: Hymenoptera. Mit häutigen Flügeln. 2 Vols. - Frankfurt am Main: Hermann 1791. (215 x 160 mm). 535 pp., (1) with double spreading engraved & hand-colored title, designed by Johann L. Christ and engraved by Johann Müller, with atlas with the same double spread engraved & hand-colored title (often missing) and 60 engraved plates in fine contemporary hand-coloring. Contemporary Swedish brown half calf with red morocco label, marbled boards, binding faded and little rubbed, inside in mint condition, with red ribbon bookmarker, former owner inscription in the first volume deleted, fresh and clean, a near pristine copy in its first binding. GBP 10.000.-

First and only edition of this beautiful and famous book on bees, wasps and ants (hymenoptera), rarely seen on the market, especially in this pristine condition.

„(The scientific work on hymenoptera) is appreciated for its many magnificently colored plates and for the fact that it contains a number of new descriptions. The book was published in a small edition and has now become very rare. Its price is constantly rising“. (Junk, Rara)

The German naturalist, gardener and „Obstpfarer“ Johann Ludwig Christ was born in Öhringen, Baden - Württemberg, in 1739. As his popular epithet suggests, he was actually a theologian by profession. In Rodheim vor der Höhe (Wetterau), he worked as a pastor from 1776, after intermediate stations in Bergen (Frankfurt a. M.) and Rüdighheim, then from 1786 as head pastor in Kronberg in the Electorate of Mainz.

His real passion, however, was gardening and writing about gardens. He was intensively engaged in theory and practice in various branches of agriculture, especially fruit growing and beekeeping. In Kronberg he established two nurseries of his own and in this way gathered a wealth of practical experience. The spread of the cultivation of sweet chestnuts and mirabelles can be traced back to him. He was particularly concerned with the systematic classification of the various fruit varieties. His detailed works were both technically well-founded, so that they were considered standard works of pomology for many years, and practically written, which made them extremely popular and earned him the designation „fruit priest“. He was also a specialist in the Hymenoptera and described numerous new species, such as the Gallic wasp. This work was partly based for the first time on observations of living insects, which had previously been known to science only on the basis of collection specimens. Christ was not only one of the most important pomologists and bee scientists of his time, but saw himself above all as a teacher close to the people, not least to improve the meager income of small farmers,- as can be seen from the relevant titles: In 1784, for example, Christ published a Bee Catechism for the Country People, and three years later a Guldnes ABC Book for the Farmers. In 1813, Christ died in Kronberg of typhus, known as a famine disease. Condition: plate VI with brown spot in one edge.- Nissen 882; Horn- Schenkling 3575; Hagen I, 129, 4; Junk, Rara 214 (1913-39): „Der Verf., Pfarrer Johann Ludwig Christ (1739-1813), war Ende des 18. Jahrhunderts einer der angesehensten Fachleute auf dem Gebiete der Imkerei ... Sein einziges wissenschaftliches Werk ist das obige. Dieses wird wegen seiner vielen prächtig colorirten Tafeln und wegen des Umstandes geschätzt, dass es eine Zahl von Neu-Beschreibungen enthält. Das Buch ist in einer geringen Auflage erschienen und jetzt sehr selten geworden. Sein Preis steigt dauernd.“

## Mysteries of numbers

### CLICHTHOVE, Josse

De mystica numerorum significatione opusculum ... – Paris, Henri Estienne, 16 December 1513. 4to (189 x 137 mm). a8 b4 c-f8: 41, (3) leaves. Repair to lower right corner of title-page. 18th century quarter chagrin, gilt title on spine. Woodcut title-border (Schreiber n° II).

GBP 7.500.-

Uncommon - the last copy at auction was the Honeyman copy in 1979.

”First (and apparently only) edition of the first separate treatise on the mystery of number to appear in print. Smith [”This is, I believe, the first separate treatise on the mystery of numbers to appear in print. Paciucolo had included a good deal of such material in his Summa of 1494, and about a century later Bungus published a monumental treatise upon the subject, but Clichthoveus was a pioneer in the publication of a separate work.”] justifies its inclusion in his list of arithmetics as not being ’unrelated to the number theories of the medieval writers and even of the Pythagoreans. Clichthove discusses the religious significance of one and the numbers of the first decade. He also mentions several larger number which were supposed have some scriptural significance, not forgetting, of course, 666, the number of the beast. There is also a chapter, generally unrecognized by writers on the history of the subject, on finger-reckoning.”

There is an issue of the book with the title-words only but without woodcut border and without the two lines at the bottom of the page: Venale habetur Parisijs in officina Henrici Stephani chalcographi (ubi impressum est) e regione scholae Decretorum. Schreiber 19 is the issue without border likewise the Honeyman copy. The Bayerische Staatsbibliothek has also a copy without woodcut border, and it is possible to see there digital copies of both issues. Renouard has no note about the different issues.

Moreover not only the title-page appears in two issues but also the text of quire a, which has minimal differences in the setting. To make it complicate you can not ascribe setting A of the first quire to copies with woodcut border and setting B to those without it – or vice versa: both title-pages appear with both variants of the setting of the text.

One strange thing both issues have in common is the wrong numbering and signatures of leaves c3 to c6: signatures b3-6 instead of c3-6, and leaf numbers 11 to 14 instead of 15 to 18. Strange I think is, that the wrong letter b and the wrong ciphers 14-18 are deleted by hand in all available digital copies of both issues, but corrected by printing the correct letter c and the correct numbers. That means the second print sheet of quire c had to go twice through the press. If you delete the mistakes of these four leaves of all copies by hand, why not correct these also by hand?

Smith, Rare Arithmetica, 94-95; Renouard 14, n° 5; Renaudet, Préréforme et humanisme à Paris ... 64; Thorndike VI, 444: I have not seen this treatise; Stillwell, The awakening interest in science, n° 159; Schreiber, The Estiennes. n° 19.

## Pre - Surrealism

### COOKE, Edward William.

(Entwicklungsgeschichte) Grottesque Animals: Invented, Drawn and Described by E.W. Cooke.- London: Longmans, Green and Co., 1872. Sm.folio ( 315 x 250 mm) VI, 24 text leaves and 24 autotype plates, each plate with two or three illustrations, printing humorous descriptions of each on the opposing leaf. Publisher’s cloth, gilt printed illustrated covers, all edges gilt; minor foxing, as always binding weak and last plates newly glued in binding, largely a good, clean copy of a rare volume. On half-title a mounted author’s inscription: „To Professor Wyville Thomson from the author with very good wish for a prosperous and successful voyage.“

GBP 4.000.-

First edition, dedication copy (?), of this original, satiric take on Darwin and evolution, invented just after the publication of the „Origins of Species“ in 1864, but published first in 1872. It is remarkably clever and creative. At times bordering on the lampoonish, the illustrations and witty descriptions are surprisingly modernist. Cooke’s work depicts imaginary creatures who have been created through combining elements from marine and terrestrial fossils as well as living specimens. Dedicated to the marine zoologist Sir Charles Wyville Thomson (1830-1882) who served as the chief scientist on the Challenger expedition (Dec. 1872, that his work there revolutionized oceanography .

The English landscape and marine painter Edward William Cooke (1811-1880) was a skilled engraver from an early age and numerous of his drawings are influenced by Nicolaes Berghem [Berchem], Paulus Potter, or Karel Dujardin. He also had serious natural history and geological interests, being a Fellow of the Linnean Society, Fellow of the Geological Society and Fellow of the Zoological Society. In the 1840s he helped his friend, the horticulturist, James

Bateman fit out and design the gardens at Biddulph Grange in Staffordshire, in particular the orchids and rhododendrons.

„Mr. E. W. COOKE possesses so high a reputation, not only as one of the leading artists of the day, but also as a man eminently devoted to science, as evidenced by the fact of his having attained the double distinction of Royal Academician and Fellow of the Royal Society, that anything proceeding from his pencil cannot fail to be worthy of notice, and we have accordingly looked through this quaint collection of facsimile drawings with very great interest. Mr. Cooke states, in his preface, that he commenced this series of “grotesque combinations,” to which he also assigns the euphonious title of “Entwicklungsgeschichte”, while seeking rest and relief on the Somersetshire Coast after the dissipation attendant upon the meeting of the British Association at Manchester, in 1864, and that the idea of publication was forced upon him by friends who wished to have copies of the drawings. We are not surprised at his numerous friends and admirers desiring that these results of his holiday recreations should be given to the world; for, apart from the merits of the drawings in an artistic point of view, containing, as they do, powerful delineations of animal forms, they exhibit a singular and amusing fertility of imagination, the disjecta membra of birds, beasts, and fishes, being worked up together in a variety of fantastic forms which it would puzzle Mr. Darwin or Professor Owen to classify. The plates are accompanied by short descriptions, also by Mr. Cooke, and intended, he says, “as a key to aid the uninitiated in animal lore.”

We give our readers the following-descriptions as a sample:—“Plate v. No. 1. An odd fish—Platax—with dress of a bivalve shell, Pecten Gibbosus. The feet of a sprat-loon, Colymbus Stellatus, and tail of Beroe. No. 2. Encrinurus entrocha, a Lily-encrinure, wears the head-dress of a porpita, one of the Acalephæ. Her dress being of Flustra, her right arm is a Pentelasmis, her left a species of Serpula. No. 3. This pig-faced lady, whose body is ‘Parasmilia centralist,’ has wings of Avicunla cygnipes (both species from the chalk), and limbs of a bird (species unknown). . . . Plate x. No. 1. This scaly creature, capped by Cephalaspis, has the feet of a Brazilian porcupine, the heterocercal tail of a Palæozoic fish, and the lower jaw and tusks of Dinotherium wherewith to scratch himself. Plate xiii. No. 3. This ancient spinster, truly Palæozoic, has the triturating teeth of a fish, Cestracion Philipi; her cap is an Argonauta, her body that of the Port Jackson shark, her fan (Spanish, of course) a Renilla. Isis hippuris furnishes her arms. . . . Plate xviii. No. 1. This hollow character, formed of the lower jaw of the hippopotamus, has very diverse arms, the right being an Ancyloceras. the left Hamites attenuatus. His head-gear is well got up with hide, horns, and the beak of a spoonbill! . . . Plate xx. No. i, thanks to Monte Bolca and its elevated strata of dried fish, we have Semiophorus vellifer (a fish of the Eocene.) With Scutes on his neck, and the claws of a lion, he walks his chalks; an upper cretaceous shell, Plagiostoma spinosum, defends his body.”

Many of the plates remind us of the gambols of the crustaceae and other marine animals in Babil and Bijou, and we have no doubt that Mr. Boucicault, in his next attempt to “improve the British Drama,” will find in this volume an endless variety of suggestions for humorous stage effects. We must not omit to mention the admirable manner in which the drawings have been reproduced by Mr. Sawyer of the Autotype Fine Art Company, the plates being exact facsimiles of the drawings. We anticipate an extensive circulation for this beautifully executed and entertaining work. “ (Nature, 1873)

### illustrated by Holbein

#### ERASMUS, Desiderius.

Precatio Dominica in septem portiones distributa per D. Erasmum Roterodamum. Opus recens ac modo natum, & mox excusum. (Basel) Johannes Froben (beginning of), 1524. 8vo ( mm) ab8 c4: (20) leaves. with 8 metal-cuts. Froben’s mark on title and last leaf. Some of the illustrations with faint coloring in yellow, a few letters rubricated in yellow. One letter of the printed marginal notes on leaves a4r, a5r and b5v cropped. Modern boards. GBP 4.000.-

First illustrated edition. Jörg Schäfer’s description (catalogue 18, 1977):

With 8 outstanding illustrations by Hans Holbein the Younger, cut in metal by the Monogrammist CV (measuring 86/87 x 65 mm). First illustrated edition of Erasmus’ commentary and interpretation of the Lord’s Prayer (Precatio Dominica), written at the request of and dedicated to Jostus L. Decius (Ep. 1393). The first, unillustrated edition was apparently printed (in November/December 1523) immediately after the text was written, while Holbein and the metal-cutter CV were still working on the illustrations. Koegler, and following him, H. Reinhardt (in Einige Bemerkungen zum graph. Werk H. Holbeins d.J. in Zeits. für Schweiz. Archäologie u. Kunstgeschichte, vol. 34, 1977, pp. 237ff.), have shown with convincing arguments that the illustrated edition could not have been finished earlier than by the beginning of 1524. Owing to a misinterpretation of the engraver’s initials, Woltmann (1874) and

some other scholars thought that these cuts were by Urs Graf, but today art historians have them unequivocally restored to Holbein (cf. Basle Holbein Catalogue, 1960, no. 397, and H. Reinhardt, op. cit.).

These eight metal-cuts indeed convey the grandeur of Holbein's design and **rank among his finest contributions to book-illustration**. The dedicatee, Jostus Ludovicus Decius (or Dietz; c. 1485-1545), was a native of Weissenburg in the Lower Alsace who emigrated at an early age to Moravia. There he became a successful and rich business-man and administrator to Sigismund, King of Poland. He spent his wealth lavishly on the encouragement of art and learning and also became a patron of Erasmus. The book at once became popular; besides numerous reprints it was translated into many languages: German (twice), English (by Margaret Roper, Thomas More's daughter), Bohemian, Polish, Spanish, and Dutch.- Bezzel 1622; VD16 E-3450; Erasmus Online 3205.

### **Scarabaeus sacer**

#### **DELACROIX, Michel.**

Les Scarabées. Lucanidae. Trogidae. Scarabaeidae. Manuscript, 1960. 4to (325 x 255 mm) Manuscript on strong paper, in a titled folder and cloth case. The manuscript is composed of a calligraphic title in black and ochre, five calligraphic part-titles in ochre, 20 pp. of typescript text illustrated with 2 plates in brown ink, all followed by 29 original drawings of beetles in Indian ink or gouache mounted under matting.

GBP 4.500.-

Very interesting, unpublished entomological study illustrated with 31 finely executed original drawings of beetles. After a passionate introduction expressing the author's love for beetles, the book deals with the morphology of beetles, the characteristics of the three families described and gives the explanation of the plates by indicating for each beetle its scientific name, its measurements, its description, its habitat, its period of life and its rarity on the French soil. The book ends with a study devoted to the sacred beetle (*Ateuchus Sacer*) through its cult among the Egyptians and its symbolic use among the Greeks and Romans.

The French Painter Michel Delacroix (1826 -) is mainly known for Parisian street scenes in the style of naive art. Born and raised in Paris, Delacroix studied art at the *École des Beaux-Arts*. He interrupted his studies for extended periods to explore his hometown on extended walks. For a short time he worked as a stage designer for Marcel Marceau. After completing his studies, he initially earned his living as an art teacher. Over the years he experimented with various techniques and styles. Naive painting eventually became his preferred means of expression. With a filigree brushwork, he depicted in lively colors mainly Parisian street scenes of the early 20th century, when horse-drawn carriages and gas lamps dominated the street scene. In many of his lithographs, well-known buildings such as the Eiffel Tower or Notre Dame can be seen in the background.

Michel Delacroix was particularly successful in the USA, where he was the focus of numerous exhibitions. In 1996 he was appointed the official painter of the Atlanta Summer Olympics. His most important awards include the Grand Prix des Amateurs d'Art (Paris 1975), the Grand Prix de la Côte d'Azur (Cannes 1976) and the Premier Prix de Sept Collines (Rome 1976).

### **photographs of the moon**

#### **DE LA RUE, Warren.**

The Moon. 1862. Accordion-bound album with twelve albumen prints mounted in carte - de - visite style. Leather bound accordion with title on upper cover. Size: folded: 211 x 211 mm; unfolded: 211 x 1219 mm.

GBP 4.000.-

Inspired by John Adams Whipple's daguerreotypes at London's Great Exhibition of 1851, the astrophotographer and amateur astronomer Warren De La Rue began experimenting with lunar photography, using wet-collodion glass negatives and a telescope of his own design. Because his first telescope had no clockwork mechanism, his earliest trials required an assistant to carefully move it in sync with the moon's trajectory through the night sky. By 1856 he had upgraded his instruments, and he began producing prints of unprecedented clarity. Back in the 1850s he had to build his own "camera" to do this. It equates to a 3000mm f/9 camera to expose a wet glass plate so telescope, observatory and darkroom had to be combined. His exposure times were around 1-20 seconds for those materials but as coating, exposure and processing had to be done in short succession the exposure was still the shortest of the steps. With a wood burning stove to stoke to keep the darkroom temperature within range and even achieving focus was an art. A quote from Warren in 1859 is appropriate here "To photograph the moon continuously is a laborious undertaking and affords full occupation for one observer, who must not fail to pay unremitting attention to the

condition of the various chemicals employed, so as to be always prepared for a fine night with such as will work.“  
Between 1857 and 1862, De La Rue made a series of stereoscopic Moon images. - Lit.: Corey Keller (ed.) Brought to Light. Photography and the invisible, 1840-1900. no. 51;  
<https://societyforthehistoryofastronomy.files.wordpress.com/2013/01/warren-de-la-rue-aa5-18feb2011p14-35.pdf>

### **EULER, Leonhard**

Institutionum calculi integralis volumen primum (et secundum, tertium, quartum). 4 Vols.- St. Petersburg, Academia Imperialis Scientiarum, 1770-1794. Quarto. 2 Bl., 466 pp.; 2 Bl., 434 pp.; 4 Bl., 639 pp.; 4 Bl., 620 pp. with 3 fold. plates. Early nineteenth century calf, rubbed and soiled, esp. spine ends.

GBP 2.500.-

First edition of vol. 3 and 4, second revised edition for vols. 1 and 2. With the rare fourth vol. which includes 28 single tracts out of Euler's premise and out of Journal's.

Euler's textbooks in calculus, Institutiones calculi differentialis in 1755 and Institutiones calculi integralis in 1768 – 1770, have served as prototypes to the present because they contain formulas of differentiation and numerous methods of indefinite integration, many of which he invented himself, for determining the work done by a force and for solving geometric problems, and he made advances in the theory of linear differential equations, which are useful in solving problems in physics. Thus, he enriched mathematics with substantial new concepts and techniques. He introduced many current notations, such as  $\Sigma$  for the sum; the symbol  $e$  for the base of natural logarithms;  $a$ ,  $b$  and  $c$  for the sides of a triangle and  $A$ ,  $B$ , and  $C$  for the opposite angles; the letter  $f$  and parentheses for a function; and  $i$  for  $\sqrt{-1}$ . He also popularized the use of the symbol  $\pi$  (devised by British mathematician William Jones) for the ratio of circumference to diameter in a circle.

