



A selection for the  
London Rare Book Fair  
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ANTIQUARIAT  
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**ALDROVANDI, Ulysses.  
Musaeum Metallicum**

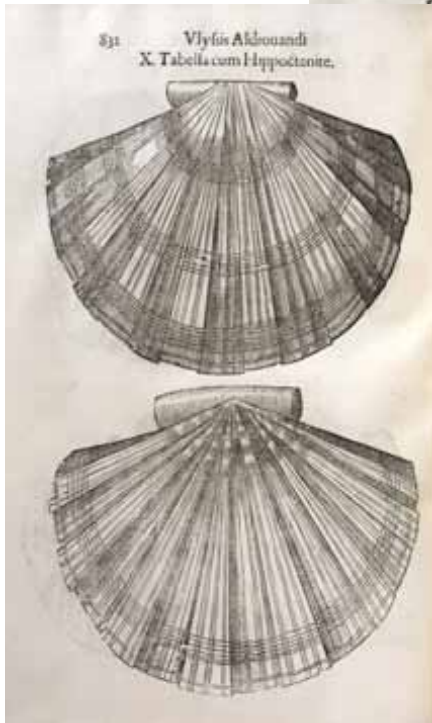
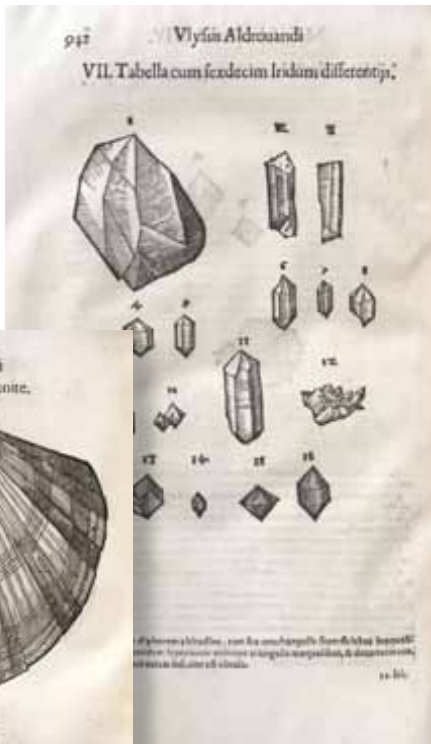
*In Libros IIII distributum Bartholomæus Ambrosinus, in patrio Bonon Archigymnasio Simpl. Med. Professor ordinarius, ... et Studio composuit cum Indice copiosissimo Marcus Antonius Bernia ... - Bononiae (Bologna), typis Io. Baptistae Ferronij, 1648. 2° (350 x 240 mm) [6], 1-979 pp., [13] with engraved title page, many woodcuts in text, printer's devices, capital letters. Although no date appears on the title page, the last page has the colophon. Contemporary polished vellum, gilt crest on both covers, red edges. Mint copy in first binding.*

EUR 14.000.-



Some forty years after he died, Aldrovandi's *Musaeum Metallicum* was published as a thick folio volume, edited by Bartolomeo Ambrosini. Since his death, the work had existed as a manuscript, „*Geologica ovvero Fossilibus*“ in the library collections of the University of Bologna, which had been bequeathed all of Aldrovandi's manuscripts. Even unpublished, many scholars studied it as a resource for their own researches. The value others placed upon Aldrovandi's material did not go unnoticed, which is why a former student of the author, Bartolomeo Ambrosini was entrusted by the Bologna senate to edit the material Aldrovandi had accumulated and oversee its publication. The final product is a superb book. The work consists of a single volume divided into four books: on metals, earths, succi concreti, and stones (minerals, rocks, and fossils). Within each of these books, whole chapters are devoted to the consideration of a single „fossil“. In a style typical of its time, each chapter then describes the fossil's medical properties, synonyms, localities, origins, varieties, and uses. Aldrovandi includes references to classical and medieval authors through out the volume in a fashion that anticipated modern scholars by compiling long lists of authorities but omitting those commonly cited. The antiquarian nature of the book commonly gives the names and descriptions of the items listed a strange, unrecognizable character. The comprehensive index included at the end of *Musaeum Metallicum* also makes this a reader friendly book. Perhaps the most outstanding feature for the lover of mineralogical rare books are the several hundred woodcuts scattered throughout the volume. „Some of these are full page but most are smaller, with many possessing a quaint, interesting character. These figures are designed to illustrate features described in the text, but since minerals do not easily lend themselves to illustration, the pictures „rather require the text to explain them“ (Adams, 1938). That Aldrovandi was a man of accumulation is clearly shown by his inclusion of all facts that came to his attention without apparently any critical faculty to distinguish between the true and imaginary, the important and non-essential. A great amount of scientific value is contained in *Musaeum Metallicum* but an overburden must be removed to discover those nuggets. In truth, the author was a product of his time. The editor Bartolomeo Ambrosini. (1587-1688) was an Italian physician & botanist. Ambrosini was a pupil of Aldrovandi, who successively became professor of philosophy, botany and medicine at the University of Bologna. He also became director of that city's botanical gardens.





Aldrovandi is regarded as one of the foremost zoologists of the Renaissance. He was born of a respectable burgher family and it was intended he should become a merchant. However, the work attracted him so little he began studying first jurisprudence in Bologna and then philosophy and medicine at Padua and Rome, receiving the degree of Doctor of Medicine in 1552. In 1560, he was appointed professor of natural history at the University of Bologna, where he remained the next 40 years, until his death. As a professor he was a favorite lecturer of the students, and his talks on botany and pharmacology were heavily attended. In order to provide teaching aids for his lectures, he founded in 1568 the Bologna City Gardens and became its first director. About this period, he was also appointed inspector of drugs and as a consequence published, *Antidotarii Bononiensis Epitome* (Bononiae, 1615), which became a model for many subsequent pharmacopoes. Throughout his adult life, Aldrovandi spent his financial and leisure resources in the accumulation of a very large collection of natural history objects. He employed the artists of the city to create wood-cuts of the objects for use in a series of large, beautifully illustrated books, covering the natural history spectrum. However, at his death, only four volumes had been published. Before he died though, the Bologna City government, in recognition of his scientific contributions, had doubled his salary. In gratitude, Aldrovandi bequeathed his collections and unpublished manuscripts to the city, where today the remains are located in the city's library and museum. This was also a shrewd move because after his death, the city decided to continue the publication of the manuscripts.

**Provenance:** Johann Jodocus Schmidmayr von Schwarzenbruck (1611–1647); Altdorf University (stamp on cover). He donated to the Altdorf University near Nuremberg in 1640 an oriental printing press. After his death the Nuremberg City Library bought over 106 rare oriental books in 1648 from the library of Johann Jodocus Schmidmayr von Schwarzenbruck.- Adams, 165-68; Cobres, I, 161-64; Mieli, 328-36; Partington, II, 92-94; Roller & Goodman, I, 25; Sinkankas, no. 72; Ward & Carozzi, 43; Wilson, *History of Mineral Collecting*, 27-28; Nissen, BBI 75.