Leonhard Euler (1707-1783), swiss mathematician and physicist, one of the founders of pure mathematics. He not only made decisive and formative contributions to the subjects of geometry, calculus, mechanics, and number theory but also developed methods for solving problems in observational astronomy and demonstrated useful applications of mathematics in technology and public affairs.

Euler's mathematical ability earned him the esteem of Johann Bernoulli, one of the first mathematicians in Europe at that time, and of his sons Daniel and Nicolas. In 1727 he moved to St. Petersburg, where he became an associate of the St. Petersburg Academy of Sciences and in 1733 succeeded Daniel Bernoulli to the chair of mathematics. By means of his numerous books and memoirs that he submitted to the academy, Euler carried integral calculus to a higher degree of perfection, developed the theory of trigonometric and logarithmic functions, reduced analytical operations to a greater simplicity, and threw new light on nearly all parts of pure mathematics.– Eneström 342 (2), 366 (2), 385 and 660; Poggendorff I, 690; Roller-G. I, 374. Sotheran 1252; Norman 734; DSB IV, 478: "The 'Institutiones calculi integralis' exhibits Euler's numerous discoveries in the theory of both ordinary and partial differential equations, which were especially useful in mechanics."

### **Venice Lagoon life**

#### **FILIPPI, Tomaso; Carlo NAYA (phot.)**

Isole della laguna di Venezia. Ricordo della Esposizione Nazionale Artistica.- Venezia, (1887). Folio ( mm) 27 leaves. Photographical Album in a splendid decorated paper binding, framed plates with elegant embroidery in gold, red and cobalt; on front one is the lion of St. Mark and indication of artist Misinato Silvio dis. Spine with title and date, sguards finely decorated with floral motifs, red cuts. Two beautiful frontispieces precede the title page: Uncompiled intaglio dedication and a splendid chromolithograph with the allegory of Venice and the indication Ricordo della Esposizione nazionale artistica. Venice 1887. The title page features the title Islands of the Lagoon of Venice within a beautifully figured frame and the name of the artist C. Godermaier dis. The verso of the title page shows author and commissioner: Photographs taken by the Stabilimento C. Naya by commission of the City of Venice, which reserves copyright.

GBP 3.000.-

Complete album in exceptional state of preservation a very interesting testimony to the lagoon life in the late 19th century. This is a famous photo album consisting of 24 albumen prints by photographer Carlo Naya. This famous collection was made by the care of Tomaso Filippi, who from 1882 joined Ida Lessiak, Carlo Naya's widow, in directing the photographic establishment of the same name. It was commissioned by the City of Venice as a tribute

album in memory of the National Art Exhibition held in the lagoon city in 1887. The Italian photographer Carlo Naya (1816 - 1882) is known for his pictures of Venice including its works of art and views of the city for a collaborative volume in 1866. He also documented the restoration of Giotto's frescoes at the Scrovegni Chapel in Padua. Naya was born in Tronzano di Vercelli in 1816 and studied law at the University of Pisa. An inheritance allowed him to travel to major cities in Europe, Asia, and northern Africa. He was advertising his services as portrait photographer in Istanbul in 1845, and opened his studio in Venice in 1857. He sold his work through photographer and optician Carlo Ponti. Following Naya's death in 1882, his studio was run by his wife, then by her second husband. In 1918 it was closed and publisher Osvaldo Böhm bought most of Naya's archive.- Sydney (25 photographs ?)

### **Roman calendar reform**

#### **GASSENDI, Pierre.**

Romanum calendarium compendiose expositum. Accessit corollarium de Romano martyrologio. – Paris, Mathurin Dupuis, 1654. (Bound with:) Gassendi, P. Notitia ecclesiae Diniensis ... Accessit Concilium Avenionense, Anni M. CCC. XXVI. Ex Manuscripto codice statutorum eiusdem ecclesiae. Paris, M. Dupuis, 1654. 4to (225 x 168 mm). (8) leaves, 189 pp., (1) p. Errata, 1 blank leaf; 185, 47 pp., (1) p. A few ink spots. Errata. 17th or early 18th century calf with later upper paste-down and fly-leaf, some restorations to the binding.

GBP 4.500.-

Very rare first editions, including Gassendi's commentary, ideas and refutations to the Roman Calendar adopted by the Catholic countries, but still in question at protestant countries. The old Julian Calendar had been established by an edict of Julius Caesar in 45 BC. Because the system of Julian years and leap years did not correspond exactly to the length of the astronomical year, dates of important Christian feasts had gotten out of alignment with the seasons. In 1579 Christopher Clavius was commissioned by Pope Gregory XIII to oversee the reform of the calendar. Clavius and his commission adopted the ideas for calendar reform of Aloysius Lilius, with some modifications, and in 1582 Pope Gregory XIII promulgated the new calendar. Catholic countries quickly adopted the "Gregorian calendar," but Protestant and Eastern Orthodox countries were very slow to do so. For example, Britain did not adopt it until 1752 and Greece until 1923. The Gregorian Calendar is now in nearly universal use. – Calendarium: J. Hamel, Bibliographie der astronomischen Drucke bis 1700, p. 176 (online).

### **First - hand account of an elephant seen in Constantinople**

#### **GILLES, Pierre.**

Descriptio nova elephanti.- Hamburg, Phillip de Ohr, 1614. Small 8vo (157 x 95 mm). 38 pp., [1]. Title with woodcut printer's device. Early 19th-century red straight-grained morocco gilt, the paneled covers with tooled corner-pieces, spine in compartments, titled and tooled in gilt, extremities lightly rubbed.

GBP 5.000.-

First separate printing of the earliest first-hand account of elephant observation, seen by the author while being in Constantinople in 1550 and published after his death as addendum to his translation of Aelian's History of animals (1562). A very scarce edition describing the two elephants seen, with further chapters on the sea elephant, the hippopotamus, the camel and the crocodile.

A very beautiful copy in red straight morocco being **William BECKFORD's** copy.

The French naturalist, topographer and translator Petrus Gyllius or Gillius (1490–1555) was well-versed in Classical Greek and Latin, as well as in natural history. Gilles seems to have spent the years 1544 to 1547 in Constantinople, gathering literary sources and investigating the physical remains of the ancient city. Cuvier notes that he saw then a dissection of an elephant of which he reports here.

Out of money, in 1548 he enlisted in Suleyman's army and joined the expedition against Persia. In 1548 he met the French ambassador to the Sublime Porte, Gabriel d'Aramon and his escort Guillaume Postel, who took Gilles with him to the Holy Land and Egypt. In January 1550, still in d'Aramon's company, Gilles returned to Constantinople. That same year he travelled with the ambassador back to France. Almost immediately upon his return, however, Gilles headed south to Rome. While in Rome Gilles began the work of sifting through the large number of source materials and notes that he had accumulated on the history of Constantinople. However, due to Gilles' sudden death of Malaria,

these texts were not published until 1561-62, by his nephew Antoine Gilles.- Hamilton Palace II, 166; Wood 358; Watt 454g; Ladvoat II, 47; Banks II, 67; Agassiz III, 55.

Provenance: William Beckford (1760 - 1844), Hamilton Palace Sale II, lot 166; Archibald Philip Primrose, 5th Earl of Rosebery, Prime Minister of Britain in 1894/95 (1847 - 1929), his sale Sotheby's, October 27 1975, lot 78; Christie's The Quentin Keynes Coll. (2004), lot. 569: GBP 4780.-

### **GMELIN, Samuel Gottlieb.**

*Historia Fucorum* auctore Samuel Gottlieb Gmelin, ... Petropoli (St. Petersburg): ex typographia Academiae Scientiarum, 1768. Quarto (270 x 210 mm). [18], 239 pp. with 35 folding copper plates engraved under the supervision of Jacobus de Stachlin - Storcksburg, plus three original samples laid down on loose paper slips, one of which dated Norwich, 1801. The 6 pp. *Explicato Tabularum*, normally found at the end, here bound with the prelims, the Natural History Museum London copy having the same arrangement. Title page & one leaf of preface with neat repair to upper margin, no loss to text. Neat, small circular and unidentified contemporary private ownership stamp to verso title. An excellent copy bound in slightly later diced russia, re-backed to style with label.

GBP 3.800.-

First book dealing exclusively with algae in which binomial nomenclature was used and the first book published in Russia on marine biology in which he described 20 types of algae in the Russian seas. It includes elaborate illustrations of seaweed and marine algae on folded leaves.

Samuel Gottlieb Gmelin (1745-1774) was a member of a celebrated family of German naturalists with Russian connections. An uncle, Johann Georg Gmelin had been encouraged by Peter the Great to move to St. Petersburg, where in 1731 he was appointed professor of chemistry and natural history at the Academy of Sciences. Soon thereafter, he undertook an exploratory journey to eastern Siberia, getting as far as Yakutsk before turning back. His nephew, Samuel Gottlieb Gmelin, was born in Tübingen and obtained a medical degree at Leiden in 1763 at the age of 18. He lived for a few years by the sea in Holland, where he became intrigued by seaweeds and began making observations, collections, and drawings. In 1767 he moved to St. Petersburg, where the Academy of Sciences published his *Historia fucorum*. In 1770, he embarked on a journey on behalf of the Russian Academy of Sciences and in the service of Catherine the Great. The interesting fact is that he was accompanied not only by the other 9 soldiers, but also a flutist and drummer. He researched flora and fauna of the western part of the Caspian Sea and was also visiting the east coast (present day Kazakhstan), making interesting ethnographic observations there. On February 5, 1774 in Dagestan, Gmelin was taken as a prisoner by the Kaitag Khan, and all attempts by the Russian authorities to influence the khan on the extradition of a scientist were not successful. Gmelin died from mistreatment (anxiety, unrest, malnutrition, exhaustion and dysentery) at the hands of a hostile tribe in the Caucasus at the age of 30. Research of Samuel Gmelin covers the broad spectre - from the Caspian birds, fish as well as mammoth remains described by him in 1769 with a flora and fauna of the Caspian Sea's region.

Like Linnaeus, Gmelin referred all cartilaginous algae to the genus *Fucus*. Unlike Linnaeus, he had a keen interest in these plants and numerous Dutch collections at hand, many of which he perceived to represent previously undescribed species. In his remarkably scholarly treatise, Gmelin synthesized all information on seaweeds. Of the 99 species of *Fucus* that he recognized, 57 were newly described, while 42 were adopted from Linnaeus. Although in some instances Gmelin gave fairly precise collecting information, for most species the collector must be inferred. He indicated the Indian Ocean as the provenance of four newly described species but gave no hint of the collector. For certain species, he cited Rumphius and Seba. Since Rumphius dealt with plants from Amboina in the Pacific Ocean part of Indonesia and many of Seba's algae came from the Cape of Good Hope in the Atlantic Ocean, we may infer that Gmelin was applying the term Indian Ocean broadly and incorrectly. However, algal specimens used by Gmelin in the *Historia fucorum* are thought to no longer exist (Dixon & Irvine, 1970).

Although reasonably well noted bibliographically & institutionally, very scarce in commerce, last time 1989 at German auctions.- Nissen BBI 722; Cleveland 487; Pritzel 3396; Stafleu & Cowan 2050; Brunet II, 1628; BM(NH) 685; Ebert 8613; Banks III, 344; Jackson 155.

### **Shell plates**

### **GOTTWALDT, Christoph.**

*Musei Gottwaldiani Testaceorum Stellarum Marinarum et Coralliorum ... Gedani 1714* (handwritten title) (maybe Frankfurt am Main, around 1758) Folio (345 x 225 mm). Collection of 49 engraved plates with

additional engraved portrait of Gottwald sen. and with a monogram surrounded by an elaborate wreath of flowers that must have been intended as a frontispiece for the book that Gottwald never published, handwritten title - page, dated Gedani 1714, minor browning and foxing. Bound in contemporary mottled calf with title on spine. An exceedingly fine calligraphed manuscript birthday poem in ink for Duke Anton Ulrich of Saxe - Meiningen (1687 - 1763) drawn and written by Heinrich David Trinks on behalf of the duke's wife, Duchess Charlotte Amalie, née Princess of Hesse - Philippsthal (1730 - 1801), dated Frankfurt am Main, November 2nd, 1758 and signed by the artist in the image in size: 535 x 375 mm is bound after. Contemporary mottled calf, morocco lettering piece, red edges, later endpapers (late 19th cent. ?), probably restored in the late 19th cent., some minor defects to one plate, but overall fine condition.

Exceedingly rare collection of plates from the Museum Gottwaldianum, probably published by Johann Philipp Breyne (1680 - 1764) after the death of Gottwaldt in Gdansk in 1714, and maybe send out to potential buyers in preparation for the auction of the collection. These is a pre-publication of the plates before they were acquired by the publisher Raspe in the late 1770's and published by him and Schroeter in 1782.

The plates were made by the older Gottwald (and S. Donnet) with the intention to publish a book which never was. It was distributed without title or text by Breyne and much later published by J. S. Schröder. Here the plates are numbered on the engraved plate differently, probably after the location within the cabinet: for instance: „Tab. VII“ (Schroeter, 1782) is here: „Tab.III, Caps: IV“. The „Tab. XXI“ (Schroeter, 1782) is here different - in the lower part of the image, the plate seems broken. A beautifully illustrated work (on shells only), which was published in 1782 by Raspe and edited by Schroeter. Rare pre-publication of these plates.

Manuscript dedication leaf / Provenance:

Designed as a capriccio within rococo ruin sand shells the poem is inscribed in a cartouche, composed with three stanzas of eight verses each in anacreontic trochae, and expresses in a very personal way the affection of the wife for her husband and her joy about his birthday, combined with wishes of happiness and blessings in a separate cartouche: „heute abermahlen glücklich erlebten Geburts-Fest Ihres herzlich geliebtesten Herrn Gemahls [ ] mit tausend Glück und Seegens Wünschen“.

Charlotte Amalie (1730-1801) was the daughter of Landgrave Karl I of Hesse - Philippsthal and his wife Christine of Saxe - Eisenach. In 1750, at the age of 20, she married Duke Anton Ulrich of Saxe - Meiningen, who was 43 years her senior and to whom she gave eight more children during the remaining period of his life. In 1763, as guardian of her sons, she took over the regency of the duchy, which was economically & financially completely ruined. Due to her tight reforms and austerity measures, the economic recovery and her promotion of intellectual life, she is considered the „savior of the duchy.“

The popular duchess was not buried in the princely crypt but, in accordance with her wishes, in the municipal cemetery.

Christophorus Gottwald created one of the largest Wunderkammer of his time. His collection was purchased by Tsar Peter the Great together with the famous collections of Seba and Ruysch and these created the nucleus of the St. Petersburg ‚Kunstkammer.‘ During his lifetime, Gottwald planned to publish an illustrated catalog of his collection with plates engraved after his own drawings. However, the book was never published, only a few of the engraved plates were distributed by Gottwald's son.

The copper plates were later purchased by the publisher Raspe, who had previously printed works on shells. Schröter was then retained to author a text. This work was published at the end of the 18th century (1782), the plates were drawn and engraved a century earlier.

In addition to being a physician and collector, Christoph Gottwald was a talented and accomplished artist. His reputation in the century after his death was based more on engravings he made of the shells in his collection than on the collection itself, which had been so quickly and thoroughly dispersed. One section of the auction catalogue is devoted to things he made, including candlesticks, beakers, game pieces, and stands for cups or dishes made of ivory turned on a lathe (this was an avocation he shared with both Peter the Great and Augustus the Strong). There were also boxes made of wood, ivory, and mother of pearl, some set with gemstones. Gottwald made a chess set of black and white stones, inset with historical personages carved in wood, and an ivory ship model. Sadly, none of these objects survive. What does survive are beautiful and remarkably detailed engravings based on his drawings. Gottwald was already an excellent artist when he went to Leiden to study medicine in the summer of 1660. He attended autopsies performed by Franciscus Sylvius and produced anatomical drawings that so impressed Professor Sylvius that Gottwald became his student and friend. While in Leiden the young Gottwald also studied copperplate engraving. It isn't known when Gottwald began the process of documenting his own collection on copperplates, but there can be no doubt that he intended to publish an illustrated catalogue in the style of other seventeenth-century collectors, which

was unfinished when he died in 1700 at the age of 63. At least 110 engravings were completed by that time. Some of the copperplate engravings were made entirely by Christoph Gottwald; his signature as both artist and engraver is clearly visible on at least one of the prints. He was assisted on some of the engraving by S. Donnet, whose mark is visible on several of the plates. The copperplates were not sold in the auction, and they and prints made from them were still in the hands of Johann Gottwald's widow in 1720, as Johann Breyne informed Hans Sloane in a letter in August of that year. They eventually came into Breyne's possession and he distributed a number of sets of the prints. The University of Basel has a copy with notes in his hand, which includes a touching and personal tribute to both Gottwalds, and a complete set is held at Strasbourg.

Illustrated among the engravings are tools that Christoph Gottwald used as a physician, scientist, and artist, anatomical drawings of humans, beavers, sea turtles and a sea lion, almost 900 different shells, and an idealized room for displaying his collection. Each plate has numbers and/or letters to reference details and some of the manuscripts by Christoph Gottwald survived long enough to be published with his turtle and beaver plates in 1781 and 1782, but not for the other items.

At some point after the death of Breyne, Gabriel Nicolaus Raspe, a Nuremberg publisher, acquired the copperplates of the beaver and turtle anatomies, with their associated manuscript notes by Gottwald, and 49 plates of the shell collection. In 1781, a book on turtles was published under the name of Christoph Gottwald, with Raspe translating Gottwald's accompanying text directly from Latin into German and providing a biographical introduction. The following year Raspe published a book on beavers in a similar fashion. While minerals, shells, and human anatomy were a major focus of Christoph Gottwald's work, the turtle and beaver anatomies resulted from chance encounters with the animals.

Unfortunately, only fragments of Gottwald's manuscript notes on the shell engravings were available, and Raspe hired Johann Samuel Schröter (1735-1808) to write the text based on Gottwald's plates and using his numbering system. The book appeared under Schröter's name but acknowledges in the title that the illustrations are by Gottwald. While the Gottwald illustrations were sumptuous, the collection illustrated was not complete according to the standards of 1782, as Schröter lamented in his introduction.

"Whole families are missing," he wrote, and "there are missing creatures and genera." Nonetheless, there were 159 species of mollusks illustrated that were not included in Martini. There are 51 total plates in Schröter's book, including portraits of both the senior and junior Gottwald. Forty-three of the engravings depict 899 shells, one has three starfish, and five illustrate 28 different samples of coral. Some of the plates are crowded with shells, a technique Gottwald used to illustrate comparative sizes and small variations.

In 1782, the same year as Raspe's publication of the beaver and shell books, Joseph Paul von Cobres (1747-1823), an Augsburg banker and collector of Natural History books, published a catalog of his private library.

Included in it was a copy of Gottwald engravings that he had purchased "from the extinct library of the Lord Cornaro, Bishop of Vicenza." Either Cornaro or Cobres made a list of the engravings in this set, which were divided into two parts: the shells and other marine animals in one, and the anatomical work and tools in the other. To identify which engraving was being described in the list, numbers were used that Gottwald had put on the plates, as well as a series of ciphers that appear on several of them (including hatch marks, circles, squares, moons, stars, etc.). Cobres was forced by financial circumstances to sell his library in 1820, and the current whereabouts of this copy is unknown.

Another bound set of engravings at Strasbourg University has a manuscript title page and notes by Jean Hermann (1738 - 1800), a professor of medicine at the University and an avid collector and naturalist. Hermann had seen the Cornaro/Cobres copy, which he references, and there are similarities in his attempt to recreate Gottwald's absent keys to the illustrations. In addition to the engravings that appeared in the books published by Raspe, there are 21 images of human anatomy, based on autopsies performed by Gottwald. Three of these are sensitive and beautiful depictions of dissections of a human head from three different perspectives, with muscles and organs revealed, including the brain. Fourteen of them show additional human organs, three show early stage fetuses (referred to as "abortus humani" by Cobres), and two show anomalous features in infants or fetuses, which Cobres calls "Monstra humana." The remaining plates show fish, seals or sea lions, with anatomical features, a large hollow tree, and seven illustrations of the tools that Gottwald used as both a physician and an artist, as well as one of the boxes in which he stored them. There is a monogram surrounded by an elaborate wreath of flowers that must have been intended as a frontispiece for the book that Gottwald never published. By the turn of the nineteenth century the bound sets, and presumably individual engravings, had become collectible and began to be mentioned in both the literature on shells and also catalogues of rare books. The British Museum had folios of both the anatomical prints and the shells by 1813, as well as the auction catalogue.

In 1815, W. Wood included a "Chronological List of Writers on Shells," in his *General Conchology; or, A Description of Shells, Arranged According to the Linnean System*. Gottwald is number thirty-three on a list that begins with Aristotle and Pliny, and his publication is given as: "Plates illustrative of his Museum, 1714." Frederic

Adolphus Ebert, the Librarian to the King of Saxony, described a bound set of the engraved plates in his massive *General Bibliographical Dictionary* in 1821, and that description has been cited by librarians and booksellers ever since. GOTTWALD, Cp. *Museum Gottwaldianum*. Without place or date (Gedani, 1714). Fol[io]. Containing 1 portrait, 1 title-plate, 49 conchyliological, and 62 anatomical and zoological plates. No text has appeared, and the book is very scarce, as it was never finished in order to publication, and only some copies have been circulated. An entirely complete copy is a great rarity, and the 3 copies which I know have only 42 conchyliological, and 58 or 60 anatomical and zoological plates. Consult *Cobres Bibl. II. 805*. A copy was offered for sale for in 1862 in London for 10 shillings and sixpence that had "upwards of 100 engravings, containing several thousand figures of shells, natural history, anatomy, & c." and "being several more than described by Ebert."

This copy also had "a brief MS. explanation of portion of the plates given on the flyleaf." The digitization of the Strasbourg copy in 2007 has made the most complete set of engravings widely available: <https://docnum.unistra.fr/digital/collection/coll13/id/43948/rec/1>

### **fossils, minerals, botany & paper**

#### **GUETTARD, Jean Etienne.**

*Memoires sur differentes parties des sciences et arts*. Par ... 5 Vols.- Paris, Laurent Prault, and Eugene Onfroy; Philippe-Denys Pierre (from Vol. IV), 1768 - 1783. Quarto (255 x 195 mm) [2], cxxvi, 439 pp., (1), (2; errata) and [18] fold. engraved plates; [4], lxxxv, (1, errata), 530 pp. with LXXI (71) fold. engraved plates by J. Robert; [4], 544 pp.; [2] Bll., (2, avertissement), 687 pp., (1, blank); [2] Bll., 446 pp., (2, imprimatur by Condorcet) with [167] engraved plates for vol. IV and V. Contemporary calf, gilt spine in compartments, yellow edges. General a very fresh, fine and broad margined copy. GBP 14.000.-

First edition, rare in complete form: „un des plus grands livres de science du XVIIIe siecle“.

A second enlarged edition was published in Paris with the publisher Costard from 1774 - 1786 in 7 vols.

The "Memoires" are mainly devoted to mineralogical, geological and paleontological subjects regarding the geography of rocks, rock formations, mines and minerals, and fossils, including reports concerning Guettard's discovery of the French kaolin deposits, weathering of mountains, fossil records, description and classification of several corals, sponges and especially tube-shaped bivalvia. 28 taxa are described here for the first time. There are also essays on paper-making. The 256 engraved plates are by Jean Robert and published here for the first time. With the financial support of his patrons and the Academy, Guettard accumulated not only specimens of rocks, crystals, fossils and mineral specimens, but a large archive of drawings and engravings of many of these objects which he witnessed in his own travels or collected in the field. The French geologist and mineralogist was also the first to survey and map the geologic features of France and to study the exposed bedrock of the Paris Basin. The keeper of the Duc d'Orléans' natural history collection, he was the first to identify several fossil species from and to suspect the volcanic origin of mountains in central France. Jean-Etienne Guettard (1715-1786) came from a modest background, trained in Paris as a botanist and a doctor, and divided his professional life between working for wealthy collectors and pursuing his own scientific work in botany, mineralogy, and related areas of natural history. Over a long career, he observed, described, and collected minerals and fossils in extensive travels across Europe, contributing to an ambitious mineralogical atlas.

„While studying medicine in the 1740's, Guettard lived in the household of René-Antoine de Réaumur, a powerful figure in the Paris scientific circles and proprietor of one of the largest natural history collections in Paris at the time. The collection grew continually for decades, through the influx of objects arriving from distant correspondents as well as those collected locally. As a curatorial assistant to this enterprise, and as a collector and observer in his own right, Guettard's work was essential to the life of Reaumur's collection. In turn, Reaumur's patronage paved the way for the young man's appointment to the Academie des sciences in 1743. ... After leaving Reaumur's household, Guettard shifted his attention increasingly to mineralogy, and especially the geography of mineral distribution. ... Although neither fashionable nor wealthy, Guettard became intimately familiar with the natural history cabinets of the capital's (Paris) elite, through his connections first to Reaumur and then to the Duke of Orleans. At his death, the duke left his valuable collection of naturalia to Guettard, but the latter ceded it to his patron's son Louis-Philippe, the new duke, in exchange for a stipend and lodgings in the Palais Royal. Guettard continued as a curator of the collection with the freedom to leave Paris on long geological expeditions from time to time.“

(Mary Terrall; in: Adiana Craciun (ed.) *The material cultures of Enlightenment Arts and Sciences*. 2016. pp. 25 ff.)

Note in the first volume one find the paper (I, 227-253): *Recherches sur les matieres qui peuvent servir a faire du papier*, which reprints a landmark paper in paper making history. The use of wood as a material from which to make paper was first suggested in the West by Reaumur observing the habits of wasp. The investigations of Reaumur while

not in actual papermaking, gave the hint to European scientists that paper might be made from other substances than rags. In 1741 Jean Etienne Guettard made his first observations regarding substitutes for rags in making paper and wrote several articles advocating the use of *coferva* (swamp moss) as a papermaking material (Hunter, Papermaking, pp. 316) According to the preface to the 4th vol., three already existing plates (doubles) should be left out by the binder (Mem. XIV, plate 11, 12 & 13). Some copies have this duplicates still present as presumably the copy, Pritzel used (stating 115 instead of 113 plates). Our copy collates as others with 113 plates (together 256 plates).- DSB V, 577-579; Schuh 2021 (only 3 vols.): "Very rare"; Oberlé 446 (3 vols. from the Duc d'Orleans library); not Schuh online; Ward & Carozzi 975; Roller/Goodman I, 491; Ferchl 204; not in Sinkankas; Pogg. I, 973; Pritzel 3631; Quérard III, 514; Hoefer XXII, 472-77; not in Honeyman & Norman; Brunet, II, 1796; France littéraire, I, 278.

### Newton, the comets of 1744 & the two-body problem

#### HEINSIUS, Gottfried.

Beschreibung des im Anfang des Jahrs 1744 erschienenen Cometen nebst einigen darüber angestellten Betrachtungen.- St. Petersburg, Akademie der Wissenschaften, 1744. 4to (235 x 190 mm). (2), 105 pp., (1) with **one mezzotint plate** and three engraved plates. Additionally bound in is an old finely hand drawn constellation map in ink, showing the course of the comet at the sky with dates of its appearance at the sky. (bound before:) **EULER, Leonhard.** *Theoria Motuum Planetarum Et Cometarum. Continens Methodum Facilem Ex Aliquot Observationibus Orbitas Cum Planetarum Tum Cometarum Determinandi. Una Cum Calculo, Quo Cometae, Qui Annis 1680 Et 1681. Itemque Ejus, Qui Nuper Est Visus, Motus Verus Investigatur* Berlin: Ambrosius Haude, 1744. [3], 4-6, 9-187 (i.e., 188: last page mispaginated), with engraved frontispiece and four folding engraved plates of diagrams. Woodcut vignette on title, woodcut initials and head- and tail-pieces. In this, as in all copies we have seen, the frontispiece, which was printed on A4, has been cut out and bound facing the title. Pages 7 & 8 are therefore omitted, but the text is continuous and the volume is absolutely complete. The remarkable engraved frontispiece by F. H. Fritsch (Berol.; Berlin) depicts the solar system with the Sun as one among many other stars in a plurality of worlds. Contemporary vellum, red edges, with some light wear, but a very good copy. Front paper renewed in the 19th cent. with Ex Libris of the astronomer Fr. Th. Schubert on inner front cover. Many corrections and commentaries to Euler's text in ink, probably by the hand of the astronomer Schubert.

GBP 4.000.-

Very rare first edition, with an additionally bound in plate showing the course of the comet, probably made by astronomer Theodor Friedrich (Fjodor Fjodorowitsch) Schubert (1789-1865), grandfather of the mathematician Sofya Kovalevskaja and a very fine, unusual mezzotint plate. Heinsius has made himself known by the excellent physical description of the great comet of the year 1744, which he followed with a telescope borrowed from the merchant Wolf.

The German mathematician, geographer and astronomer, Gottfried Heinsius (1709 – 1769) was awarded a Ph.D. in 1733 from the University of Leipzig with a dissertation on *De viribus motricibus*. Later he became professor of mathematics at the same institution. Heinsius may have been the first to publish an announcement about the return of Halley's comet in 1759. From 1736–1743 he taught astronomy in St. Petersburg along with Leonhard Euler and was a member of the St. Petersburg Academy of Sciences. The Academy appointed him associate professor of astronomy with the obligation to work as adjunct of Johann Nicolas Delisle. After the death of his former teacher in Leipzig, he was offered his position, which he accepted and therefore worked in Leipzig again from 1745-1769.

Heinsius uses here the, for scientific works, unusual technique of mezzotint: The technique of mezzotint first emerged in the 17th century in the Netherlands and was embraced by English printmakers where it rose to great prominence in the 18th century. It was the evolution of experimentation with marks on a plate, and it broke with traditional printed image making as it is not based in line work, but rather tones. The first mezzotints by Ludwig von Siegen in the 17th cent. were made using the light to dark method, but in the 18th cent. the dark to light method became the most common method. The whole surface (usually) of a metal, usually copper, plate is roughened evenly, manually with a rocker, or mechanically. If the plate were printed at this point it would show as solid black. The image is then created by selectively burnishing areas of the surface of the metal plate with metal tools; the smoothed parts will print lighter than those areas not smoothed by the burnishing tool. Areas smoothed completely flat will not hold ink at all; such areas will print „white“, that is, the color of the paper without ink. Jacob Christoph Le Blon used the dark to light method and invented the three and four-color mezzotint printing technique by using a separate metal plate for

each color. Le Blon's color printing method applied the approach whereby red, yellow and blue were used to create a larger gamut of color nuances.- SKI 1251; Brüning 1682 (wrongly one plate).

First edition of Euler's first treatise on astronomy, „a fundamental work on calculation of orbits“ (DSB); his calculations are mentioned in the Anhang (amendment) of Heinsius' book. Stimulated by the appearance of two great comets in 1742 and 1744 (now designated C/1742 C1 and C/1743 X1), Euler developed new methods to determine the (elliptic) orbits of planets and the (elliptic and parabolic) orbits of comets. His first major contribution in the present work was to the ‚two-body problem,‘ the problem of determining the motion of two spherical bodies under their mutual gravitational attraction. Newton had attacked the two-body problem using geometrical methods in his Principia, and preliminary analytical results had been presented in 1734 by Daniel Bernoulli, but it was Euler in the present work who gave the first complete analytical solution.

The second major contribution of the present work was the introduction of new techniques of perturbation theory - the method of successive approximations that Euler used to determine parabolic orbits is still known as ‚Euler's method.‘ Euler used these new techniques, together with observational data supplied by Alexis-Claude Clairaut in Paris, to calculate the orbits of the comets of 1742 and 1744, and his success stimulated others to use his methods to predict the next return of Halley's comet, which Edmond Halley had first observed in 1682.

„When Euler reported back on his successful calculation of an orbit from their data, the Parisian astronomers, even die-hard Cartesians like Jacques Cassini, had to accede to the power of Newtonian theory. In fact the French adopted it with such enthusiasm that they virtually took over the work on Halley's comet at its forthcoming apparition, Clairaut foremost among them.“ (Broughton, p. 126).- Eneström 66; Honeyman 1063; Houzeau & Lancaster 11948.

Broughton, The first predicted return of Halley's comet, in: Journal for the History of Astronomy 16 (1985), pp. 123 - 133. Holdings: Bonn, Erlangen, Bremen, Görlitz, Göttingen, et al.; ZB Zürich, Paris Observatoire, NYPL, Adler Planetarium.

### **Egyptian Mysteries in French**

#### **HERMES TRISMEGISTUS / Lodovico Lazzarelli**

Deux livres de Mercure Trismegiste Hermès [...] Avecq' un dialogue de Loys Lazarel [...] intitulé le Baÿin d' Hermès. Le tout traduit de Grec en francoys par Gabriel du Preau [...] – Paris, Etienne Groulleau, 1557. 8vo (161 x 100 mm). a8 e4 A-X8 (without blank X8): (12), 167 ff. Green morocco by Chambolle-Duru. Gilt fleuron on both covers, inside dentelle, gilt edges.

GBP 7.500.-

This is the first translation in any language from the Greek editio princeps (Paris, Morel 1554): Du Préau's translation of 1549 was based on Ficino's Latin translation. Rare. Hermes Trismegistus is a legendary Hellenistic figure that originated as a syncretic combination of the Greek god Hermes and the Egyptian god Thoth. He is the purported author of the Hermetica, a widely diverse series of ancient and medieval pseudepigraphical texts that lay the basis of various philosophical systems known as Hermeticism. The wisdom attributed to this figure in antiquity combined a knowledge of both the material and the spiritual world, which rendered the writings attributed to him of great relevance to those who were interested in the interrelationship between the material and the divine.

#### **IANNONE, Dorothy.**

Lists (IV). from The Book of D(orothy). + D(ieter). A much more detailed than requested reconstruction.- Cologne: Diver Press, 1968. oblong 4to (220 x 275 x 11 mm) Set of 34 drawings (silkscreen on plastic with foam and board). Book object. Signed and numbered at the front (#3) dated and with dedication by the artist, Jan. 18th, 1969.

GBP 2.800.-

One of 30 copies made. The bookwork embodies a visual record of Iannone's erotic relations with various partners, accompanied by a list of their names. The list ends with Dieter Roth whom she met in Reykjavik and lived with in Düsseldorf for many years. Good copy, the printed plastic still unusually fresh. The feminist artist Dorothy Iannone (born 1933) object is full of personal and sexual allusions. In Düsseldorf she developed her very own style and found the real core of her creative work. The theme of love and the taboo representation of sexuality lived out with relish continued to dominate her work.

#### **JACOBSON, Johann Karl Gottfried.**

Technologisches Wörterbuch oder alphabetische Erklärung aller nützlichen mechanischen Künste, Manufacturen, Fabriken und Handwerker, wie auch aller dabey vorkommenden Arbeiten, Instrumente, Werkzeuge und Kunstwörter, nach ihrer Beschaffenheit und wahren Gebrauche, herausgegeben von Otto Ludwig Hartwig. Mit einer Vorrede von Johann Beckmann. (from Vol. VI: fortgesetzt von Gottfried Erich Rosenthal). 8 Vols.- Berlin und Stettin: bey Friedrich Nicolai, 1781 - 1795. 4to (mm) 816 pp.; (4), 652 pp.; (4), 636 pp.; (4), 736 pp.; VIII, 768 pp.; (2), 801 pp., (1); (2), 558 pp.; (2), II, 300 pp.; (2), 420 pp. Contemporary half calf with two morocco lettering pieces, and gilt spine in compartments, red sprinkled edges, very nice copy in nearly mint condition. GBP 2.400.-

Very fine set of this rarely complete seen dictionary on all arts and crafts, with the last volume of 420 pages present which has a bibliography to each entry. An inexhaustible source on all crafts, arts, tools and engineering sciences during the Aufklärung and around 1800. Useful to understand technological texts of this time.

Jacobson studied law in Jena and Leipzig from 1743 and in 1747 obtained a position with the government in Dresden. After a duel he had to flee and became a soldier of the Electorate of Saxony. In 1755 he accompanied King August to Warsaw as a constable of the riding troopers. In 1760 he entered Prussian service and took part in the 7 Years War as a non-commissioned officer. During the years of peace in the Berlin garrison, he occupied himself with the new field of technology, inspired by Peter N. Sprengel, the principal of the School of Technology (Realschule). In Berlin factories, he studied tools, machines, and work processes, described them, and thus made significant contributions to the textbook „Handwerke und Künste in Tabellen“ (Crafts and Arts in Tables), published by P. N. Sprengel and O. L. Hartwig (1767 ff.). In 1773-1776 Jacobson's first work „Schauplatz und Beschreibung aller Zeugmanufakturen in Deutschland“ was published, through which he became widely known. Friedrich Nicolai enlisted him to collaborate on the 2nd edition of the „Beschreibung der kgl. Residenzstädte Berlin und Potsdam“ (1779), and he was commissioned by the Königsberg bookseller and publisher Kanter to translate „L'art du menuisier“ by Roubo. His „Technologisches Wörterbuch“ (vol. 1-4, 1781-84) met with great and lasting acclaim for a number of decades. Johann Beckmann had written the preface to it. Volumes 5-8 were published in 1793-95 with additions by J. F. Rosenthal. The trend-setting importance of this dictionary was shown, among other things, by the fact that Gottfried Erich Rosenthal's „Litteratur der Technologie. Verzeichnis der Bücher, Schriften und Abhandlungen, welche von den Künsten, den Manufakturen und Fabriken handeln“ (1795) was arranged according to the alphabetical order of Jacobson's dictionary. In 1781, he received the post of factory inspector in Königsberg.