## Cave Hunting

### Rosenmüller, Johann Christian. Die Merkwürdigkeiten der Gegend um Muggendorf.

*Beschrieben von Johann Christian Rosenmüller, ... Mit sechs illuminirten Kupfern. - Berlin: Johann Friedrich Gottlieb Unger, 1804. Folio (405 x 245 mm) 90 pp. with 6 finely hand-colored engraved plates by Wittich after Rosenmüller. Contemporary marbled boards, rubbed and soiled, front-fly and outer edges spotted, else fine uncut copy. Ownership stamp on first free leaf: E(x) Bibliotheca Böttigeri (Carl August Böttiger).*

EUR 3.800.-

#### Rare first edition

Johann Christian Rosenmüller (1771–1820) was a German anatomist born near Hildurghausen, Thuringia, who received his education at the Universities of Leipzig and Erlangen, and in 1794 was appointed prosector at the anatomical institute at Leipzig. In 1797 he earned his doctorate, and from 1802 until his death was a professor of anatomy and surgery at the University of Leipzig. An avid speleologist, in 1794 he provided the binomial name of *Ursus spelaeus* for the extinct cave bear from his analysis of bones found near the village of Muggendorf. He was the author of several treatises on anatomy and surgery

The Rosenmüller cave was discovered in 1790 by Johann Ludwig Wunder, a son of the cave inspector Georg Wunder. The Leipzig physician and professor of anatomy Johann Christian Rosenmüller was the first stranger to visit the cave in 1793. In his honor, the cave henceforth bore his name. The original entrance is about 13 meters

high, so the cave could be committed only by arduous abseiling. The cave consists essentially of a 16-meter high main room and is 112 meters long after remeasurement. To operate the cave as a show cave, an 8-meter long artificial entrance was built in 1836, through which one still enters the cave today. From 1836 to 1960 the cave was operated as a show cave and is thus one of the oldest show caves in Franconia. A particularly romantic impression aroused using candles for lighting, the holders are still there today.

Cave bear skeletons were first described in 1774 by Johann Friederich Esper in his book *Newly Discovered Zoolites of Unknown Four Footed Animals*. While scientists at the time considered that the skeletons could belong to apes, canids, felids or even dragons and unicorns, Esper postulated that they actually belonged to polar bears. Twenty years later, Johann Christian Rosenmüller, an anatomist at the Leipzig University, gave the species its binomial name.





*Ausfer Aufsicht der Hofenmittelschöble*



*Eingang zur Güterwälder Höhle*





## Relief Map



### Die Sächsisch-Böhmische Schweiz

*nach den neuesten Untersuchungen von Odeleben, Oberreit, Schiffner und Wiemann zusammengestellt und en haut-relief bearbeitet von C(arl). Ritter. – Dresden: Verlag Farben- und Reliefdruck von C. C. Meinhold und Söhnen, (o. J. before 1845) Size: 380 x 365 mm. Cardboard with gilt printed text (card legend area) with relief map of Saxonian Switzerland in size: 265 x 220 mm in the middle. Without frame.*

EUR 4.800.-

Exceedingly rare relief map of the Saxon Switzerland, a hilly climbing area and national park around the Elbe valley south-east of Dresden, Germany part of the Elbe Sandstone Mountains.

Made by Carl Ritter after studies by Ernst Otto Innocenz Freiherr v. Odeleben (1777–1833), a military surveyor who made an important new military map of the region, published in 1830 in Dresden as “Topographische Karte der besuchtesten Theile der sächsischen Schweiz mit einem Kommentar”, after examinations of the cartographer Jakob Andreas Hermann Oberreit (1777–1865) who edited the „Topographischen Atlas von Sachsen” and of the geographer Christian Albert Schiffner (1792-1873). The german geographer Carl Ritter (1779–1859) is considered along with Alexander von Humboldt, one of the founders of modern geography. From 1825 until his death, he occupied

the first chair in geography at the University of Berlin.

Relief maps are maps with each pixel colour-coded according to the ground height and/or slope at that location. Generally height is shown in a combination of three concepts: contours, colouring and shading.

Äußerst seltene Reliefkarte der Sächsisch-Böhmschen Schweiz, plastisch in Prägedruck ausgearbeitet und koloriert. Unterhalb der Karte ein Längenmaßstab von 1 sächsischen Polizeimeile = 16000 Dresd. Ellen oder 2 Wegstunden. Anmerkung. die Höhe verhält sich zur Länge 3 zu 1. Relief etwas berieben, mit minimalen Abplatzungen, der breite Rand etwas angeschmutzt, 3 Ecken der Umrahmung des Reliefs mit kleinen Einrissen, schöner Zustand. KVK: Frankfurt a. Main; BL London dating 1845. Neukrantz. Bericht Gewerbe Ausstellung Berlin 1844, pp. 581.





## Beautifully executed Engravings of Fossil & Living Marine Animals that reveal the Keen Spirit of Observation of the Painter & the Naturalist



### SCILLA, Agostino. De corporibus marinis lapidescentibus quae defossa reperiuntur.

*Addita dissertatione Fabii Columnae de glossopetris. – Rome: de Rubeis, 1747. Quarto (265 x 195 mm) (2), (8), 73 pp., (6) with engraved frontispiece and 30 engraved plates. Contemporary vellum with two morocco labels, overall fine and clean.*

EUR 1.900.-

First latin edition of one of this classics of geology, first published in Naples in 1670 under the title: „La vana speculazione disingannata dal senso” in little smaller size and with Fabio Colonna’s De glossopetris dissertatio of 1616 as appendix. Charles Lyell praised his work more than a century after Scilla’s death. Besides being an artist known for his church frescos, Agostino Scilla was a pioneer in the study of fossils. His searches for them in Sicily and Malta led to the publication of this work which affirmed that they were not the product of fable but the remains of living creatures trapped in mud or soil that later turned into rock. Shells, coral and ‘pescevacca’ are the subject of particularly interesting descriptions. The supposedly magical objects called ‘glossopetrae’ or ‘tongue stones’ are correctly identified as sharks’ teeth.

„Scilla described with admirable clarity and critical sense the observations he had made on the fossiliferous sedimentary terrains of both shores of the Strait of Messina. (He) studied the zoological features of each fossil, comparing them with those of analogous living species” (DSB).

Scilla likewise refuted the ideas of Maltese naturalist Giovanni Francesco Buonamico, who shared Athanasius Kircher’s ideas that some fossils were formed as sports of nature. Scilla also uncovered the origin of glossopetrae, as did Niels Stensen a few years earlier. But whereas Stensen delved deeper into how rock layers formed, Scilla focused more closely on how fossils formed.

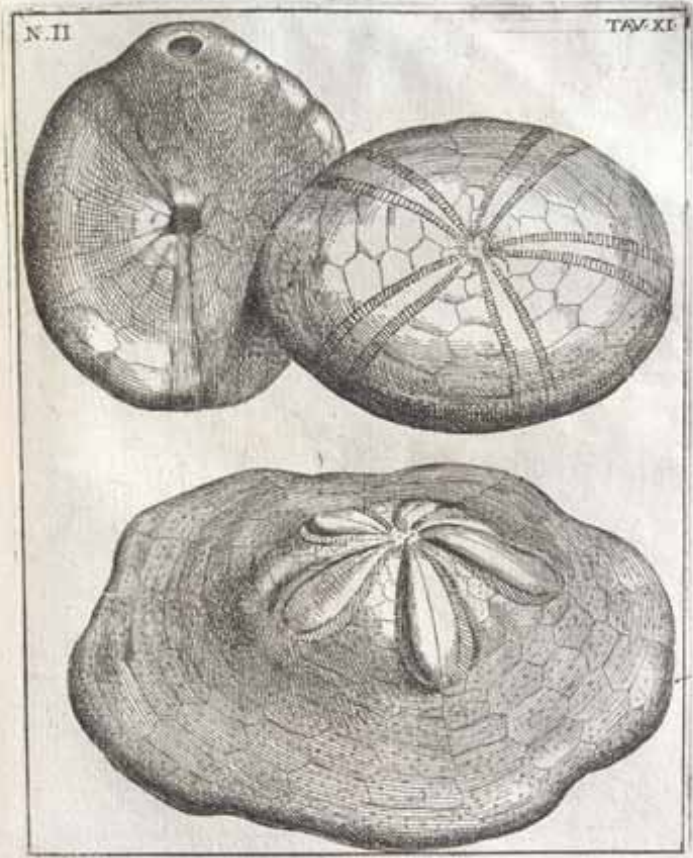
Scilla was born in 1629, in Messina, Sicily. His father was a notary, and Scilla enjoyed good