### First photographs of the sun surface

#### JANSSEN, Jules.

Annales de l' Observatoire d' Astronomie physique de Paris sis Parc de Meudon, publié par M. J. Janssen. Tome I.- Paris: Gauthier - Villars et fils, 1896. 4to (280 x 220 mm) (4), 122 pp., (2) with 9 photo-gravure plates (hel. Dujardin) showing the observatory and 12 original mounted photographs (230 x 170 mm) showing the grainy surface of the sun. Original publisher's printed paper-card boards, little rubbed & dust-soiled, little spotted inside, handwritten dedication on title, else a fine association copy.

GBP 10.000.-

First photographs of the sun surface made by Pierre M. Arents and Louis Pasteur under the direction of Jules Janssen. Description of the observatory of Meudon and an essay on the photography of the sun: „Mémoire sur la photographie solaire“ with spectacular original mounted photographs (photoglyptie) of the grainy surface of the sun which were also partly later issued in his famous „Atlas de photographies solaires“ of 1904.

With **handwritten dedication by Janssen:** „à Mon cher et éminent confrère le Dr. Potain souvenir affectueux, J. Janssen“.

The French solar astronomer, Pierre Jules César Janssen (1824 - 1907) discovered that it is possible to see prominences beyond the limb of the sun without waiting for an eclipse and demonstrated that some features in the solar spectrum are actually caused by gases in the Earth's atmosphere. Janssen's device for imaging solar prominences was a prototype of the spectroheliograph. It was left to George Hale to add photographic plates to produce the first spectroheliograph, but Janssen invented other photographic devices, including an „astronomical revolver“ permitting many short images to be taken in quick succession.

The french government agreed to Janssen choice of Meudon (an old royal domain that other-wise would have been divided up for housing) as a site for a new solar observatory in 1874. At the physical observatory of astronomy of Meudon, the celestial service of photography created by Jules Janssen in 1876 undertook a systematic study of the

solar surface. Those principal results were published between 1896 and 1910 and in the astonishing Atlas de photographies solaires (1904), which illustrated the precise granulations of the surface of the sun.

The quality of the images, which resolved granulation as fine as 1" was not bettered until the 1950's. (Raymonde Bartholot) With the 5.5-inch solar telescope of the Meudon Observatory made by Adam Prazmowski, Janssen and his collaborators made some 6.000 photos of the sun during the period of 1876 to 1903. These photos are the base of Janssen' monumental work: L' Atlas de photographies solaire, published in 1904.

Of the 6000 glass plates only seven (!) survived (Launay, 2012. pp. 119).

In 1877 Janssen used this telescope to take a photograph of the solar photosphere which for the first time showed clearly the granular nature of the sun's surface. „Janssen travaille alors beaucoup avec son photographe Pierre Marie Arents (et Louis Pasteur) pour utilisier au mieux la si précieuse photographie.“ (Francoise Launay.- Lit.: Jules Janssen et la photographie; in: Dans le champ des étoiles, pp. 26); Canguilhem. Le merveilleux scientifique.

Photographies... 1844-1918. photo 58 (pp. 76), Dans le champ des étoiles. Les photographes et le ciel, 1850-2000. photo 47a+b, 48a+b; Encyclopedia of Nineteenth-Century Photography edited by John Hannavy, pp. 91; Stefan Hughes. Catchers of the Light. III. 3.6., 3.7. pp. 269 ff. BEA I, 588-89; DSB VII, 73-78.

## AUTOMATA

### **KNAUSS, Friedrich von.**

Selbstschreibende Wundermaschinen, auch mehr andere Kunst- und Meisterstücke.- Vienna: for the author by Schulz-Gastheim, 1780 sm.4to (200 x 130 mm) (18), 170 pp., (2) with engraved frontispiece portrait by Mansfeld, and 10 plates (of which 9 are fold.), errata at the end, last blank, woodcut ornaments, some dust marking to edges, else a near fine copy, clean & fresh bound in contemporary half calf, morocco title label on spine, the board corners slightly worn, otherwise quite excellent, in its first binding.

GBP 7.000.-

First edition, privately printed and exceedingly rare in fine condition, a work on early automata.

Friedrich von Knauss (1724-1789) was a watchmaker and inventor of automata, including a clockwork musician that played a simple flageolet, and some sets of talking heads. In this book here, the author describes and illustrates several automatic writing machines, designed to replicate handwritten pages simultaneously with the creation of the original, using pen and ink and both to impress and amuse royal guests. This was able to automatically write 68 Latin characters and, on its first performance, composed a letter in French. He began his career at the court of Prince Charles of Lorraine and later moved to Vienna to work for Franz I. and his wife. Maria Theresa made him the director of the Physikalisch-mechanische Kunstkammer, where he spent the rest of his life creating court amusements and more basic machines such as water pumps. His most famous, though ultimately unsuccessful, automaton is the „Four Talking Heads“. In 1779, a competition held by the Academy of Sciences in St. Petersburg had as its theme the construction of talking heads that had to be able to pronounce five vowels. The jury found Knauss's automaton to be inadequate. Knauss' contraptions foreshadow the „polygraph“ machine that **Thomas Jefferson** used extensively from 1804, to produce copies of his signature. A later mechanical development is the „autopen“, used by Harry Truman, J.F. Kennedy and other American Presidents and Celebrities.- Tomash & Williams K53; Peter Frank; Johannes Frimmel. Buchwesen in Wien, 1750-1850, pp. 178 ff.; VD18 10612114; Poggendorff I, 1279; Brunet III, 677; Roller & Goodman II, 46; Berlin Katalog 1795; Pollen 1003; BMC 14; 155; Wellcome III, 403; Chapuis & Droz 289. Provenance: Ranschburg I/1975.

## Monoculture

### **KRAUSE, Johann Wilhelm.**

Abbildungen und Beschreibung aller bis jetzt bekannten Getreidearten mit Angabe ihrer Kultur und Nutzen, in acht Heften. Zur Förderung der wissenschaftlichen Kenntniss, Gleichförmigkeit des Systems und der Benennungen dieser ersten ökonomischen Gewächse unternommen. 8 installments (Hefte) in one vol. (= all publ.)- Leipzig, Baumgärtner, 1835 - 1837. Large Fol. (440 x 290 mm). iv, (12), (24), (2), 13-32 pp., (2), 24 pp., (2), 16 pp., (2), 19 pp., (1), (2), 28 pp., (2) pp., 16, (2), 12 pp. each Heft (installment) with 6 plates, together 48 partly hand-colored engraved plates. Contemporary half cloth over paper boards, gilt printed title on spine, rubbed and soiled. Text partly foxed and at the beginning with faint water stain, plates partly browned, one plate with small ink stain, one plate with small tear in the white margin. The beautiful detailed illustrations each with stalk fruit and grain after „nature“ by Ernst Schenk.

GBP 2.800.-

Early and rare book on crop, showing 48 grains on hand-colored engraved plates; the book also describes the cultivation of grain as monoculture. The German botanist and agricultural writer Johann Wilhelm Krause (1764 - 1842) cultivated from 1826 to 1834 in his garden the varieties of the four main cereals known up to that time and published the findings (culture and benefits of these cereals) in eight installments with engravings that were engraved by the drawing teacher at the University of Jena, Ernst Schenk. The book describes all grain species (wheat, rye, barley, oats) known up to then: *Triticum vulgare*, *Triticum turgidum*, *Triticum durum*, *Triticum polonicum* and *spelta*, *Triticum amyleum* and *monococcum*, *Secale cereale*, *Hordeum*, *Avena sativa* and *Avena orientalis* and *fatua*.

Krause was a teacher, then rector at the city school in Apolda and in 1807 rector of the city school in Jena. After his ordination, in 1820 he took over the Lutheran parish of Taupadel near Bürgel and in addition to his work as a pastor, Krause was an active promoter of the dissemination of known and new knowledge for the rural population. This concerned first the detailed description of the then known cereal varieties and later the publication of the „Allgemeine Encyclopädie“. These volumes, compiled by several scholars and practical farmers, were sold throughout Germany and thus had an important influence on further education in agriculture and home economics.

Monoculture farming is one of the most disputable topics in today's agriculture industry. As the world's population augments in number and the demand for food on the global scale keeps rising, many farmers deem monoculture agriculture to be the simplest solution for satisfying this constantly growing need for victuals. In crop monocultures, each plant in a field has the same standardized planting, maintenance, and harvesting requirements resulting in greater yields and lower costs. When a crop is matched to its well-managed environment, a monoculture can produce higher yields than a polyculture. Monocultures of perennials can lead to soil and environmental problems such as soil acidification, degradation, and soil-borne diseases, which ultimately have a negative impact on agricultural productivity and sustainability. Diverse rotations of crop monocultures can minimize the risk of disease and pest outbreaks. However, the shorter the rotation (fewer crops included) the higher the risk. There are examples of short, two-year rotations selecting for pests that are adapted to such rotations.- Nissen, BBI, 1101.

Holdings: outside Germany the book is quite uncommon as in trade (Stabi Berlin (lost); Coburg, München, Bamberg; Stockholm, Utrecht, Cambridge, NHM London, Paris, Strasbourg, van Pelt Library Pennsylv., Yale Univ., Lloyd Museum Library, Texas A & M)

### **„Female Hobby“ Exquisite Baroque lace patterns**

**[LATOMUS, Sigismund, publisher].**

Schön neues Modelbuch, von sechshundert außerwehlten künstlichen so wol Italienischen, Frantzösischen, Niederländischen, Engelländischen als Teutschen Modeln, allen Seydenstickern, Nählerin und ...

Weibspersonen zu Nutz zugerichtet. Un beau et nouveau livre a patrons, enrichie des six cents belles pour traitures et patrons exquises. Frankfurt, Sigismund Latomus [Meurer], 1623. Oblong folio, 34 unnumbered leaves, including a woodcut title with German and French text coloured by a contemporary hand, and 33 woodcut plates printed in black-on-white; gathering 'C' and leaf 'N2' misbound; the tile a little frayed at outer and lower margins and mounted at an early date; lightly browned; a very well preserved copy, bound in contemporary red-dyed vellum over paste paper boards; geometric lining to covers; the boards warped.  
GBP 20.000.-

A fine copy in its original binding of what may be the final printing of this superb Baroque model book with woodcut lace patterns for needle work, with the artistic quality and intricacy of the designs much surpassing those presented in Johann Siebmacher's contemporary publication, which used copper engravings. All issues or editions of this work are extremely rare, and recorded in a very small number only.

'During the sixteenth century, the technique of lacemaking was freed from a woven foundation, and became a fabric in its own right. A number of notable pattern books for both needle and bobbin lace were published in the late sixteenth and early seventeenth centuries and these illustrate some of the pictorial designs that became possible using true lace techniques. Examples of lace exist which attest to the fact that these pattern books provided inspiration to numerous lace makers.

'There are essentially two methods of making lace: both involve the manipulation of fine linen thread and they are commonly referred to by the names of the tools used. Needle lace requires the use of a single thread and a needle to make stitches one after another that gradually build up a fabric. Bobbin lace uses many threads attached to small bobbins, which are interwoven in various combinations to create a pattern' (Melinda Watt, Metropolitan Museum of Art, 2003, online). As with the other recorded examples of Latomus' work, the title of his *Newes Modelbuch* is in contemporary colour, most probably publisher's. The central section of the lower part of the title border shows six women and two men pursuing needle work. The thirty-three woodcuts that follow, printed in black-on-white, show

highly delicate, intricate patterns. Several incorporate various animals as well as mythological creatures; two include figures in contemporary dress.

The work was compiled from blocks used for Latomus' pattern book of 1606 and Hoffmann's work of lace patterns of 1604. The present version appears to be identical in collation to the various others of this *Newes Modelbuch* produced by Latomus. Comparison between our copy and the Rostock copy of the 1609 printing (viewable online), however shows some of the blocks to be differently assembled on some leaves, and with maybe a couple of replacements. As much designed for inspiration as for practical use, the different printings can only have been produced in very small numbers nonetheless, considering the time elapsed between the Rostock printing and the one offered here, as the woodblocks employed display minimal deterioration to very few only. Some contained in ours are, in fact better inked and in decidedly darker impressions. All printings are of the greatest rarity, with the present known in one other copy only, which is preserved at University Library Erlangen-Nuremberg.

See Lotz 45a-d, Lipperheide Yda 103, Murray Collection of Early German Books 294, and VD 17 28:720731U for other issues or editions of the work; OCLC locates a single copy of the 1606 printing, at Princeton, one of a 1607 printing in Denmark, and two of a 1609 printing, at Rostock, and Cologne; KvK adds a copy of the 1607 edition at the Austrian Museum for Applied Arts, and one further copy of that of 1609 at the Bibliothèque Nationale; there also is an edition dated '1622' on the title page.

### **model book**

#### **LAUTENSACK, Heinrich.**

Desz Circelsz und Richtscheyts, auch Perspectiva, und Proportion der Menschen und Rosse, kurtze, doch gruendliche underweisung desz rechten gebrauchts.- Francfort: Egenolff Emmel for Simon Schamberger, 1618. sm. folio (303 x 192 mm) (8), 54 Bll., with title in black and red, 107 text woodcuts incl. 3 folding plates. Later red maroquin in style of Duseuil, gilt edges, carefully washed and newly bound copy (Devauchelle). GBP 6.000.-

Very fine second edition with the same collation as the first edition of 1564 (Vagnetti mentions an edition of 1616 which we could not trace), richly and beautifully illustrated, of a highly important drawing book: based on Albrecht Dürer's work on human anatomy, *Vier Bücher von menschlicher Proportion*, and his treatise on perspective, *Vnderweysung der Messung dem Zirkel*, with an added chapter on the anatomy of the horse with three woodcuts. German woodcut book presenting linear geometry, perspective and human proportion; the last section includes unusual woodcuts illustrating the human body with lines and cubes. The fine 107 woodcuts (including three folding plates) include simple design of polyhedrons, perspective of architectural details including facades, wells, arches, and elaborate human figures (infants and adults) in various positions as well as horses. The goldsmith and painter Heinrich Lautensack (1522-1590) followed Hirschvogel's style of making perspective images in his 1564 work: *Des Circelsz unnd Richtscheyts, auch der Perspectiva, und Proportion der Menschen und der Rosse,...* (= Brief yet thorough introduction to the correct use of compass and ruler, and of perspective, and proportions in human and horses). Lautensack stressed the importance of knowing geometry and illustrated its use in, among other things, perspective constructions. He applied a simple method similar to Hirschvogel's. He also illustrated how the image of a pavement of square tiles can be used as (to apply a modern term) a coordinate system in the picture plane (Andersen. *the Geometry of an Art*, 222).- Vagnetti, *EIIIb19*; Kat. Berlin 4691 (1564 ed.); Adams, L-290; Rosenwald, 702; Choulant/Frank 358.- KVK: Harvard Medical School, NLM Bethesda, et al.

**„One of the most exquisitely illustrated astronomical works ever printed“  
(Kenney)**

#### **MARINONI, Giovanni Jacopo de.**

De astronomica specula domestica et organico apparatu astronomico libri duo.- Vienna: Leopoldus Joannes Kaliwoda, 1745. Folio (365 x 253 mm.) 12 Bll. (incl. the engraved frontispiece by Sedlmayr after Bertoli), 170, (2), 171-172, (2), 173-174, (2), 175-176, (2), 177-178, (1), 180-210 pp., (2, one leaf of errata). Slightly later green half calf over marbled boards, for the most part clean fresh and bright, with engraved frontispiece, title printed in red and black with engraved vignette of a map of Vienna, beautifully illustrated with 17 half- to full-page engravings and headpiece, woodcut ornaments, 43 folding engraved plates, last leaf with errata and instructions to binder (in Latin and German). Plates and title with stamps by a 19th cent. Vienna deceased Military Institution. A very fine copy, crisp and clean. In modern preservation solander box. GBP 9.000.-

First edition, first issue on good paper, of this most luxuriously printed & illustrated volume on astronomical instruments. The work describes and illustrates the astronomical instruments in the private observatory of Giovanni Jacopo Marinoni (1676 - 1755), mathematician and astronomer to the Imperial Court of Austria.

Like the private observatories of Tycho Brahe in the 16th century and Hevelius in the 17th century, Marinoni's observatory was one of the most beautiful and best equipped in Europe in his time. He built his own instruments and those illustrated here include quadrants, telescopes, micrometers, an improved Graham pendulum, and a camera obscura. Marinoni left all the instruments to the Empress Maria Theresa, to whom this work is dedicated. It should be noted that many of the instruments are still preserved at the Vienna Observatory.

„In 1755...in connection with a general reform of the University of Vienna, the Habsburg's decided to establish a great central astronomical observatory. Its basic equipment was to be the instruments of the late Imperial mathematician and geodetic surveyor, J. J. de Marinoni, who had made his house, on a relatively favorable site at the edge of Vienna, into an astronomical observatory.“ (DSB VI, 233).

Our copy is a first issue with the title dated 1745 and with only one leaf of errata (the second issue is dated 1746 with an additional leaf of errata also smaller in size).- Boffito, pp. 129 & plate 81; Poggendorff, II, 53; Riccardi, II, 119; Turner, Early Scientific Instruments. Europe 1400-1800, 223; Kenny, Catalogue of Rare Astronomical Books, p. 200 (1745 edition); Lalande 426; cf. Zinner, Astronomischen Instrumente, 206 & 437 (1746 edition). Provenance: Erwin Tomash; his catalogue M 37.

### **MERCATI, Michele (1541-1593).**

Metallotheca. Opus posthumum. Edited by Giovanni Maria Lancisi. 2 parts in one.- Rome: Johannes Maria Salvioni, 1719. Folio (365 x 250 mm) [8], xiii-lxiv, 378, [18] pp., 1 Bl., 54 pp. including half-title, title printed in red and black, engraved frontispiece, engraved portrait of Mercati (bound after pp. xx), 6 engraved plates (2 double-page mounted on stubs, one additional engr. title), 139 text engravings (some full-page), title vignette, 2 engraved initials and one engraved tailpiece. Signatures: [a]4 b-h4 A-3B4 3C6. In the Appendix the engraved portrait of Lancisi. Contemporary vellum, internally clean with only very minor occasional spotting to the end, little browned in places.

GBP 12.000.-

First edition, second issue of this superb catalogue of the Vatican ‚Armara‘, a series of cabinets with drawers which housed Mercati's fossils, marbles, ores, shells, earth samples, salts, alums, gums and resins; of particular interest to gemologists are the fine illustrations of lapis lazuli, jet, amber (including the absurd depiction of a frog encased in amber), precious coral, pearls, and nacre. The work existed only in manuscript at the time of Mercati's death, but it was prepared for publication by Giovanni Maria Lancisi (1654-1720). The work was published in 1717 and reissued with a cancel title, and a portrait of Lancisi added, also with a separately paginated appendix which was not included in the first edition of 1717.

„The collection reflects the state of knowledge extant at the time and therefore includes objects of presumed magical or medicinal virtue as well as those which are correctly identified and described. The plates can scarcely be equaled for fidelity to originals and the exquisite care employed in their engraving and printing.“ (Sinkankas).

Michele Mercati, a physician and superintendent of the Vatican Botanical Garden, formed a collection of minerals under the aegis of Pope Sixtus V, as early as 1574. Although the collection was dispersed on Mercati's death, his catalogue remained to be published almost 150 years later. It represents ‚a landmark treatise in the history of mineralogy and metallurgy describing what was among the first organized mineralogical museums ever established‘ (Schuh).

David Clarke describes Mercati as „the archaeological counterpart of Cardano in mathematics, Vesalius in anatomy, Galileo in the physical sciences and Copernicus in astronomy.“

Brunet III, 1644; Caillet 7390; Hoover 581; Ward & Carozzi 1541; Hirsch IV, 208; Cicognara 2929; Graesse IV, 493; Brunet III, 1644; Cobres I, 107-08, 20; Sinkankas 4390; DSB IX, 309; Thorndike VI, 334; Wilson, Mineral Collecting, pp. 32-34.

### **Apocalypse - ‚Bilderbuch‘ (picturata editio)**

**METHODIUS, pseudo.**

**Sebastian BRANT; Wolfgang AYTINGER.**

Revelationes divinae a sanctis angelis factae de principio mundi. [Add: Wolfgang Aytinger. Tractatus super Methodium]. [Ed. Sebastian Brant]. – Finit Basilee Michaellem Furter opera et vigilantia Sebastiani Brant. Anno. M.ccccc. xvi. Kal. Martij. [Basel, M. Furter, 14. Febr. 1500.] 4to (205 x 141 mm). a-g8 h-i6: (68) leaves. with 61 woodcuts, a few with coloring in red, a few underlinings in red. Three or four tiny wormholes in the margins. 19th century calf, rebaked and wear to corners. Exlibris on paste-down.

GBP 22.000.-

On the strange and difficult text of ps.-Methodius originally written in the Syriac language in the second half of the seventh century I quote a few lines from B. McGinn, *Visions of the End. Apocalyptic Traditions in the Middle Ages*, pp. 70ff.:

„The crown of Eastern Christian apocalyptic literature is the treatise attributed to Methodius of Patara, a martyr bishop who died in the early fourth century. After the Book of Daniel and the Revelation of John it was among the most widespread of medieval apocalyptic texts ... [it is] a politico-religious manifesto, rejecting every kind of defeatism or collaboration with the Moslems, warning against reliance on the weak and distant ruler of Ethiopia as a will-o-the-wisp, calling for war against the conquerors, and preaching that salvation from the Moslem yoke could come only from one source, the most powerful Christian monarch of the time, the Basileus at Byzantium ...

The Revelations of Pseudo-Methodius is the earliest surviving witness to the legend of the Last World Emperor ... Like many great apocalypses the Pseudo-Methodius was born in the midst of crisis. In the Revelations for the first time a foe worthy of the fully formed imperial apocalyptic myth steps upon the scene ...

The influence of the Pseudo-Methodius in the West was immense. The text itself was later translated into a number of vernacular literatures, and was printed early and often. The use of the text in the twelfth and thirteenth centuries, the confrontation with Islam, and the threat of the Mongol invasions gives sufficient evidence of its paramount importance.“

The second author: Wolfgang Aytinger, ca. 1465–1515, from Augsburg, calls himself „juris utriusque promotus“, „artium magister“ and „Clericus“; red proofs for the Augsburg printers Oehlin, Nadler, and for Froschauer. His edition of ps.-Methodius and its treatise is Aytinger’s only publication. In the treatise Aytinger cites the relevant literature from Joachim di Fiore to Bridget of Sweden, from Vincenz Ferrer to Johannes Lichtenberger, and many more. After the fall of Constantinople in 1453 the visions of the end of the Western Christianity flourished and Aytinger brings this and the need for reform of the Church together in his tract, the hoped and expected „destructio Turciae“ and the „purgatio et reformatio ecclesiae“.

The editor of the book is Sebastian Brant (1457–1521), humanist and satirist from Strasbourg, who held the chair of jurisprudence in Basel; famous as author of *Das Narrenschiff* / *Ship of Fools*, first published at Basel in 1494. The preface by Brant (a1b and a2a) is addressed to Johannes Meder, the Basel Franciscan who in 1495 and 1497 had published a *Quadragesimal* at Basel printed also by Michael Furter. Sometime in late 1496 or early 1497 Meder suggested to Brant a new edition of ps.-Methodius.

But unlike the existing editions it should be an illustrated edition, a „picturata editio“.

In his preface Brant refers to Meder’s request. The picture, says Brant, is absolutely necessary for the understanding of the revelation of Methodius by a broader „readership“\*. What the written word means to those who can read, the image does for those who can not (idiotae, and ignorantes). In the image, the ignorant see what they should understand, and in it, those who are ignorant of the scripture can „read“.

In other words: the book had two groups of readership: one could read and understand the Latin text, a second who could „read“ the illustration only. To the first group the illustrations have no additional information but are visualizations of what they have read; to the second the illustrations are a text which is understood by the help of oral instructions. (In difference to the „fall of the angels“, „Adam and Eve picking the apple“ or „Gog and Magog“ most woodcuts do not understand by itself, but need explanation even for the then „reader“.)

Whereas the reader of the text did not need others for understanding, and therefore could read in a private situation being alone in a room, those of the second group had to „read“ the woodcuts in a group of at least two; it must have been a kind of „public“ reading with the oral explanation of the woodcuts – explanations of course in the vernacular. You may call the book a *Methodius pauperum*. Be it as it may – Brant’s note on the woodcuts and their function is surely one of the earliest if not the earliest of its kind.- ISTC im00525000.

### optical instruments

**MEYEN, Joachim Friedrich.**

*Kurzer Unterricht von der Beschaffenheit und dem Gebrauch der Vergrößerungsgläser und Teleskopien.*- Dresden und Leipzig: Friedrich Hekel, 1747. 4to (195 x 160 mm) (8), 72 pp., (2, blank) with 7 folding

engraved plates with illustrations of optical instruments and mechanical tools, with head- and tailpieces. Later period style binding, red edges, brown spotted throughout, else fine copy.

GBP 3.600.-

Rare trade catalogue of the optician and lawyer Joachim Friedrich Meyen (1707 - 1772) with an introduction into the optical sciences & microscopy and their use to educate people and teenager. Described are magnifying glasses, microscopes and telescopes and from pp. 65 is a list with the instruments sold by the Meyen optical shop, with title: „Verzeichniß von denen vorrätthigen optischen, mechanischen, und andern mathematischen Sachen, welche zu haben sind, bey Joachim Friedrich Meyen, Königl. Hofoptico“.- VD 18.11555858.

**Large paper copy of a work  
„prized by gamblers“**

**MOIVRE, Abraham de.**

The Doctrine of Chances: or, a Method of Calculating the Probabilities of Events in Play. The second edition, Fuller, Clearer, and more Correct than the First. London: Printed for the Author, by H. Woodfall, 1738. Quarto (285 x 225 mm) xi, 259 pp. with wood-engraved title-vignette, ornaments and initials, engraved head & tail-piece, tables, some full-page, with blank leaf at end of preliminaries, occasional spotting, hole to lower margin of O3, a few leaves slightly shorter at foot. Contemporary calf, rubbed, label chipped, spine worn at head.

GBP 5.000.-

Second enlarged of Abraham De Moivre master-piece of probability theory.

The authors greatly improved edition and the last to be published during his life-time; a classical and groundbreaking work on probability.

The first textbook for the calculus of probabilities, offering in this edition for the first time an approximation of the binomial by the normal distribution. Important work on probability by a friend of Isaac Newton's, greatly expanded from the first edition of 1718 which was dedicated to Newton. De Moivre's work, already adumbrated in the Philosophical Transactions in 1711 with his De mensura sortis, was first published in 1718. This is the second and much improved edition with over 75 pages of new material. Mathematically, this is de Moivre's most important work and all editions were rated as „landmark writings in western mathematics.“

„In the second edition of the Doctrines part of the material contained in the Annuities together with new material was incorporated. ... In it he „developed a series of algebraic and analytic tools for theory of probability, like a ‚new algebra‘, the method of generating functions, or the theory of recurrent series for the solution of differential equations. In the Doctrine offered an introduction which contains the main concepts such as probability, conditional probability, expectation, dependent and independent events, the multiplication rule, and the binomial distribution.“ (Ivo Schneider)

„The 1718 first edition is essentially a gambler's manual... It does not contain Moivre's work on the normal approximation of the binomial probability distribution, which ranks as the most memorable of his discoveries; this discovery was first printed in its entirety in 1733 in a Latin pamphlet, which was later translated into English and incorporated, in successively expanded versions, in the second (1738) and third (1756) editions.“

„In the later editions of his book, de Moivre included his unpublished result of 1733, which is the first statement of an approximation to the binomial distribution in terms of what we now call the normal or Gaussian function. This was the first method of finding the probability of the occurrence of an error of a given size when that error is expressed in terms of the variability of the distribution as a unit, and the first identification of the calculation of probable error. In addition, he applied these theories to gambling problems and actuarial tables.“

Macclesfield sale 1422 (large paper copy); Norman 1529 (first edition); Kress 5546c

**NASMYTH, James Hall; CARPENTER, James.**

The Moon: Considered as a Planet, a World, and a Satellite.- London: John Murray, Albemarle Street, 1874. 4to (275 x 210 mm). XVI, 189 pp., (1, blank) including half-title, without advertising leaf dated December 1873 at end. With 46 text illustrations, and 25 plates on 24 leaves, comprising 12 mounted Woodburytypes of lunar models, 6 photogravures, 4 autotypes, 2 lithographs, and one chromolithograph. Contemporary red morocco binding, gilt spine in compartments, fine gilt printed covers, gilt edges, minor soiling. Text little age-toned, some spotting and foxing to plates, marbled endpaper at back removed, but a very fine copy.

GBP 3.200.-

First edition of James Nasmyth (1808–1890) and James Carpenter classic & influential text on lunar geology. It was due to Nasmyth's superior talent in visual communication, that this book unfortunately perpetuated a misconception - that lunar craters were volcanic - for almost 100 years. It was not until 1969, when the Apollo 11 space mission brought back geologic samples from the moon, that the impact theory gained credibility and the volcanic hypothesis was finally abandoned.

At the time of their publication, Nasmyth's illustrations were held in the highest regard by both the public and the scientific community: „perfectly enchanting photographs, which one could never be tired of looking at.“ (Isabella Herschel)

Nasmyth's first drawings of the moon were made as early as 1842, and were first exhibited in Edinburgh in 1850. The first public presentation of photographs of Nasmyth's models took place in 1856 at Manchester Photographic Society Exhibition, entitled: „Portions of the moon's surface, from models by James Nasmyth, Esq.“; the photographs are attributed to Joseph Sidebotham (1824–1885), known for his mastery of the waxed paper negative process. Two years later, in 1858, Nasmyth learnt the wet-collodion process and began making his own salted paper prints from glass plate negatives. In 1864, John Herschel and his daughter Isabella visited Nasmyth, where Nasmyth entertained them with his many demonstrations that aimed to explain the formation of the lunar surface. The tedious tasks of photographing the models and sending the glass plate negatives to the various printmakers were all done by Nasmyth, the writing of the book was completed with the help of the astronomer James Carpenter.

This edition includes seven different printmaking processes from six print companies, incl. two different variants of the Woodburytype. The first edition sold out quickly at a price of GBP 1.10s (approx. 1300 \$ today), resulting in a second edition published within a month (1874).

The book was among the first to be illustrated with photo-mechanical prints, which were lauded by a contemporary reviewer as among the most 'truthful and striking representations of natural objects' ever encountered by a student of science. However 'truthful' they may appear, though, the illustrations are not real photographs of the moon - they are curious, hybrid objects in which manual, mechanical and indexical processes are densely layered. The book was the culmination of decades Nasmyth had spent studying the moon through a large telescope of his own design. During that time Nasmyth, a retired industrial engineer and amateur astronomer, produced numerous studies and maps of the moon, which recorded its topographical features with extraordinary lucidity and precision. In order to reproduce the variegated textures and luminous dimensionality captured by his drawings, Nasmyth and Carpenter looked not to expensive steel engraving but rather to photography. And they aimed the camera not at the lunar surface itself but, instead, at a series of hand-made plaster models based on Nasmyth's drawings. Technical limitations meant that, while it was already possible to photograph the moon, the kind of closely framed, intensely magnified views Nasmyth and Carpenter sought could only be achieved from a model. The finished plaster models were photographed outdoors in raking light, which served to both recreate the oblique angle of the sun's rays on the lunar surface and reveal the subtle topographical variations of the model's surface.

„Photographers sometimes adopted realism over naturalism in order to render motifs more literally. On occasion, however, the reverse was true: photographers attempted to deceive through extremely literal treatment. The artist Les Levine once claimed iconoclastically that the folksaying ‚the camera never lies‘ is a lie. Nasmyth and Carpenter's *The Moon* presents an elaborately devised model photographed with the clarity of a subject at an arm's distance. The deception was necessary because successful astronomical photographs of sharp definition and good contrast were not possible until the twentieth century with the advent of sensitive films and efficient lenses. The Woodburytype proved to be exceptionally effective illustrations and, doubtless, many readers were misled to think that they were seeing the face of the moon itself.“ (Truthful Lens, pp. 38).

„The Woodburytype has no grain whatsoever, because it does not use cracks or dots to reproduce tone. Instead, a relief mold is made of the image in lead, so that the areas of dark tone are deep and light tone shallow. Ink suspended in gelatin is cast in the mold, and the resulting print produces contrast by the thickness or thinness of the ink.“ (Ashworth, 20)

The first three editions reveal the aesthetic variations in the illustrative plates due to reproduction and print processes used. These processes include: engraving, photogravure, heliotype, lithograph, chromolithograph, and four different variations of the Woodburytype. In the third edition of the book, printed in 1885, many of the heliotypes from the first edition were reproduced as woodburytypes, and some were noticeably altered. The resulting images offered greater tonal contrast and were able to capture even more of the models' textural details. It is perhaps fitting that these woodburytypes took on a kind of topography of their own - the dark expanses and inky lines that play across their surface are subtly but noticeably raised up from its more muted passages.- *The Photobook*, p.51; Ashworth, *The face of the moon*, Linda Hall, 20; Laura Margaret Ramsey. *Phases of the Moon. ... Theses*, 2009.

### Thorp's copy with his handwritten annotations

**NEWTON, Isaac.**

Mathematical Principles of Natural Philosophy. Translated into English, and illustrated with a commentary, by Robert Thorp, M. A. Volume the First [all published].- London: Printed for W. Strahan; and T. Cadell, in the Strand, 1777. Quarto. pp. [10], xv-lviii, (ii), 360 pp. (and) **NEWTON, Isaac.** Mathematical Principles of Natural Philosophy ... translated into English and illustrated with a Commentary by Robert Thorp, D. D., Archdeacon of Northumberland. Second edition. London: T. Cadell Jun. & W. Davies, 1802. Quarto. [4], xv-lviii, [2], 360 pp., with 22 folding engraved plates,. Uniformly bound in early 19th century half calf lettered in gilt „Thorp's Newton“, spine gilt. The spine at the upper cover of vol. II. cracked (while the books had been stolen in a book theft). GBP 10.000.-

Very rare first edition, of the second translation into English of Newton's Principia, although only the first volume was published. Here the translator **Robert Thorp's copy**, with his name on title, **extensively annotated by him in the margins, and with further diagrams**, the first edition bound without the plates (but present in the reissued second edition, also present). Thorp's translation, "though based on Motte's edition of 1729, is considered by Cohen (Newton, 1969, p. iv) to be 'notably improved and amended'. Further, he declared, for anyone wishing to follow Newton's reasoning and 'to comprehend this great treatise on its own terms, there is no better work ... available in English'." (Gjertsen, The Newton Handbook).

None of the manuscript corrections and notes made by Robert Thorp to this copy of the first edition have been incorporated into the second edition, nor have the errors listed on the verso of the Index leaf been corrected by the printer. Apart from a new title-page the second edition differs from the first in that it lacks the dedication leaf to the Duke of Northumberland and the 4pp. list of Subscribers, and has a new leaf, 2pp. „Advertisement“, undated, immediately following the title-page. This copy is uniformly bound. Robert Thorp (1736-1812) was one of the three editors of the *Excerpta quaedam e Newtoni Principiis Philosophiae Naturalis* published in 1765. He attended Durham School and Peterhouse College, Cambridge, obtaining a B. A. as Senior Wrangler in 1758 and an M.A. in 1761. In 1768 he succeeded his father Thomas Thorp (1699 – 1767) as rector of Chillingham; in 1782 he became rector of Gateshead; in 1792 Archdeacon of Northumberland. In 1795, he became rector of Ryton, and was a founder of Durham University.- Wallis 28. Gray 28. Not in Babson. **Provenance:** Robert Thorp, inscribed on title; R. Fenwick Thorp, 1904 from W. T. Thorp, inscription on end-paper to descendent to current owner; Book-Theft London.

#### a key document

#### whether Newton or Leibniz had priority in discovering differential calculus (Norman).

**NEWTON, Isaac.**

The Method of fluxions and infinite series with its application to the Geometry of curve-lines to which is subjoin'd a perpetual comment upon the whole work.- London: Henry Woodfall, 1736. Quarto (264 x 209 mm). Contemporary paneled calf, rebacked and recorned with orange morocco label, red speckled edges. Engraved plate (facing p. 273), errata, woodcut diagrams throughout. Light toning to title, contents clean; a very good copy, complete with the sometimes-wanting plate.