training from accomplished artists at an early age. When just a teenager, he went off to Rome and apprenticed for five years under a classical painter. But Scilla didn't live a continuously charmed life. His participation in a failed revolt against Spanish rule forced him into exile, so he wound up living in Turin and then Rome, where he had earlier received an education. His artistic training, as well as his long-term interest in coin collecting likely helped his studies of fossils. He had a practiced eye and gave considerable thought to how fossils formed. Scilla also brought his artistic ability to fossil depictions, often providing multiple views of the same kind of fossil. Naturalists in Tuscany, Sicily and Malta were enthusiastically debating the nature of fossils in Scilla's day, exchanging letters, specimens and explanations. The same problems that plagued many naturalists of the time were at work here. Fossils might be well preserved, but they didn't necessarily have living analogues, at least not in the same vicinity. Shark teeth might be common fossils, for example, but sharks in this region were relatively rare. Sand dollars and sea urchins were rare enough that naturalists couldn't compare echinoderm fossils to their modern counterparts. Scilla deserves admiration for the insights he reached despite these setbacks. That he rejected Kircher's notions of fossils as nature's big joke didn't mean that Scilla necessarily had a

modern understanding of geology. He rejected the claim that God changed snake tongues into glossopetrae because he didn't think that particular „miracle“ had been sufficiently proven, but that didn't mean he rejected miracles altogether. Scilla believed that fossils were probably deposited by the Noachian flood, though he suggested there might have been a series of floods. This suspicion was far from the findings of today's science, but the notion of a series of events brought Scilla closer than many of his contemporaries to understanding how fossils were formed and deposited in rocks. On the frontispiece of Scilla's book, Sense holds a fossil shell and gestures toward an outcrop of similar organisms to make the point. The fact that the fossils include a shark tooth and echinoid — easily recognizable fossils if well preserved — helps Sense's case. At that time, a few other sharp minds, including those of Stensen, John Ray and Robert Hooke, reached similar conclusions about the organic nature of fossils. - DSB XII, 256; Nissen ZBI 3780; Dean III, 341; Eales I, 765; Lit.: Marco Romano (2013). 'The vain speculation disill-lusioned by the sense': the Italian painter Agostino Scilla (1629–1700) called 'The Discoloured', and the correct interpretation of fossils as „lithified organisms“ that once lived in the sea, in: *Historical Biology: An International Journal of Paleobiology*







**AGASSIZ, Jean Louis Rodolphe.** Monographie des poissons fossiles du vieux grès rouge ou système dévinien (old red sandstone) des Iles Britanniques et de Russie.

*Neuchâtel and Solothurn: H. Wolfrath for the author and Jent and Gassmann, 1844–1845. 2 volumes. Text volume with letterpress table; plate volume with lithographic title, 43 lithographic plates by Bachfeld, Diekmann et al. after Dinkel, Jäger and Sonrel, most hand-colored or tinted and two folding. Later half calf period style.*

EUR 2.900.-

First edition, separately published, although recommended as supplement to Agassiz' famous „Recherches sur les poissons fossiles“. By the time the follow up volume ‚Monographie des Poissons Fossiles du Vieux Grès Rouge‘ (1844-1845), had been issued Agassiz's interest had switched to other subjects such as his studies on glaciers and the ice age. In 1846 he left Europe for the United States where he widely lectured at the Lowell Institute, Harvard and Cornell Universities. Following a bout of ill

health, Agassiz did briefly return to the study of Brazilian fish in the 1860s. Agassiz died on 14 December 1873, aged 66.- BM(NH) notes that the Monographie was ‘regarded by the author, and given by Engelmann, as a supplement to the Recherches’ (I, p.18). BM(NH) I, pp.17-18 (wrongly calling for 42 plates); Nissen ZBI 42 (wrongly calling for 42 plates); Wood p.181; Woodward and Sherborn, A Catalogue of British Fossil Vertebrata, pp. XXIX.







## Hell's Herschelien Constellations



**HELL, Maximillian.**  
**Monumenta, aere prenniora, inter astra ponenda,**  
**primum, Serenissimo Regi Angliae, Georgio III.**

*Alterum, Viro Celeberrimo, Friderico, Wilhelmo Herschel. Vienna, Trattner, 1789. 8vo, ff. 40; text within typographical border, plus four folding engraved astronomical celestial maps; a fine copy in contemporary bronze paperboards.*

EUR 4.850.-

**Exceedingly rare first edition** of this work introducing some new constellations in a series of four maps named after William Herschel (1738–1822) and his telescope.

According to Warner (1979) the maps were derived from Fortin's 1776 atlas and measured 16 x 21 cm, except for the fourth, which was 28,5 cm square. Hell used a Sanson-Flamsteed projection with a geocentric orientation. His new constellations honored William Herschel and his patron, King George III. In honor of the latter was the constellation 'Psalterium Gregorianum', and in honor of the former's telescopes were the constellations 'Tubus Herschelii Minor' and 'Tubus Herschelii Major'. No longer in use today, these constellations appeared later in Fortin's 1795 atlas, Bode's monumental 1801 atlas, and several other 19th-century atlases.

**Maximilian Hell** (Miksa Hóll) (1720–92) was a Hungarian Jesuit astronomer, director of the new Vienna observatory since 1755. 'Although Hell lived in Vienna, he had close connections with Hungarian astronomers and four observatories were built between 1755 and 1792 under his guidance in Hungary. Between 1757 and 1791 he published the annual Ephemerides, the second astronomical yearbook in Europe. He was invited by Christian VII, king of Denmark, to observe the transit of Venus of 1769 from Vardö and determine the solar parallax, since Vardö was the northernmost location from where the transit could be followed. Hell's observations were critical from the point of view of the accuracy of the value of the sun-earth distance. Hell delayed in publishing the results because at first he wanted to show them to his royal patron, Joseph de Lalande, who was to collect the observational data from each observing site, accused Hell of manipulating the data because of the delayed submission, thus destroying Hell's reputation' (BEA I, p. 520).- Kanas 177; KVK locates copies at Augsburg, Munich, Marburg, Mainz, Bonn, Erfurt, and Göttingen; COPAC locates a copy at Edinburgh University; OCLC list no copies.





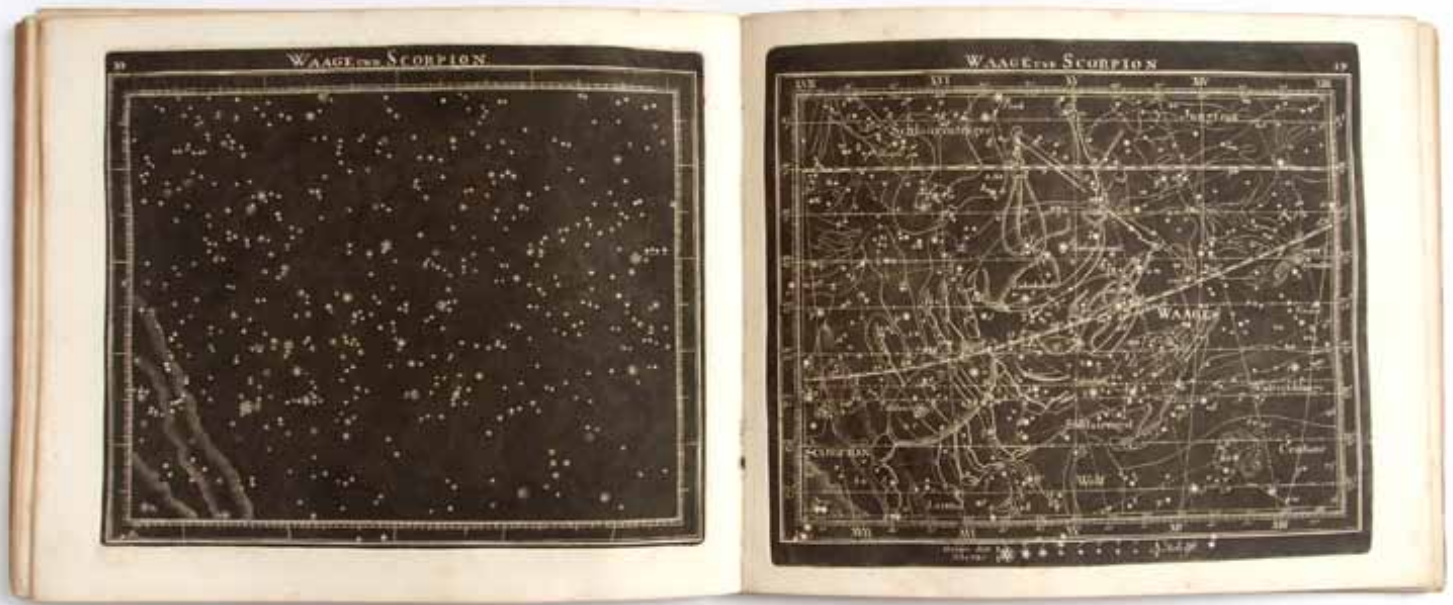
**Zach, Franz Xaver von; Christian Friedrich Goldbach.  
Neuester Himmels-Atlas**

*zum Gebrauch für Schul- und Akademischen Unterricht, nach Flamsteed, Bradley, Tob. Mayer, De la Caille, Le Francais de la Lande und v. Zach, in einer neuen Manier, mit doppelten schwarzen Stern-Charten bearbeitet; durchgehends verbessert, und mit den neuesten astronomischen Entdeckungen vermehrt von C. F. Goldbach. Revidirt auf der Sternwarte Seeberg bey Gotha und mit einer Einleitung begleitet von Freyherrn F. von Zach, ... Zweyte unveränderte Auflage. - Weimar: im Verlage des Landes - Industrie - Comptoirs, 1803. square small folio (220 x 275 mm) 10 pp. text with 52 maps on black ground and 4 hemisphere maps. Original publ. half calf.*

EUR 3.600.-

Second edition of this rarely seen star atlas with cover-title: Neuester Himmels-Atlas für Schul- und Akademischen Unterricht. Revidirt auf der Sternwarte Seeberg bey Gotha, invented by Christian Friedrich Goldbach and revised by Franz Xaver von Zach. 10570 stars are shown, 7651 more than in Flamsteed's atlas. Christian Goldbach (1763-1811) was a german astronomer who taught astronomy at Moscow University. In 1799 he published a celestial atlas derived from Bode's Vorstellung Der Gestirne ... which was entitled Neuster Himmels-Atlas zum Gebrauche für Schul- und akademischen

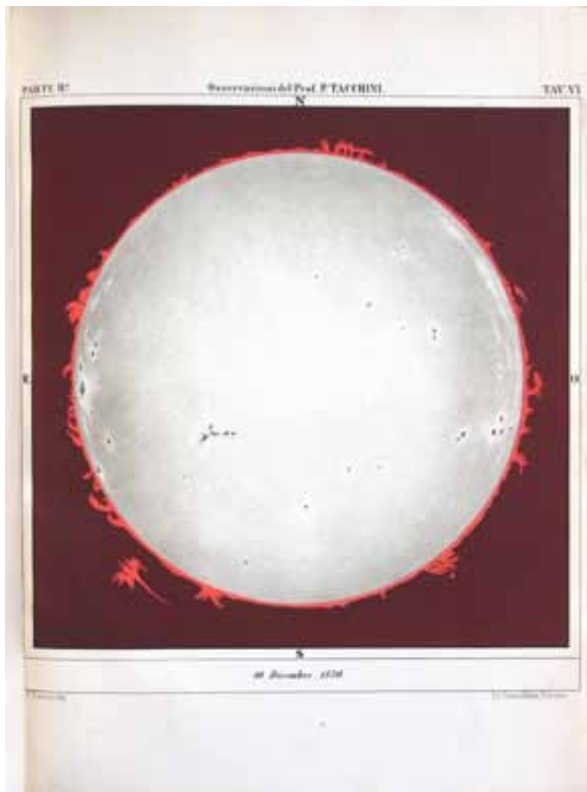




Unterricht: „It consisted of 56 maps, 26 of which were white-on-black constellation maps centered on the major constellations north of the Tropic of Capricorn. Each map used a Sanson - Flamsteed projection with a geocentric orientation, and the Ursa Major map was 158 x 206 mm. Facing each of these maps was a print of the same area showing the white stars on a black background but without coordinates, constellations, or other markings. These were intended to simulate the view of the night sky. This pairing was well received by the astronomical community.” (Kanas, 184-85)

Goldbach's star atlas is a fairly copy of the Bode-Flamsteed edition of 1782, with two striking differences. The most obvious is that Goldbach's star maps are white on a black background. The second modification is that a matching

plate is provided on the facing page with the constellation figures omitted. What is particularly interesting about the Goldbach atlas is the method of printing. Normally, white on black images are printed on woodblocks; the Semler atlas of 1731 used such a technique. This atlas is immediately distinguishable from all its predecessors by the black background on the plates. Each plate was printed from a woodblock, cut only to outline the constellations and pinpoint the stars. Goldbach's images however were engraved on copper plates, which were then printed in relief (with the ink on the surface) rather than in intaglio (with the ink down in the engraved lines and the surface wiped clean). (Linda Hall, Sky).- Pogg. I, 925; Warner, Sky explored 96, 1.



## SANTINI, Giovanni, Gaetano CACCIATORE, and others. Rapporti sulle osservazione dell'eclisse totale di Sole del 22 Dicembre 1870.

*- Palermo, Lao, 1872. Folio (333 x 235 mm) [8], 214 pp.; with a lithographic frontispiece and 15 plates, some folding; a few spots or marginal stains; some of the tissue-guards wrinkled. Bound in contemporary paper-backed boards, red morocco label, rubbed and soiled. Inner cover with presentation Ex Libris from Gaetano Cacciatore to Prof. Halle at Wroclaw Observatory.*

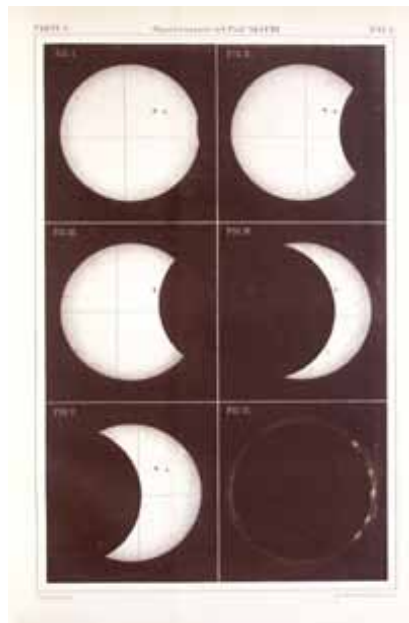
EUR 1.800.-

First edition of this extensive and ground-breaking collaborative study of the total solar eclipse of 1870, consisting of individual reports by the leading Italian astronomers of the time, including Angelo Secchi, G. B. Donati, Gaetano Cacciatore, Pietro Blaserna, A. Nobile, P. Tacchini, et al.