GBP 25.000.-

First edition of Newton's work on fluxions, one of his greatest Mathematical works, an interesting copy with some early corrections or notes in ink and pencil.

This is Newton's fullest exposition of the calculus; though the last of his works on calculus to be published, it was the work which he himself intended to publish first, in Latin, in 1671. The first page of the manuscript (preserved in Cambridge University Library) is lost and the title *De Methodus Fluxionum* was supplied by John Colson when he first published it in this translation, with his own extensive commentary. Written in 1671, Newton's Fluxions is a key document in the controversy over whether Newton or Leibniz had priority in discovering differential calculus. Newton did not publish anything on the calculus until after 1700, whereas Leibniz began publishing papers on the subject in 1684; however, Leibniz's manuscript notes on the calculus date back only to 1673, eight years after Newton began investigating the subject. By 1671, Newton was in a position to give his clearest statement to date of the fundamental problem of the calculus, and to present a successful general method (Norman Catalogue). In the Method, Newton gives the solution of a series of problems in illustration of this analytical art, mainly problems of maxima and minima, tangents, curvatures, areas, surfaces, volumes and arc lengths. With qualities represented as generated by continuous

flow, all of these problems can be reduced to the following two (one the inverse of the other). 1. Given the length of the space at every time, to find the speed of motion at any proposed time. 2. Given the speed of motion at every time, to find the length of the space described in the proposed time. This is among the greatest generalizations in the history of mathematics, reducing the great majority of problems faced by mathematicians of the time to two basic problems (Cambridge Companion to Newton). It was often lamented that the world had had to wait for so many years to see Newton's masterpiece on fluxions. It is astonishing to realize that publication sixty years beforehand would have changed the history of the calculus and would have avoided for Newton any controversy over priority. In 1736 all the results contained in Newton's treatise were well known to mathematicians. However, it was too concise for a beginner, and Colson added almost 200 pages of commentary. His commentary contributed to the establishment of a kinematical approach to the problem of foundations (N. Guicciardini, *The Development of Newtonian Calculus in Britain 1700-1800* pp. 56-57). Provenance: contemporary corrections and a few side notes by an unidentified reader to several equations or text on pages 50, 53, 60, 68, 79, 87, 93, 94, 95, 96, 107, 108, 110, 111, 112, 113, 114, 119, 120, 132, 135, 138, 157, 275; twentieth-century bookplate of the physicist and writer Edward Neville da Costa Andrade (1887-1971) on front paste-down.- Babson/Newton 171; ESTC T18629; Gray p. 46; Lowndes p. 1674; Norman 1595 (misdated 1734); Wallis 232.

**awarded at the first World Exhibition  
at Crystal Palace in London**

**NOERDLINGER; Hermann von.**

Fünzig Querschnitte der in Deutschland wachsenden hauptsächlichsten Bau-, Werk- und Brennholzer. Für Forstleute, Techniker und Holzarbeiter. Mit 50 Holzproben zwischen Doppelblättern. Stuttgart/Augsburg, Cotta, 1858. Kl.-Oktav (150 x 110 mm). 32 pp. illustrated with 50 mounted tree samples, each within a thin paper chemise with circular label bearing the name of each tree sample in German and Latin, loose as issued in original book-shaped pebbled cloth chemise and slipcase (a little worn).

GBP 1.600.-

First Edition. A rare mid-nineteenth century work containing 50 paper-thin slices of wood and tree specimens for the use of microscopic investigation, accompanied by descriptive text in German. The specimens were cross-cut to show the grain of the wood, as well as the color, structure, etc. Each sample is mounted within an oval window, and features a circular label bearing the name in Latin and German. Nördlinger (1818-1897) was a recognized authority on trees and wood from around the world; he was the indefatigable author of numerous works on the subject, including an 11 volume survey of trees (containing 1100 samples) which appeared in the years 1856-1888. He received several awards for his achievements, namely at the 1851 and 1862 London exhibitions (the former appearing as a stamped medallion on one of the sheets in the present collection). Nördlinger was awarded a professorship at the University of Tübingen in 1881. The present work is not to be confused with the undated „Collection de 60 Sections Transversales de Bois“ (ca. 1870-1880) which is essentially a reissue of the wood specimens with a French text. Extremely scarce; OCLC lists only four copies Worldwide, three in Germany and one in Switzerland. A copy that was sold at New York (Doyle, 1999 - \$ 1.800 then) states that no copy was sold since 1975 (ABPC).

Erste Ausgabe. Sehr selten. Vollständiges, dekorativ gebundenes Exemplar. Die papierdünnen Holzproben sind rückseitig auf ihren jeweiligen, mit einem ovalem Passepartout-Ausschnitt versehenen Chemisen in Deutsch und Latein bezeichnet. Das Beiheft enthält eine kurze Einführung in die Erkennung der Holzarten aus der Feder Nördlinger's. Ein erster Entwurf des Werkes wurde 1851 auf der Londoner Crystal Palace Exhibition, der ersten Weltausstellung überhaupt, mit einer Medaille prämiert. Eine Chemise des vorliegenden Exemplares trägt daher rückseitig den vom Verlag sicherlich nicht ohne Stolz angebrachten Stempel: „Preismedaille IV. London Ausstellung 1851“. „N. hat durch seine zahlreichen Veröffentlichungen Werke von bleibendem Wert für die Forstwissenschaft geschaffen. Berühmtheit erlangten seine zahlreichen Arbeiten über die Eigenschaften der Holzarten, ein bis dahin kaum bearbeiteter Forschungsbereich, den N. durch umfang-reiche eigene Versuche vorantrieb.“ (NDB). Junk, Rara 29302.

**Birds of Chile**

**PHILIPPI, Rodolfo Amando.**

Figuras i descripciones de Aves Chilenas ... Con 51 laminas.- Santiago de Chile, 1902. (= Anales de Museo Nacional de Chile publicados por orden del Gobierno de Chile. Entrega 15a. Primera Seccion: Zoologia)

sm.folio (320 x 280 mm) (4), 114 pp., 51 partly lithographed, mostly chromolithographed plates. Period style half calf. Overall a very fine copy.

GBP 3.800.-

Rare work on the birds of Chile by the famous German - Chilean paleontologist & zoologist Rodolfo Amando (Rudolph Amandus) Philippi (1808 – 1904) written in the year of his death. Philippi contributed primarily to malacology.

Rudolf Amandus Philippi was born in Berlin - Charlottenburg to a Prussian government auditor, and was educated at Yverdon at the Pestalozzian Institute founded by Johann Heinrich Pestalozzi (1746–1827). The teaching included the use of natural objects for teaching and Philippi was involved in collecting plants and butterflies at a young age. He later graduated at the Friedrich-Wilhelms-Universität Berlin; his studies included medicine, surgery, comparative anatomy, botany and zoology. His dissertation was on the orthoptera of Berlin. In 1830 he left Berlin to Italy where he travelled around with the geologists Friedrich Hoffmann and Arnold Escher von der Lind who were studying Etna and Vesuvius. Philippi began to examine fossils here. He also collected molluscs and interacted with the Italian Benedictine priest and malacologist Emiliano Guttadauro (1759–1836) who encouraged him to study molluscs. He then worked as a teacher at Kassel from 1835. His first major work on molluscs based on his collections from Sicily was published in 1836. For this work, he received a medal from Kaiser Friedrich Wilhelm III thanks to a recommendation from Alexander von Humboldt. Along with 14 others, he founded the Vereins für Naturkunde (Natural History Society) of Kassel the same year. In 1837 he moved to Sicily living there for several years, recovering his health. He began to collect molluscs in earnest, making use of a collector trained by Italian malacologist Scacchi (1810–1893). In 1840 he returned to Kassel, with a stop in Neuchâtel where he met Louis Agassiz. At Kassel, he interacted with the local malacologists to begin the first journal in German, *Zeitschrift für Malakozoologie* in 1844. This led to an increased productivity, and he wrote several illustrated monographs.

His brother Bernhard Philippi in the meantime became a successful merchant and sailed to Chile several times, making collections for museums. He moved to Chile in 1841 and encouraged Germans to emigrate to Punta Arenas, an area that he helped seize control of, and had been made a governor of the Magellan Province. Philippi was caught up in the German revolutions of 1848 and was seen as a liberal and threatened. He escaped Kassel, stayed underground and left Germany on 20 July 1851 aboard the *Bonito*. Philippi directed a high school in Valdivia from 1853 and he was also appointed professor of zoology and botany at the Universidad de Chile (Santiago), as well as director of the natural history museum there. He was also sent on an expedition into the Atacama Desert. He worked on several book on natural history in Chile and collaborated with traveling European naturalists like Landebeck as well as with museums in Europe. Philippi described a number of species across taxa, including three new species of South American lizards. It was shortly after completing a monograph on the Chilean frogs and Chilean birds in 1904 that he was diagnosed with pneumonia, leading to his death. A state holiday was announced the next day and his body was kept for public viewing and was visited by 10.000 people. The 284-horse-drawn cortege was lined along its route by 30.000 people including schoolchildren and the entire Chilean parliament & cabinet were in attendance.- KVK: Coburg, Hamburg, Berlin; Paris MHN; Oxford, NHM London, OCLC: (?) Harvard, Brown, Yale, American Museum Natural History (others mixing up online copy and actual book).

### world of Parrots - Parrots of the world

#### REICHENOW, Anton.

Vogelbilder aus fernen Zonen. Abbildungen und Beschreibungen der Papageien. Mit 33 getönten beikolorierten lithographierten Tafeln nach Aquarellen von G. Mütze.- Kassel, Fischer, 1878 - 1883. Folio (390 x 280 mm). [42] Bll. / leaves. Green original embossed cloth, upper cover with decorative border blocked in black and gilt lettering, gilt title on spine. Minor foxing as often, but overall a nearly mint copy with bright coloring.

GBP 4.000.-

First edition, of „A series of colored plates illustrating the known parrots, accompanied by short descriptions of each and notes on their distribution.“ (Zimmer).

The German herpetologist and ornithologist Anton Reichenow (1847 - 1941) worked at the Natural History Museum of Berlin from 1874 to 1921 and was an expert on African birds, making a collecting expedition to West Africa in 1872 and 1873, and writing *Die Vögel Afrikas* (1900–05). He was also an expert on parrots, describing all species then known in his book *Vogelbilder aus Fernen Zonen*, illustrated by artist Gustav Mützel (1839–1893) who was famous for his mammal and bird paintings, including the illustrations for the second edition of Alfred Edmund Brehm's *Thierleben* and Richard Lydekker's *The Royal Natural History*. He created a large number of illustrations for

the German Ornithological Society, having been a member since 1874. Müntz's diverse interests led also to his membership of the German Society for Anthropology, Ethnology and Prehistory and the Association of Berlin artists. A number of birds are named after Reichenow, including Reichenow's woodpecker and R.'s firefinch. Reichenow is known for his classification of birds into six groups, described as „shortwings, swimmers, stiltbirds, skinbills, yoketoes, and treebirds“. This system was not adopted by any other ornithologists, but is used in the Dewey Decimal System.- Fine Bird Books, pp. 102; Nissen IVB 767; Zimmer, 514; Sitwell-B. 133.

### The extinct Great Auk and rare flowers incl. tulips

**ROBERT, Nicolas** (enr.; 1614-1684).

Diverses oyseaux dessinées et gravées d' apres le naturel par N. Robert. A Paris F. Poilly excudit... (after 1673 ?). 31 leaves with engraved birds

**(bound with:)**

**ROBERT, Nicolas.** Variæ ac multiformes Florum species appressæ ad Vivum et æneis tabulis incisæ.

Authore N. Robert. Diverses fleurs dessinées et gravées s'apres le naturel. Paris, F. Poilly, (after 1665).

Folio (290 x 215 mm). Engraved title and 30 engraved plates of flowers by Nicolas Robert.

**(bound with:)**

**VA(U)QUER, Jean.** 5 series with engravings of flowers titled: Livres de fleurs. (Paris: Poilly) (ca. 1680).

10 engraved plates incl. title by Jean Vauquer (Ornamentstichkat. Bln. 4432, 4; Dunthorne 317) and 48 engraved plates of flower bouquets (ca. 1680), probably all in 18th century prints. Mild browning

throughout, some staining here and there; restored tear to one plate, small marginal tear to another. 18th century mottled calf, gilt spine in compartments, soiling and rubbing to boards, spine damaged at head and tail. Overall fine copy. Two bookplates: C. R. Richmond and L. Gidel. Rear free endpaper with note: „Vient de la bibliotheque de Mr de la haye fermier general“ (i.e. Martin de la Haye, 1684-1753).

GBP 17.000.-

Fine Sammelband, including a copy of the third edition of the famous „florilegium“, first published in Rome in 1640, showing anemones, lilies, daffodils, roses, tulips, etc., each with the names of the flowers in Latin and Robert's monogram; this is the most common edition of the book published by François de Poilly (1623-93) in Paris after 1669. Robert's volume was already copied early on. These copies attest to the popularity of and demand for his compositions, and in turn helped to spread them widely. The plates were adapted by Maria Sybilla Merian as illustrations for her *Histoire des Insectes de l' Europe* (Amsterdam, 1730).

The prints are all in reverse of the Rome edition, which was the prototype for the Paris prints. This is odd, given the fact that Robert lived in France and was in the King's service at the time that the book appeared in Paris with the King's privileges. Moreover, the monogram suggests Robert's involvement. Perhaps the artist took initiative for plagiarizing his early work some thirty years after it first appeared.

The French painter Nicolas Robert (1614 - 1685) was one of the greatest French natural history artists of the seventeenth century. Early he published a collection of flower engravings entitled *Fiori diversi* (1640), later called „Florilegium“. He became famous for his drawings of flowers, which combined botanical accuracy with superb craftsmanship. Some time after, Robert was called to the service of Gaston (1608-60), Duke of Orleans, and brother to the French king Louis XIII (1601-43). Gaston had a garden, an aviary and a menagerie in which he grew exotic plants, birds and animals, and Robert was commissioned to depict these in gouache on vellum. When Gaston died, the vellums were passed on to Louis XIV, who in turn expanded the collection. They are in the library of the Musée d' Histoire Nat. in Paris today. In 1666, Robert entered the service of the King as a miniature painter, producing more watercolours on vellum of natural history subjects for the royal collection. He produced thousands of watercolours for the king, today known as „les velins du Roi“. One of the images of birds show the extinct Great Auk (*Pinguinus impennis*), a species of flightless alcid that became extinct in the mid-19th century: a puffin swimming in a pond is figured in the foreground and in the background there are three Great Auks, two of them swimming and one standing on the bank. This is one of the few surviving images of this extinct bird.- Nissen, BBI 1646 and Vol. I, 96 f.; Hunt 282 (ed. 1660). Ornamentstichkat. Berlin 4423 (incptl. copy); Thieme-B. XXVIII, 423; de Belder 306 (only 29 plates); Oak Spring Flora 42; II. Magnificent and very rare set of bird prints: Nissen, IVB, 787; Ronsil 2599; Bradley Martin 1837. Arturo Valledor de Lozoya; David Gonzalez Garcia. A great auk for the Sun King; in: *Archives of natural history* 43 (2016), 41-56.

## Quadrature of the Circle „solved“

**SCALIGER, Joseph Justus.**

Cyclometrica elementa duo. [Part 2: Mesolabium. Part 3: Appendix ... ]. 3 parts in one.- Lugduni Batavorum [Leiden], Ex officina Platiniana, apud Franciscum Raphelengium. 1594. Folio (287 x 198 mm). \*6, A-O4 P6; a-e4 d6; †4 ††6: (6) leaves, 122 p.; 34 p., (1) leaf; 20 p. Printed in red and black. Contents slightly toned. Contemporary vellum, ties gone. Initials „I M A M“ and date „1595“ on upper cover. Lower margin of title-page with a small old repair. Beautiful imprint.

GBP 6.000.-

First edition. Joseph Justus Scaliger (1540–1609) was a famous classicist and humanist. Although mathematics was not his main area of expertise, he announced around 1590 that he had solved the three famous problems of ancient Greek mathematics, namely the circle quadrature, the trisection of the angle, and the construction of two mean proportionals (Grafton, 380-84).

In the summer of 1593 he was hired by the University of Leiden, where his *Cyclometrica Elementa* [Elements of Circle Measurement] appeared in June 1594. The work was lavishly produced. The definitions and theorems are in ancient Greek with Latin translation, and the proofs are in Latin. The chapter titles, page headers, and geometrical figures are printed in red, as well as all letters in the Latin text indicating points in the figures. The *Cyclometrica Elementa* consists of two books, and will henceforth be abbreviated as *Cyclometrica*. In Book 1, Scaliger “shows” that the square of the circumference of the circle is ten times the square of the diameter. In Book 2, he “proves” that the area of a circle is 115 times the area of the inscribed regular hexagon. Scaliger does not accept the relationship between the circumference and area of a circle, which had been proved by Archimedes, and which can be expressed in modern terms as follows: surface area is radius times half circumference. Archimedes proved this relationship by *reductio ad absurdum*, but Scaliger warns against the corrupting influence of this method of reasoning on young people. It was not a problem for Scaliger that his circle rectification was inconsistent with the Archimedean limits. Scaliger states that his own quadrature of the circle is done in a geometrical way and according to scientific method, and not done in a tyrannical way as was that by Archimedes. Scaliger’s pompous *Cyclometrica* did not fail to make a big impression on many scholars, as appears from his extant correspondence between 1594 and 1596. Only a few experts in mathematics realized that Scaliger’s work was mathematically very incorrect. Three such experts were Francois Viète (1540–1603), Adriaan van Roomen (1561–1615), and Ludolph van Ceulen (1540–1610).