'In the early 19th Century the studies on spectral lines by Joseph von Fraunhofer and Gustav Kirchhoff led to "the joining of physics and chemistry into astronomy ... as the essential result of a more general approach", thus determining the birth of astrophysics. The application of two new techniques, such as photography and spectroscopy, to astronomical observations of total solar eclipses contributed greatly to further the development of solar physics. In 1851 astronomers obtained the first photographic image of the total phase of a solar eclipse showing that the corona was part of the solar atmosphere rather than the Moon's one. Thanks to the use of the spectroscope, in 1868 astronomers observed hydrogen lines in the spectrum of solar prominences and found the presence of a yellow line that later was to be associated to a new chemical element, Helium.



'After the first studies on the stellar classification by Giovanni Battista Donati and Angelo Secchi, Italian astronomers wishing to get involved in this field, did not miss the opportunity represented by the total solar eclipse of December 22 1870, whose area of totality would have covered eastern Sicily. A scientific commission was set up and formed by the directors of Naples, Milan, Florence, Palermo, and Padua Observatories. The astronomer from Rome Angelo Secchi, joined the commission, being "the only one able to compete with foreigners in terms of spectroscopy". In September 1869, the Commission met up in Florence to define the sites and programs for the observations.



'The observational stations were placed in the old convent of the Capuchins close to Terranova (now Gela), and on the terraces of the Augusta castle. The scientific program focused on the spectroscopic studies of chromosphere, corona and solar prominences. Having set up two stations, it was possible to host other scientists who collaborated in the astronomical, meteorological and magnetic observations. To move to Sicily instruments and astronomers, the Italian Royal Navy placed a steamer already used in the Expedition of the Thousand, Plebiscito, at the Commission's disposal. The "senators" of Italian astronomy were located at the Augusta station, undoubtedly more comfortable than the Terranova site, which was reserved to younger astronomers and their assistants. Between its arrival and the start of the eclipse, the large group of Italian scientists had the opportunity to work together – for the first time in the history of the unified country – and acquire new skills in astronomical spectroscopy, a field of which little was known to the majority of Italian astronomers.

'Following the results of this scientific expedition, on October 5 1871, the main actors involved founded Società Italiana degli Spettroscopisti, the first scientific organization in the world devoted to "physical astronomy". The reports written by the astronomers based on the results of their observations were published in 1872 in a volume that gained wide appreciation also in the international scientific circles. "Rapporti" was presented to many Italian and international politicians and intellectuals, including Giuseppe Garibaldi. In the effort to compete with foreign astronomers, the main actors of the expedition soon managed to implement high-quality research programs that led Italy to stand out in astrophysical studies until the end of the 19th Century, favouring the establishment of Catania Royal Observatory, the first astrophysical observatory in Italy, and the institution at Catania University of an academic chair in astrophysics, the first one in the world' (Emilia Olostro Cirella and Mauro Gargano, The Solar Eclipse of 1870, online).- BEA





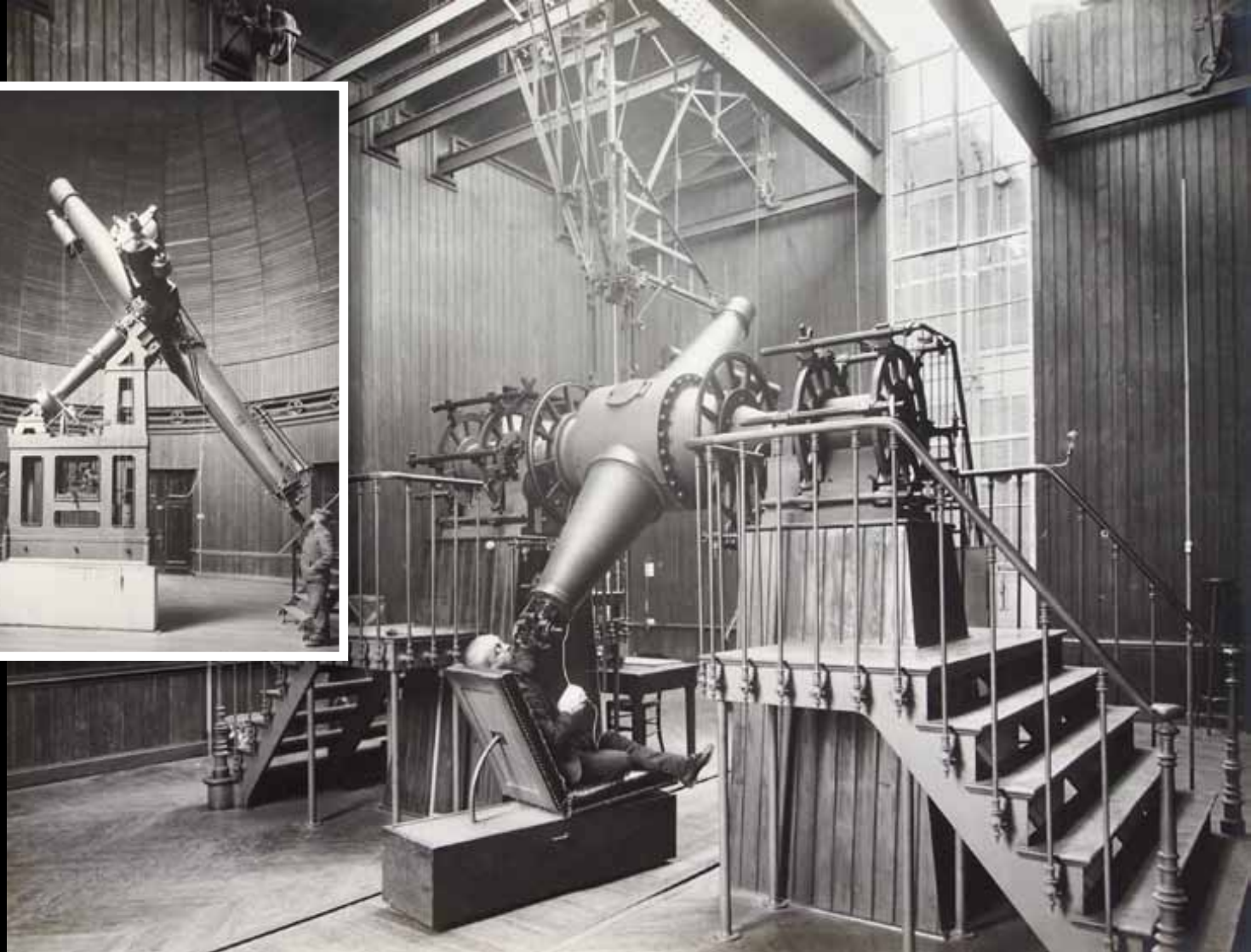
**Gilletta, Jean (photogr.)  
Universite de Paris.**

*L' Observatoire de Nice. Foundation Raphael Bischoffsheim. F. Gilletta, Nice.  
(Cover title) L' Observatoire de Nice. Portfolio with twelve mounted photographs  
by F. Gilletta, phot. (Nice, 1911) Folio (400 x 500 mm) 12 mounted photo-  
graphs, all titled in print on heavy paper. Image size: 215 x 280 mm. In cloth  
portfolio, heavily rubbed and soiled. Boards stocked, else fine. A few photographs  
silvered.*

**EUR 1.800.-**

**Fine and exceedingly rare portfolio showing the Nice Observatory and its instruments.**

The observatory was founded in 1879, by the banker Raphael Bischoffsheim. The architect was Charles Garnier, and Gustave Eiffel designed the main dome. The 77 cm (30 inch) refractor telescope made by Henry and Gautier became operational around 1886–1887, was the largest in a privately funded observatory, and the first at such high altitude (325 m or 1,066 ft above sea level). It was slightly bigger in aperture, several metres longer, and located at a higher altitude than the new (1895) 76 cm (30 in) at Pulkovo observatory in the Russian Empire, and the 68 cm (27 in) at Vienna Observatory (completed early 1880s). In the records for the largest refracting telescopes all three were outperformed by the 91 cm (36 in) refractor installed at the Lick Observatory at 1,283 m altitude in 1889. Jean Gilletta (1856 Levens – 1933), born Jean-Baptiste Gilletta and whose name is sometimes spelled Jean Gilletta, was a French photographer who was active in Nice, France and founded a postcard company in 1897. He was a student of Jean Auguste Theodore Walburg de Bray and having travelled extensively throughout the south east of France – often on a tricycle – to take over 10,000 iconic shots of its landscapes, architecture and subjects from the end of the Second Empire to the 1930's. The content: Le personnel scientifique (18. Febr. 1911), Pavillon du Petit Meridien, Le Grand Cercle Meridien, Pavillon du Grand Meridien, L' Equatorial Coudé, Le petit Equatorial, La petite Coupole, Le Grand Equatorial, La Grande Coupole, La Bibliotheque, la bibliotheque et la direction, L'entree.



## Mechanization of Construction Sites



### ROTARI, Giuseppe. Geanaforo Economico per Trasportar terra per Aria a Qualunque Altezza inventato del Nob.

*Giuseppe Rotari Veronese .... Verona: Preso la Topgrafia Ramanzini, 1822. 4to (292 x 217 mm). 23 pp. with 5 folding engraved plates at the end, some very light mainly marginal spotting and staining. Decorated paper boards, extremities rubbed. Fine copy.*

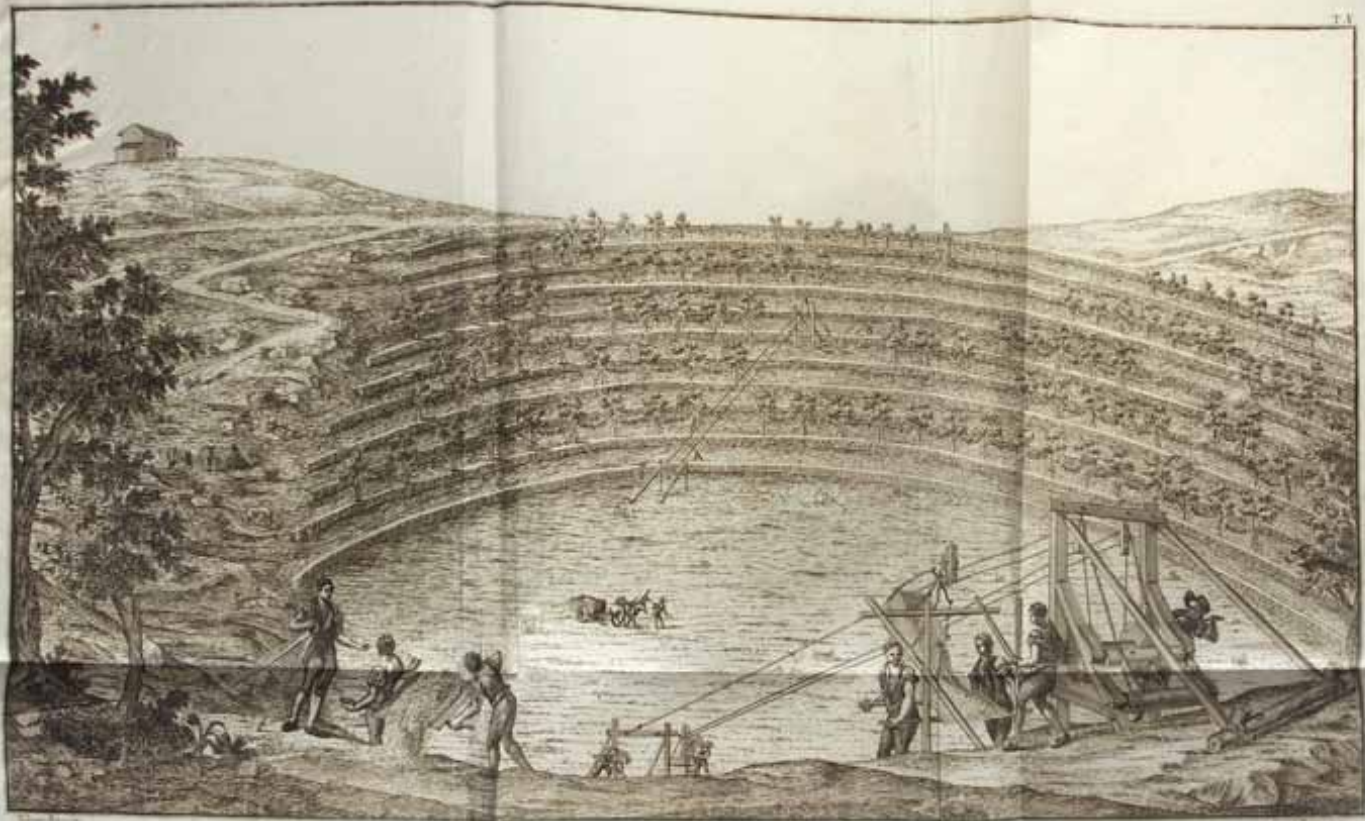
EUR 1.400.-

Exceedingly rare work by the lesser known member of the Agricultural Academy of Verona.

In this beautifully illustrated treatise, Rotari describes an aerial ropeway system of his own invention for transporting soil from the bottom of a slope up the hill as used in canal engineering or harbour construction or to form terraces on steep and barren hillsides, on which to plant vines and olives. This „Geanaforo“ (composed of three greek words meaning earth, height and carry) was originally designed in 1819 and used for the first time at Grezzano and at Quito, both near Verona. A combination of two or more machines could be used where the site was particularly high, and it was both economic, needing few men to run it, and much faster than moving soil by hand.

The engravings were designed by P. Lonardo Manzati and etched by Giuseppe Mazza. Practically nothing is known about the engineer Giuseppe Rotari, But he might have been related to the italian painter Pietro Antonio Rotari (1707 - 1762) from Verona who painted mainly portraits of members of the russian court in St. Petersburg. In 1756, he was invited to work at the court of the Tsarina Elizabetta Petrovna in Russia. From there he moved to Dresden to work at the court of Augustus III of Poland. He returned to St Petersburg to work at the court of Catherine II. and he died there. (not in A. Fava, Diz. Univers. Storico - Mitologico - Geografico, Vol. 3, Torino 1856). Fumi 1589; Phillips 45, 107; not in TIB Hannover; ETH Zürich; Harvard, Michigan, Colorado School of Mines.