There are two issues of both parts, recognisable by the devices displayed on their title-pages. Here, the *Cyclometria* and *Mesolabium* have a woodcut “*Labore et Constantia*” device (in other issue, both have an engraved device). Some copies are found with an “*Appendix ad Cyclometrica sua*” (†4 2†6, pp.1-20); this also is known in two issues, with (and without) errata on the final page (cf. Adams, *Catalogue of books 1501-1600 in Cambridge Libraries*, S559/S560). Provenance: 1. Something like J. Santeaume in the upper and lower margin of title. 2. Counts of Schönborn-Buchheim; their paper ticket on upper cover. The library was sold by Reiss & Auvermann in 1994 (Auktion 53, part III, no. 829); Adams S-560 (issue with woodcut device and errata on page 20 of the third part); Smitskamp, *The Scaliger Collection*, no. 153; Tomash & Williams S23, S24; Paul Valkema Blouw, *Typographia Batava 1541-1600* (Nieuwkoop, 1998), nos. 4470-4471; Hoogendoorn p. 784 Sca03 1.1 and p.784 Sca04 1.1

## Defender of Machiavelli when he was seen as atheist

**SCHOPPIUS (Schoppe), Caspar.**

*Machiavellica Hoc est Apologia duplex Qua(rum) priore Sacrae Romanae Ecclesiae de Nicolai Machiavelli libris decreta defenduntur. Posteriore (Eiusd(em) Machiavellin innocen(ti) a adversus Calvinistas, precipuè Italici nominis hostes propugnator ... Anno M.D.C.XIX.* Manuscript in Latin on paper. Italy, circa 1645 Folio (304 x 215 mm). 1 leaf (title), 85, (113), leaves, 1 blank. Brown spot to upper margin of last leaves. Outer edges uncut. Contemporary Spanish red morocco, gilt spine, narrow border round sides enclosing, on front cover, the arms of Felipe Ramirez de Guzman, Duke of Medina de las Torres, and his second wife Anna Caraffa, princess of Stiglione, rear cover with Guzman’s emblematic signet *Revoluta foecundant*. Slightly rubbed in places.

GBP 15.000.-

A defender of Machiavelli in times when he was seen as an atheist and his book was on the Index.

One of the manuscript version's (it was never published) showing the efforts of the political agent and pamphleteer Kaspar Schoppe to rehabilitate Machiavelli, especially his „Il Principe“ (PMM 63), the foundation of modern political philosophy and the source of „Macchiavellianism“.

Unlike the few earlier attempts by Machiavelli's Florentine descendants, Schoppe's campaign was motivated by complex factors, which were in a great part related to his vision of Catholic renewal and at a certain moment became related to Galileo's similar fight for Copernicanism.

Machiavellica, written in 1618, was a long and complex book in manuscript form (manuscripts: BML, Cod. Sciop. 206, ff. 237–60; Venice, Biblioteca Marciana, L. VI, CCIX (=3466). It aimed as much at giving a full interpretation of Machiavelli's *The Prince*, occasionally in light of the *Discourses on Livy* (in book 1), as at systematically refuting the criticism of Innocent Gentillet, Antonio Possevino, Pedro de Ribadeneira and Tommaso Bozio (in book 2). Schoppe's initial strategy was to profit from the contradiction between Machiavelli's Catholic appreciation (the papal privilege published in the first print of 1531 of the *Discourses*) and condemnation (in 1559). This contradiction was in fact an 'embarrassing trifle' to many censors of the past. Schoppe argued that both papal judgements were right and suited their times, but not for the reason people might think. There was nothing pagan in Machiavelli's ideas about fate or fortune, nor was there any problem with his just criticism of papal politics. And yet, the pope rightly banned his works, since some European states could find them offensive, and some superficial readers could be led to bad ideas or deeds. Caspar Schoppe (1576-1649), German controversialist and scholar, converted to Roman Catholicism in 1599. In service of Popes, Emperors, Dukes and Cardinals, and in relation to all eminent and representatives intellectuals of his time – from Markus Welser to Tommaso Campanella and Galileo Galilei. His *Apology of Macchiavelli* was written in 1619 and circulated as manuscript in European courts and academies. It was never printed. His Machiavellian thought influenced later political thinkers like Gabriel Naudé or Hermann Conring. Schoppe distinguished himself both as a Counter-Reformation polemicist and as a Catholic humanist ready to go against Protestant intellectual celebrities. He became 'one of the attack dogs of Catholic erudition', as Anthony Grafton and Joanna Weinberg have put it, and there is reason to believe that the underlying psychological motive was the vulnerability of his self-narrative as a Catholic convert. Nonetheless, it soon transpired that Schoppe would not make a smooth court career for himself in Rome, as he was difficult to control or tame and too independent minded, and would not hesitate to criticize the Jesuits, or the cardinals either. With the hard work of several years Schoppe managed to become an agent of the Habsburgs, both the Austrian and the Spanish, and by 1614 he was receiving a pension from the Spanish throne. By that time he was dreaded and hated so much that English agents beat him up in the streets of Madrid in broad daylight, and he started feeling physically endangered. As a self-made Habsburg politician he was principally engaged in the construction of the Catholic League against the Calvinists. The campaign initiated for Machiavelli's rehabilitation was of another kind. As Schoppe told his closest friend Johann Faber, he would oblige the entire Italian nation with his apology for Machiavelli, but in particular the Florentines. An extremely ambitious project, which fitted Schoppe's character, always ready to go against the tide: a celebrated defender of Machiavelli in an age when Machiavelli's name was a synonym for atheism and his works were on the Index. – See d'Addio, Mario: *Il pensiero politico di Gaspare Scioppio e il Macchiavellismo del Seicento*. Milano 1962; Gabor Almasi. *Rehabilitating Machiavelli: Kaspar Schoppe with and against Rome*, *History of European Ideas* 42 (2016), 981 - 1004. Provenance: Medina de las Torres (1600-1668), named also Don Ramiro Núñez de Guzmán, viceroy of Naples from 1637 to 1644. A large part of his books passed into the library of the English diplomat William Godolphin (?1635-96), who served Charles II of England in Madrid during the 1660s, became full ambassador in 1671, converted to Catholicism and forfeited his office in 1678; contemporary annotations in Latin; a manuscript shelf signature on title.

## Moon Mapping

### **SCHROETER, Johann Hieronymus.**

Selenotopographische Fragmente zur genaueren Kenntniss der Mondfläche, ihrer erlittenen Veränderungen und Atmosphäre, sammt den dazu gehörigen Specialcharten und Zeichnungen. 2 Vols.- Lilienthal, for the author, 1791. Quarto. [18], xx, 676 pp., [1]; [8], xxii, 565 pp., [1], with engraved title vignettes to both volumes, and 75 engraved plates, five folding; a very few leaves with the odd spot. Contemporary half calf over speckled board, red leather labels. GBP 22.000.-

A Superb Copy, crisp, clean, entirely uncut, and complete with the very rare second volume of Schroeter's famous work, „the foundation of modern Moon research“ (Brown).

Schröter studied law at Göttingen but also attended lectures in mathematics, physics, and astronomy, the last under Kästner. Through his appreciation of music he met the Herschel family, who revived his interest in astronomy. In

1781 he became chief magistrate at Lilienthal, a post that left him free time to devote to astronomy. With the aid of the optician J.G. Schrader he built and equipped an observatory that subsequently became world-famous for the excellence of the instruments. Some were made in his own workshop; others he bought from Herschel, the latter including a reflector with a twenty-seven-foot focal length, the largest on the Continent. George III of England enabled Schröter to continue his astronomical work by buying all of his instruments, with the stipulation that they remain in Schröter's possession until his death, when they would become the property of the University of Göttingen. Schröter was also awarded a grant to hire an assistant. K.L. Harding and, later, F. W. Bessel were among those who held the post. For thirty years the observatory at Lilienthal was a center of astronomical research and was visited by foreign astronomers. On 21 September 1800 it was the site of the congress organized to search the space between Mars and Jupiter for a planetary body. Lilienthal was occupied during the Napoleonic Wars by the French, who looted and partly destroyed the observatory, although most of the instruments were saved. In the ensuing fire Schröter lost all copies of his own works, which he had published himself. Schröter was the first to observe the surface of the moon and the planets systematically over a long period. He made hundreds of drawings of lunar mountains and other features, and discovered and named the lunar rills (DSB). The face of the moon is not only furrowed with craters, valleys, and seas, but it is laced with narrow clefts, or rills, and the honor of discovering the first lunar rills lies squarely in the lap of Johann Schröter. His *Fragments of Lunar Topography* contains the results of a dozen years of observing; it has a large re-engraving of the Mayer moon map, and more importantly, dozens of engraved views of particular features of the lunar landscape. Especially noteworthy in Schröter's lunar studies was his practice of studying the same feature under different angles of illumination, by which he was able to get a much better idea of actual lunar topography. He even calculated altitudes of many lunar mountains (Linda Hall exhibition catalogue). Whilst many copies of Schröter's work were destroyed in 1813 during the occupation of Lilienthal by the French, the second volume, published closer to the event than the first, is of great rarity. Complete with all the plates, the copy offered here is further enhanced through the addition at the time of binding of three folding plates by Bode, including a large chart illustrating the parabolic paths of 72 comets, and a fine stereographic celestial map, measuring 76.5 x 76.5 cm and 67.5 x 66 cm respectively (these with short tears to folds and lightly offset). The large, apparently separately printed maps by Bode are of similar rarity, with the chart of cometary paths recorded at the Staatsbibliothek zu Berlin, and Technische Universität Bergakademie Freiberg only, and - whilst a number of different examples of the stereographic celestial chart are recorded in German libraries the only copy recorded as engraved by the Berlin engraver C.C. Glassbach, as here, is at the Burndy Library. - Linda Hall Library / Ashworth (ed) *The Face of the Moon* 14 (vol. I only).

### „a Genteel pastime“

#### **SMITH of Adwick - Hall, Miss. (fl. 1818).**

*Studies of Flowers from Nature*, dedicated by permission to Her Royal Highness, the Princess Elizabeth, this work will consist chiefly of a selection of subjects from the choicest exotics, painted after nature, with a correct outline of each, and instructions for producing a facsimile of the finished drawing by Miss Smith. - Adwick Hall near Doncaster (and London: printed by W. & S. Graves): sold by the author [no date, ca. 1818; plates watermarked 1817 - 1820] Small folio (360 x 255 mm), Hand-colored engraved aquatint title, text leaf and plates in 2 states, comprising: 20 text leaves, 20 hand-colored aquatint plates, 19 (of 20) uncolored aquatint plates, list of subscribers at end (amended in manuscript), without the errata slip sometimes present. Blank leaves bound in. Contemporary red morocco-edged boards, spine with raised bands in seven compartments, gilt edges, lacking uncolored duplicate plate of „Rosa mundi“, light scattered spotting and browning. Fine copy in good coloring on strong paper.

GBP 5.800.-

„A rare work with finely colored plates [and] most interesting examples of the use of aquatint of the finest possible grain“ (Dunthorne). The work, „illustrated with excellent fine-grain aquatints“ (Blunt, 256), is typically of the genre of botanical coloring books, which sprung up in the very late 18th and early 19th century, frequently written and drawn by female artists and drawing teachers, such as Clara Maria Pope, Mrs Withers or Mary Lawrence. The format of these books was similar to that of *Studies of Flowers from Nature*, which was aimed at „young Ladies and private Governesses“. Fashionable though these floral copybooks were, perhaps due in part to the royal patronage that they received, as Blunt notes, „many of them, to judge by their rarity today, were either published in small editions (subscriber list indicate less than 100 copies) or thrown away when they had been duly ‚tinted in‘ (Blunt, 255-256). Containing uncolored duplicate plates intended for amateurs to practice on, this is one of the finest instruction manuals supporting the contemporary fashion of flower painting. In our copy only the „Rosa mundi“ had probably been used and never bound with. There are Images of the following flowers: Gentianella, Fuschia Coccinea, Rosa

Sinensis, Chrysanthemum, Pelargonium Cardatum, Pelargonium Zonale, Poconia, Var., Ixia tricolor, Mimosa paradoxa, Gardenia florida, Camelia japonica, Begonia Evansiana, Erica Cerinthoides, Erica coccinea, Roses, Rosa mundi, Passiflora alata, Dahlias, Crassula coccinea, Strelitza regina,

Miss Smith, who did the coloring for the aquatint engravings, is known to us only by her last name and place of residence. The subscriber list includes mainly female subscribers incl. the Princess of Hesse Homburg, Duchess of Rutland, Duchess Dowager, Duchess of Leinster, Countess Manvers, .... The name Smith might be a pseudonym. Adwick Hall near Doncaster was the family home of the Washington family (related to George Washington also). The hall was built in 1673 for Richard Washington and was a vernacular building in an old fashioned style, even for the time. The hall was demolished ca. 1866 after falling into ruin. There is a description of Adwick Hall's grounds from 1802 when the 'core' part of the estate was advertised as to let. At that time it was described as having '80 acres or thereabouts of corn, meadow and pasture land and convenient gardens walled round with greenhouses etc., stables for 23 horses, coach houses, barn, cow house, brew house, farm yard, poultry yard etc.' The parkland had clumps and some exotic tree planting within it. To the south of the hall there was a small walled kitchen garden with stove-house, sited very close to the hall, which may have been the site of earlier formal gardens. Estimates for the size of the parkland are in the region of 12 ha (30 acres). The work is dedicated in print to Princess Elizabeth of England and Landgravine of Hesse-Homburg (1770-1840) who was the seventh child of George III and Queen Charlotte, and an enthusiastic amateur artist, whose patronage of this work is entirely apt: she and her mother had both taken lessons in nature drawing and coloring from Franz Bauer (1758-1840), and the worth of this work would have been evident to her eye.- Dunthorne 283; Great Flower Books (1990) p.140; Nissen BBI 1855; KVK: Cambridge, Yale, Morgan Library, Dumbarton Oaks; Univ. Wisconsin; Morton Arboretum.

### first botanical field-guides

#### **(THEODOR, Jakob) Iacobus Theodorus, called Tabernaemontanus.**

Eicones plantarum seu stirpium, arborum nempe, fructicum, herbarum, fructuum, lignorum, radicum, omnis generis; tam inquilinorum, quàm exoticorum : quae partim Germania sponte producit, partim ab exteris regionibus allata in Germania plantantur; in gratiam medicinæ reique herbariae studiosorum, in tres partes digestoe; adiecto indice gemino locupletissimo.- Francofurti ad Moenum: [Nicolaus Bassaeus], 1590. oblong 4to (192 x 250 mm) [8], 1128 pp., [16] p. with 2255 text woodcuts of herbs, flowers, plants, trees etc. Contemporary vellum, bent, rubbed and soiled, hinges little cracked, but holding, front fly with old colored portrait in pen and ink, color oxidized. Partly browned, little stained; few woodcuts slightly colored but a little later hand. Inner cover with old colored hand drawing of a women.

GBP 7.500.-

First edition of this smaller format pictorial album or botanical field - guide by one of the fathers of botany.

The Frankfurt print - shop of Nicolaus Bassée (Basse) decided to print a herbal without text in a size which could be used to take into the field to identify plants. Further research could then be done in the studio with more books. On the other hand the book could also be used by artists as a model-book to copy certain plant illustrations. The illustrations here were later used by Gerard for his Herball.

Already in 1581, the publisher Plantin published an album containing all the plant illustrations of the Kruydtboeck by Mathias Lobelius, but the horizontal quarto of 1581 were accompanied only by the name of the plant. Plantin was probably aware that the botanical commentaries of Lobelius were not such a high order as those by Dodoens, Clusius and others. This album was issued at the behest of Severinus Gobelius, physician to the Elector of Brandenburg. Gobelius bought 150 copies at 36 st. each (Voet. Plantin press no. 1580). The pictorial album had minimal text, just plant-names and references to Lobelius' Folio Plantarum and the index had plant-names in Dutch, French, German, Italian, Spanish and English, which made the Plantin album saleable across Europe.

Nicolaus Basse was using Lobelius Plantarum seu stirpium icones (1581) as a model for his printing effort and participate with the selling success of the Plantin pictorial album.

Moretus published in 1591 a second edition of this botanical atlas by Lobelius, again a collection of plant pictures unaccompanied by commentaries, intended to make it possible to identify the plant solely with the aid of the picture. The field botanist and the general public found such smaller, lighter books more convenient and they were considerably cheaper. A small plant guide based on the herbals written by Fuchs was also very successful.

The „last of the botanists of the 16th century“ and one of the most influential, Iacobus Theodorus (1522-1590), also known as Tabernaemontanus, produced two extensive works on botany. Educated as a physician at Padua and Montpellier, Theodorus was an associate of Hieronymus Bock and Otto Brunfels. His Neuw Kreuterbuch (1588 - 1591), sometimes considered the most important work of botany of the 16th century, includes descriptions of

numerous plants brought back to Europe from the colonization of the New World, including Indian corn and the potato. Theodorus' intention was to make knowledge about the medical uses of plants available to a wide audience, and to that end, he included an index in twelve languages that included the common, as well as learned names of plants. Based partly upon illustrations from earlier works, the woodcuts from the *Neuw Kreuterbuch* were reissued in 1590, without the text, as the *Eicones plantarum seu stirpium*. The majority of these engravings enjoyed a life long after 1590. The plates were acquired in Frankfurt by John Norton, printer to the King of England, and were re-used in John Gerard's famous *Herball or Generall Historie of Plantes* (1597), one of the most influential English herbals of the 17th century. Only 16 text woodcuts were new. The enlarged edition of 1631 of Gerard's *Herball* used then the woodblocks of the Plantin - Moretus print-shop. – VD 16, T 829; Isphording 86; Nissen, BBI 1932; Pritzel 9094; Alden-L. 590/66; Heilmann 297: "Da der voluminöse Wälzer sehr unhandlich war, ließ der Verleger Bassaeus nach dem Muster von Fuchs und Egenolph für den täglichen Gebrauch einen textlosen Band im Quartformat mit 2255 Holzschnitten drucken ... Die Holzstöcke von Tabernaemontanus wurden von John Norton, England, angekauft und 1597 zur Illustration von Gerards *Herball* verwendet."

### Wood & Tree samples

**THIL, André.**

Descriptions des sections transversales de 120 espèces de Bois par André Thil, Inspecteur des Eaux et Forêts.- Paris: Laveur éditeur & tempere micrographe, 1914. Quarto (200 x 160 x 55 mm) 96 pp. text, one fold. table, in original printed wrappers and 120 samples of wood in small envelopes. In original green publisher cloth box. Minor defects, clasps missing but overall very fine. GBP 2.600.-

A rare Xylotheque - wood library or sample catalogue for local and exotic woods from Japan, India, Australia, Reunion, Guinea and Central America. Rare work containing cross sections of 120 species of wood. The second edition of this interesting work offers both a method of logical determination of the woods following the example of the *Bonnier Flora*, as can be seen from the large folding plate of the fasciule. The text provides the main data for each species, i.e. Latin and French name, description of the tree and geographical area of origin, density of the wood and use. The book then contains 120 samples, each of which is placed in a small identification envelope with a transparent oblong window, enabling the identification of a wood to be confirmed.