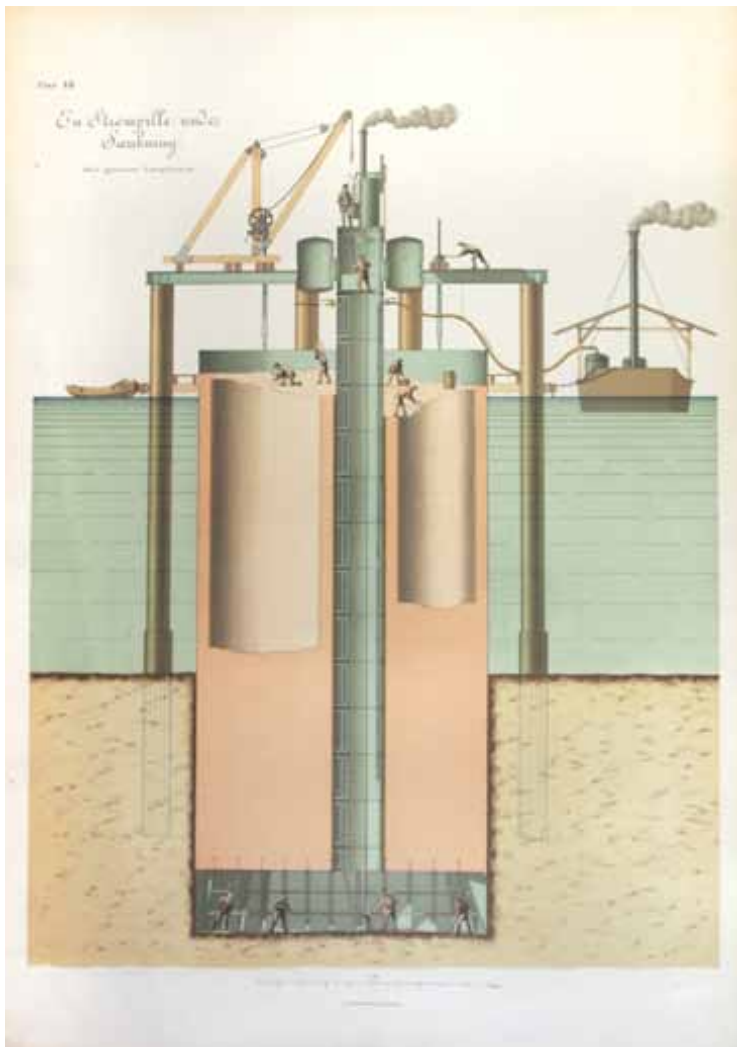






Plancher de la mine de St. Louis

Goussier delin.



## DANSKE STATSBANER (Danish State Railway).

*Jernbanebroen over Limfjorden imellem Aalborg og Nørre-Sundby, opført i aarene 1874-79. Planer. - København: Aamodt, 1884. Imperial Folio (510 x 685 mm) 1 Bl., 14 very fine colored lithographed plates. Contemporary half cloth, title on cover, heavily rubbed and soiled, inside clean but one corner bumped with small missing part in the white border.*

EUR 2.400.-

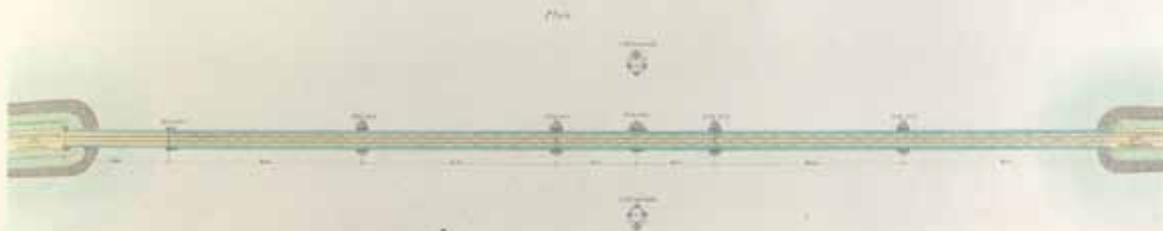
Only edition, the description and construction of a railway bridge over a channel in Northern Denmark. Jernbane-broen over Limfjorden (Limfjord Railway Bridge) is an iron railway bridge over Limfjord, a shallow sound, in Northern Denmark. In the first years after the inauguration of the railway line there was a ferry operating. People had to cross the channel by ferry. In October 1873 a contract was signed with the French Compagnie de Fives-Lille, and in June 1874 the work began on the first bridge with the seven pillars that were supposed to carry the bridge. The building was completed in 1878 and the bridge was opened on August 16, 1879. The bridge building was difficult due to over 30 meters of deep mud on the fjord, and the construction cost 14 people's lives. The bridge was a swing bridge. It was the largest engineering work in Denmark so far, and the bridge plant cost 2,729,353 danish kroner. The first railway bridge was replaced by the current railway bridge, built from 1935 to 1938. During World War II, the railway bridge was central to the German occupying power. The airport in Aalborg was used as a bridgehead for the attack on Norway on 9 April.



# JERNBANEBRØDEN OVER LIMFJORDEN.

## Generalplan.

Alt det Endre



Træsnit af Overbygningen paa Lille N<sup>o</sup> 3.

Skæbne 1/10

Plan



Snit E F

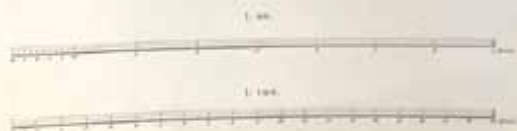
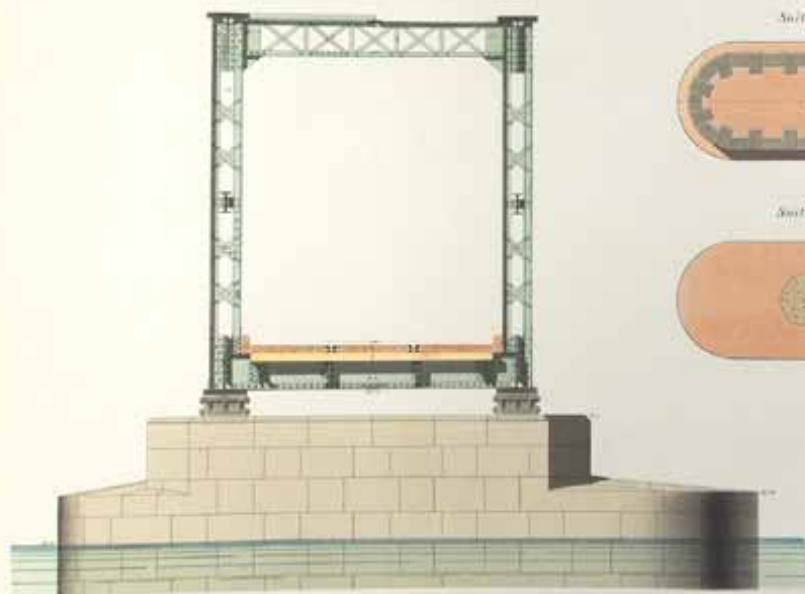


Snit C D



Skæbne 1/100

Snit A B

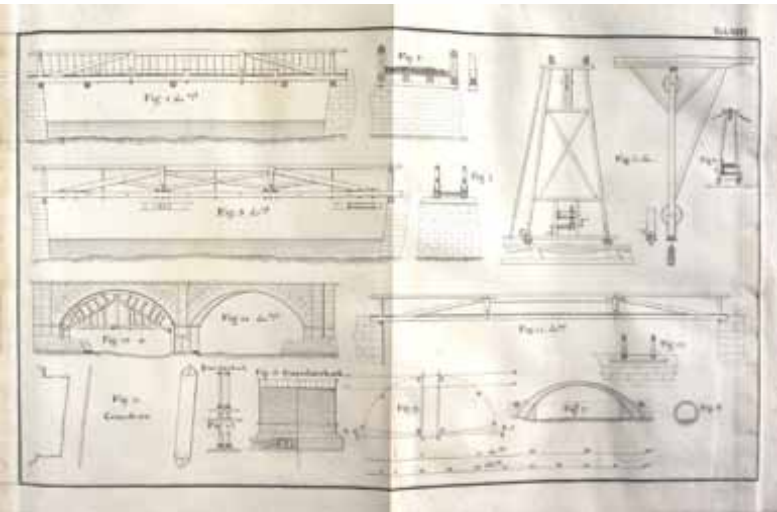




**DITTLER, Georg.**  
**Hydrotechnische Bemerkungen gesammelt auf einer Reise durch  
England, Holland, Nord- und Süddeutschland in Jahr 1830.**