Andre Thil, a former student of the *Ecole Imperiale Forestiere de Nancy*, class of 1870, was one of the leading foresters in Paris during the 3rd Republic until his retirement in 1911. André Thill was the author of two works on dendrology, containing cross-sections of wood together with their descriptions. He published a first work in 1895, devoted exclusively to French woods and containing 100 samples. A second work was published in 1904, with 120 samples in all, including many exotic ones from Japan, India, Australia, Reunion, Guinea and Central America. The author also relates his achievements with his excellent colleagues who helped him to obtain the raw material indispensable for this collection. It is easy to understand that the publishing adventure was very risky, the cost of making such a book being obviously very high.- Holdings: (1895 ed.) OCLC: Paris, Toulouse, Rennes; in the USA: only Berkeley; (1904 ed.) OCLC: Groningen, Wageningen (now sold to private owner); Paris, Grenoble; only four copies in USA: Chicago, Lloyd Museum & Library; Iowa Law Library; Washington Univ. Seattle.

### Free Will

**VALLA, Lorenzo.**

De libero arbitrio. Apologia eius adversus calumniatores, quando super fide sua requistius fuerat. Item, Contra Bartoli libellum, cui titulus, de Insignijs & armis, Epistola ... [Ed. Joachim Vadianus]. – Basel, Andreas Cratander, November 1518. 4to (204 x 145 mm). a-g4 h6: (34) leaves. Woodcut border on title-page. Contemporary vellum. Small piece torn from blank lower corner of the title-page. d2 (Apologia) with restored tear, d4 with a small hole and loss of some letters. A few old underlinings. – VD16 V 225; Adams V 4146. **(Bound before:) POMPONIIUS LAETUS, Julius.** Opera. Romae historiae compendium, ab interitu Gordiani Iunioris usque ad Iustinum tertium. De Romanorum magistratibus. De sacerdotijs. De iurisperitis. De legibus ad M. Pantagathum. De antiquitatibus urbis Romae libellus, qui Pomponio adscribitur. Epistolae aliquot familiares. Pomponij vita, per. M. Antonium Sabellicum. – Strasbourg, Mathias Schürer, January 1510. A2 B8C4 D8 E4 F8 G8 H4 I8 K4 L4 M8: (2), LXVII, (1) leaves. – VD16 V 158; not in Adams. Provenance: Ex libris Bibliothèque de Mr. Braley des Varannes on paste-down. Late 18th century notes on a paper strip tipped in at the beginning of each work.

GBP 4.200.-

Lorenzo Valla (1407-1457) was one of the most important humanists of his time. His main works are *De voluptate*, a dialogue of representatives of Epicureism, Stoic, and Christian philosophy of morals, in 1519 also published by Cratander, *Dialecticae libri tres*, a radical refutation of scholastic logic and philosophy, *De elegantia linguae latinae*, which reached some 80 printed editions until 1600, the exposure of the Donation of Constantin as a forgery, titled *De falso credita et ementita Constantini donatione declamatio*, the path-breaking annotations on the New Testament, edited by Erasmus in 1505, and the present dialogue on free will (*Breve dicam, multo sunt plura quae ignorantur*. 4v). Its first edition was published in Cologne in 1473: *Dialogi decem variorum auctorum*, a compilation of several very different authors. A separate edition followed in Strasbourg in 1474, then Cologne 1482, printed together with his bestseller *Elegantiae linguae latinae*, Louvain 1483, together with *De vero bono*, and Vienna 1516. It has been intensively discussed from its first appearance in manuscript to Leibniz' *Theodicee*. The following work *Apologia, pro se, et contra calumniatores* is written against the accusation of heresy, and it is dedicated to his friend Petrus Candidus Decembrius. The last tract attacks the celebrated 14th-century lawyer Bartolo da Sassoferrato not only because of his barbarous Latin, but primarily because of his incapacity to understand the historical background of law. The law faculty at Pavia took offense, and Valla found it expedient to leave – in France Valla's critique of the contemporary jurisprudence led to the new *mos gallicus*. And even more than this, it prepared the foundation of philological and historical method.

E. Keßler, Editor of the Latin-German edition of the dialogue (München 1987), summarizes the philosophical achievement of Valla's dialogue by having shown, that the problem of free will can not be discussed without considering historical conditions and prejudices, and that it is bound to preliminary decisions, which not to take into consideration would mean to escape in empty concepts, like Boethius did: "sed ad quasdam res confugiat imaginarias et commenticias." (5r)

„Lorenzo Valla's work *De libero arbitrio* begins the theoretical discussion of the freedom of the will ... For the first time since antiquity, the problem of freedom is taken before an entirely secular forum, before the bench of natural reason ... Valla created that form of dogma-criticism used in the seventeenth century by Bayle and even in the eighteenth century by Lessing. (E. Cassirer, *The Individual and the Cosmos in Renaissance philosophy*, p. 79ff.) Pomponio Leto's *Opera* fits perfectly to Valla, since Pomponio (1428-1498) studied under Valla in Rome. „He soon became the centre of an intellectual circle later known as the Roman Academy. Originally a spontaneous and often lighthearted group of intellectuals, most of whom had ties to the papal court, the Academy devoted itself to literary discussions, archaeological excursions, and eventually the production of Roman plays and a more formal corporate life. Beginning at about 1465, Pomponius taught rhetorics at the Studio of Rome but was dissatisfied with his salary and determined to leave the city in 1467, going first to Venice, with the intention of embarking on a long voyage to the east [...] In 1470 he returned to teaching rhetorics at the Studio of Rome. [...] He is responsible for editions of several Latin authors and commentaries upon them, including Nonius Marcellus, Festus and others [...] The most important work of his later years concerned the historical sources and the antiquities of Rome [...] As a historian and antiquarian he became the most important continuator of Flavio Biondo's work. (Bietenholz, *Contemporaries of Erasmus III*, 110). On the editor of *De libero arbitrio* Joachim Vadianus see Bietenholz, *Contemporaries of Erasmus, III*, 364f. Vadianus has edited the same compilation in Vienna, printed by Singriener and others in 1516.

### **VISCONTI, Sigismond (Sigismund); DUFOUR, Adolphe (Auguste).**

Précis du système planétaire pour servir à l'intelligence des tableaux de MM. Sigismond Visconti et A.-H. Dufour.- Paris: Ch. Simonneau, 1830. sm.8vo (170 x 100 mm) 71 pp., (1, blank) Contemporary half calf. (with:) Tableaux du système planétaire par Sigismond Visconti et A. H. Dufour, accompagnées d'un précis.- (Paris: Charles Simonneau, 1830) Large folio (520 x 350 mm). Title, seven double-page stipple engraved plates, the first six after Visconti by A. Gianni, the seventh, which has contemporary hand-coloring, after Dufour; occasional very light foxing, small marginal tears to three plates, not affecting images. Contemporary red half-calf over marbled boards, gilt-printed title on spine, printed label on front cover; spine chipped, covers rubbed. One corner restored. Split at the bottom of 4 plates, without lack of paper. Fine copy. GBP 3.000.-

Rare complete set of the second edition of a magnificent set of seven large plates of the solar system dramatically executed in stipple engraving (color printing?), with the last in fine original hand coloring.

The first six plates were originally published in 1815, with the new plate added by Dufour in 1830 for this edition. The plates are titled: *Système solaire. - Orbite de la révolution annuelle de la Terre autour du Soleil avec*

l'indication des saisons. - Phases de la Lune. - Éclipses de Soleil et de la Lune. - Le flux et reflux. - Coupe de la Terre prise sur l'Équateur et vue du côté du Pôle Arctique. - Planisphère.

The French geographer and Paris based map and atlas publisher Auguste-Henri (Adolphe Hippolyte) Dufour (1795 - 1865) studied with Emile Lapie and worked with him on several maps for the Dépôt de la Marine. In 1824, he published for the first time, under his own name, a Geographical Analysis of the Map of Palestine, and from then on took part in many historical or topographical publications for which he drew up plans and maps. He is known to have worked with numerous other cartographers, publishers and engravers of the period including Charles Dyonnet and Duvotenay. His corpus includes numerous maps and atlases, the most striking of which is probably his monumental elephant folio: Atlas Universal physique, historique et politique géographique ancienne et moderne. Dufour's student and successor was Alexandre Vuillemin. Both editions are rare and the work is unrecorded in Houzeau & Lancaster, which does note only the 12mo text by Dufour describing how to interpret Visconti's plates (no. 8172).- Tooley, Mapmakers, Suppl. 109 (J. Visconti); Wurzbach LI, 60.

### First modern book on the Eye

**(Anon.; VOGTHERR, Heinrich)**

Ein Neues hochnutzliches Büchlin, von erkantnüs der kranckeyten der Augen, Sampt einer figur oder Anothomia eines augs, wie es jnnwendig gestaltet ... Auch erklärüng der selbigen mit anzeigung viler nutzlicher vnd bewerter hülf, als Purgation, Pflaster, Collirien, Sieff, Puluer, Salben und augen wassern, ... Getruckt zü Straßburg durch Heinrichen Vogtherren. Anno. M.D.xxxviij. (= Straßburg: Heinrich Vogtherr, 1538) sm.4to (192 x 142 mm) [12] Bll./leaves. with woodcut anatomical diagram of the eye and optic nerve on verso of title, printer's device with woodcut portrait of the publisher on last leaf. Backstrip. Old ink number 13 on title and reminisces of a wax stamp, else fine. GBP 9.000.-

First edition of an exceptionally work in the field of ophthalmology, maybe the first work by a modern European author. Heinrich Vogtherr's *Büchlin* is the first European, ophthalmology booklet published in the vernacular. It appeared in 1538 amidst a stream of other medical booklets by the same publisher. The *Büchlin* includes an anatomy of the eye, a description of pathophysiology, various diseases, and numerous remedies. It precedes G. Bartisch's *Ophthalmodouleia* but earlier texts probably influenced Bartisch more. A second edition of the *Büchlin* appeared in 1539. Because ophthalmology was the province of barber-surgeons, publications by learned medical authorities did not appear until relatively late. The *Büchlin* begins very impressively with a full-page woodcut of the anatomy of the eye. After two pages on anatomy, discussion of affections of the eye begin, with references to cataract, affections of the cornea, conjunctiva, pruritus, clearing the sight, etc. The pamphlet concludes with a little over three pages of remedies (collirium, Sieff, emplastrum pomale, and pulvis are some).

Vogtherr was a versatile character; in addition to his activity as printer, author and engraver actively committed to the Protestant cause, he also executed and published works on topics ranging from urology and ophthalmology to a manual of Renaissance ornamental motifs for the use of craftsmen. Overall, his publishing activity may be seen as a conscious expression of a desire to use printing to foster the spread of ideas and knowledge in social groups that would otherwise have been unfamiliar with the world of the book. Vogtherr's scientific texts give considerable space to illustrations and diagrams (here only one), and consists of very few pages. The language is simple and is always in the vernacular. (Andrea Carlino. Knowne Thyself. Anatomical Figures in Early Modern Europe; in: RES XXVII (1995), pp. 52-69).- Lit.: Donald Blanchard. Vogtherr's *Büchlin*; in: Documenta Ophthalmologica XCIII (1997), pp. 73-79; Garrison and Morton (online) 6932; Albert et al. 793 (wrongly listed as by Fuchs) as IBBO 271; Durling 3336 (lacking title and colophon leaves); VD16 1189; OCLC records British Library and Strasbourg. The *Büchlin* does not appear in the standard ophthalmology catalogues such as Becker or BOA, nor is it in Waller or Wellcome. There is a copy in the Wilmer Collection at Johns Hopkins, and Durling mentions obtaining facsimile leaves (title and last leaf) for the NLM copy from the College of Physicians of Philadelphia.- VD16 N 1189 (BSB München, Berlin, Univ. München, Halle, Erlangen, Wien, HAB Wolfenbüttel)

**WOODBURY, Walter B.**

Treasure Spots of the World. A selection of the chief beauties and wonders of nature and art. Edited by W.B.W. Containing ... photographs [with descriptive letterpress].- London : Ward, Lock, and Tyler, Paternoster Row [1875]. 4to (280 x 210 mm) [vi], 1-50 unnumbered pages with 28 mounted Woodburytype photographs with captions and names of photographers and each with a leaf of descriptive text. Original publisher's green gilt pictorial cloth, bevelled edges, all edges gilt, original brown endpapers.

Gutta Percha binding, a few gatherings weak, notorious for pages loosening, the pages in this copy have been reglued but still weak in places, binding slightly rubbed, slight wear to head and tail of spine, corners slightly worn with board just showing at tips, pale browning to top of title page and first leaf of text, tip of top corner of first leaf of text repaired, lower margin repaired to plate of Cordova, Spain, not affecting image, slight pale foxing to margin of frontispiece and last plate, foxing to endpapers, blank side of frontispiece and last leaf of text, pale browning to margin edges of a few pages or on blank side of plates, margins a little dusty at edges, but a good copy.

GBP 2.000.-

Truthful Lens, page 129, image 108 and page 230, No.189. Photographers listed: Stuart (4), J. M. Good (4), W. Woodbury (2), King (1), William England (2), Adolphe Braun (4), Parret (1), Stephen Thompson (4), Bierstadt (1), Naya (1), Houseworth (1), Shepherd (1) and John Thomson (2). Of special note are the views of Bangkok and Amoy Harbor, China by John Thomson and the view, On the Merced, Yosemite Valley by Houseworth. Holdings: no copy in Germany; Rijksmuseum; BL London, Cambridge, NL Scotland. USA: (?) difficult to tell as most libraries have only an online resource listed.

### **the book that Columbus' and Vasco da Gama used on their voyages**

#### **ZACUTO or ZACUT, Abraham ben Samuel.**

Almanach perpetuu[m] exactissime nuper eme(n)datu(m) omniu(m) celi motuum cum additionib(us) in eo factis tenens complementum. Venice: Petrus Liechtenstein, 1502. (colophon: ... Impressum est ac absolutu[m] Venetijs q[uam] accuratissima fide ... caractere Per Petru[m] Liechtenstein Coloniensem Anno Salutifere incarnationis 1502. Die 15 Julij.) Quarto (215 x 160 mm) ff. 243, 1 blank leaf.

Contemporary blind - tooled pigskin over wooden boards, with single middle clasp, handwritten lettering piece on upper cover, ample margins with deckled edges, some water-staining to first leaves, some worming to title and final blank, traces of removal of owners' entries in ink on title and fol. 3, slight wear and soiling, lower spine end damaged by worming, ms. paste-downs removed. Fine copy in first appearance.

Exceedingly rare third latin edition of Zacuto's „Almanach“ (or Ephemerides) that revolutionized ocean navigation and was used by Columbus and Vasco da Gama while traveling. The latin translation of La Compilacion Magna (known as Almanach perpetuum / „Book of Tables on the celestial motions or the Perpetual Almanac“ which was begun around 1470 and completed in 1478) was made by Zacuto's disciple, José Vizinho and first published in Leira in 1496, one of the first books published in Portugal with a movable type printing press. The first Castilian translation was undertaken in 1481 by Juan de Salaya with the help of the author. The first latin edition was reprinted 1502 from Peter Liechtenstein in Venice adding to the text annotations, corrections and a few tables among them a list of stars by Alfonso de Cordoba, a physician in the service of Cardinal Borgia in Rome. These are not present in the Leira edition. Peter Liechtenstein, a German printer who established a press in Venice towards the end of the 15th century, was from Cologne, an early centre for printing (where the first printer in England, William Caxton, learned the trade) and had printed other works of astronomy and astrology: for instance the first latin edition of Ptolemy's *Almagest* (1515). Zacuto's work became important for the contemporary explorers. The Almanach was composed of 65 detailed astronomical tables (ephemerides), with radix set in year 1473 and the meridian at Salamanca, charting the positions of the Sun, Moon and five planets. The calculations were based on the Alfonsine Tables and the works of earlier astronomers (notably of the 14th-century Majorcan school). Zacuto set out the data in a simple „almanac“ format, with the positions of a planet easily interpolated between entries, making it quite easy to use at voyages. *Zacuto's Almanach perpetuum* helped immediately revolutionize ocean navigation. Prior to the *Almanach*, navigators seeking to determine their position in the high seas had to correct for „compass error“ (the deviation of the magnetic north from the true north) by recourse to the quadrant and the Pole Star. But this proved less useful as they approached the equator and the Pole Star began to disappear into the horizon. *Zacuto's Almanach* supplied the first accurate table of solar declination, allowing navigators to use the sun instead. As the quadrant could not be used to look directly at the sun, Portuguese navigators began using the astrolabe on board (an old land-based instrument to measure the height of the sun indirectly). *Zacuto's* tables in conjunction with the new metal nautical astrolabe allowed navigators to take accurate readings anywhere. Already in 1497, Vasco da Gama took Zacuto's tables and the

astrolabe with him on the maiden trip to India. It would continue to be used by Portuguese ships thereafter to reach far destinations such as Brazil and India. Vasco da Gama and his crew underwent a thorough briefing and preparation by Zacuto, in addition to learning to use the new instruments which he had developed for their trip before setting on the voyage to India in 1496. Prior to that, Zacuto had again improved on the existing astronomical tables, mostly those prepared under King Alfonso X. of Castille. Already Columbus had used Zacuto's tables. „The story is that on one of his voyages, when attacked by the natives, Columbus noted that Zacuto had predicted an eclipse for that day, and used this information to threaten the natives and convince them that he could extinguish the Sun and Moon and deprive them of all light. Zacuto's work thus saved the Admiral's life and that of his crew.“ Abraham Zacut (ca. 1452 - ca. 1515) was an important Jewish astronomer who contributed to observational astronomy and astronomical tables who served as Royal Astronomer to King Joao II. of Portugal. With the general expulsion of the Jews from Spain in 1492, Zacuto took refuge in Lisbon. Already famous in academic circles, he was invited to court and nominated Royal Astronomer and Historian by King Joao II., a position which he held until the early reign of Manuel II.. He was consulted by the king on the possibility of a sea route to India, a project which he supported and encouraged. Zacuto would be one of the few who managed to flee Portugal during the forced conversions and prohibitions of departure that Manuel I enacted, in order to keep the Jews in Portugal as nominal Christians for foreign policy reasons. He fled first to Tunis, and later moved to Jerusalem. He died probably in 1515 in Jerusalem, however, other reports indicate his final home was the Hebrew community of Damascus and the death occurred in 1520.- Bedini (ed.) *The Christopher Columbus Encyclopedia*, I, 753 f.; Hockey (ed) *BEA* II, 1255/56; Chabas/Goldstein. *Astronomy in the Iberian Peninsula: Abraham Zacut and the transition from manuscript to print*. 2000. Adams A44; Fürst III, 201; Houzeau/ Lanc. 14174; Panzer VIII, 356; Proctor/Isaac 12987; STC 740; EDIT 16 CNCE 35569 (a Venice edition of 1499 is apokryph).



# KÜHN

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