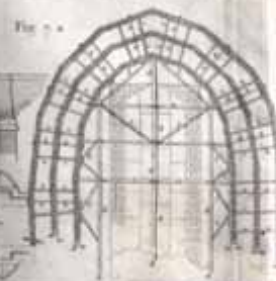
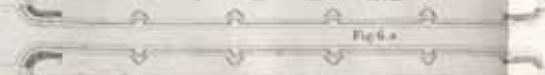
*Nebst einer kurzen Biographie des Verfassers. – Karlsruhe, Groos, 1835. Quarto. VIII, 239 pp., (1) with 18 double-page folded lithographed plates and 1 fold. map. Contemporary half-calf, gilt spine in compartments and with gilt lettering on spine, top of spine little defective, stamps on title-page. Lithographed portrait. Browning and brownspots to text leaves and plates, else fine.*

EUR 1.400.-



Rare travel tour to study hydraulic engineering through England, the Dutch Republic, Northern and Southern Germany written by the water engineer Georg Dittler (1796 –1834), with instructive details. Dittler had studied in Karlsruhe and in Paris with Biot, Hachette, Thenard, Poisson and Gay-Lussac. After studying different construction works & engineering sites in France, he worked from 1821 to 1830 in Southern Germany in different engineering positions, mainly in hydraulics, like the construction site of the new harbor in Mannheim. From 1830 to 1833 he travelled through England et al. – described here – but he died early in 1834. He haven't seen his book published.







## Cantor, Georg. Grundlagen einer allgemeinen Mannigfaltigkeitslehre.

*Ein mathematisch-philosophischer Versuch in der Lehre des Unendlichen. –  
Leipzig: B. G. Teubner, 1883. 8° (230 x 155 mm) (4), 47 pp., (1, last blank)  
Contemporary half-calf, marbled boards, rubbed and soiled, else fine.*

EUR 3.200.-



### First edition, very rare.

In this revolutionary monograph, Georg Cantor set out the earliest detailed version of his transfinite set theory, including a theory of transfinite ordinal numbers and their arithmetic; and a defense of the theory on historical and philosophical grounds. In concert with his later articles on the foundations of set theory (1895–1897) it created a virtually new discipline, set theory. Cantor's theory became a whole new subject of research concerning the mathematics of the infinite (e.g., an endless series, as 1, 2, 3, ..., and even more complicated sets), and his theory was heavily dependent on the device of the one-to-one correspondence. In thus developing new ways of asking questions concerning continuity and infinity, Cantor quickly became controversial. When he argued that infinite numbers had an actual existence, he drew on ancient and medieval philosophy concerning the "actual" and "potential" infinite and also on the early religious training given him by his parents. In his book on sets, *Grundlagen einer allgemeinen Mannigfaltigkeitslehre* ("Foundations of a General Theory of Aggregates"), Cantor in 1883 allied his theory with Platonic metaphysics. By contrast, Kronecker, who held that only the integers "exist" ("God made the integers, and all the rest is the work of man"), for many years heatedly rejected his reasoning and blocked his appointment to the faculty at the University of Berlin. In 1895–97 Cantor fully propounded his view of continuity and the infinite, including infinite ordinals and cardinals, in his best-known work, *Beiträge zur Be-*

*gründung der transfiniten Mengelehre* (published in English under the title *Contributions to the Founding of the Theory of Transfinite Numbers*, 1915). This work contains his conception of transfinite numbers, to which he was led by his demonstration that an infinite set may be placed in a one-to-one correspondence with one of its subsets. By the smallest transfinite cardinal number he meant the cardinal number of any set that can be placed in one-to-one correspondence with the positive integers. This transfinite number he referred to as aleph-null. Larger transfinite cardinal numbers were denoted by aleph-one, aleph-two, .... He then developed an arithmetic of transfinite numbers that was analogous to finite arithmetic. Thus, he further enriched the concept of infinity. The opposition he faced and the length of time before his ideas were fully assimilated represented in part the difficulties of mathematicians in reassessing the ancient question: "What is a number?" Cantor demonstrated that the set of points on a line possessed a higher cardinal number than aleph-null. This led to the famous problem of the continuum hypothesis, namely, that there are no cardinal numbers between aleph-null and the cardinal number of the points on a line. This problem was of great interest to the mathematical world and was studied by many subsequent mathematicians, including the Czech-Austrian-American Kurt Gödel and the American Paul Cohen. - Landmark writings in western mathematics, 1640-1940. no 46 (pp. 600-612)



## Ponfick, Emil. Topographischer Atlas der medizinisch-chirurgischen Diagnostik.

*Erste Lieferung / Topographic Atlas of Medico-Surgical Diagnosis. / Atlas Topographique de Diagnostic Médico-Chirurgical. - Jena: G. Fischer, (1901 - 1905). (400 x 310 mm) (28), 176 unnumbered pages and 30 chromolithographed plates in two volumes. Title in three languages, accompanying text only in German. Original published in installments. The wrappers not present. Cloth bound volume with cover title, stamped inside, rubbed and soiled, for the text. The plates in separate folder, also stamped. Plates loosely inserted, a few plates with minor defects through glueing.*

EUR 1.200.-

### **Ponfick's magnum opus, for which the plates were produced under difficult circumstances.**

From 1900–1905, Dr Emil Ponfick (1844–1913) worked with Lithographer K. Wesser to create 30 colour topographic anatomical plates. Technically brilliant, yet also accessible to the non-medical, Ponfick has become a favourite at Public Engagement activities. Ponfick asserted that there was an over emphasis on pathology in medical illustration at this time, and to fully understand disease, pathology and anatomy should be combined in illustration. In his call for a method of joint diagnosis, he argued against presenting 'the diseased organ alone and without regard to its influence upon other parts of the body'. Ponfick observed that physicians encountering

disease needed to have topographical records of disease which would provide recognizable anatomical structures, but also 'concrete form the exceptions to the memorized rules recording normal positions'. Without aiming for the completeness of Cruveilhier's Atlas, Ponfick intended to picture the sum of topographical deviations, following in the tradition of Pirogoff's Atlas.

Ponfick describes the difficulties in producing these 30 plates, and a number of years were required to 'obtain useful sections'. Ponfick's work was 'confined to a very short period of time'. Access to artificial methods to lower room temperature were not available to Ponfick, so he dissected during colder months. Despite difficulties, Ponfick aimed for perfection, with primary sections often being replaced several times over.



When the 'acceptable section' was taken from the frozen body, the surface was covered with a plate of milk-glass. The circumference and important outlines of organs were traced, then smaller cavities were drawn on the glass. The drawings were transferred to transparent paper, then remeasured by Ponfick and Wesser. Ponfick aided the artist with extra detail and explanation 'very materially by drawing an exact sketch of each cut



surface on a large blackboard'. The results consist, not only of wonderfully colored plates of horizontal and vertical sections, but also detailed patient notes including: patient history, present condition, clinical and anatomical diagnosis and post-mortem examinations. (Emma Black, Surgeons' Hall Museum)

Emil Ponfick was a German pathologist who had studied medicine in Tübingen, Freiburg and Heidelberg, where he obtained his doctorate in 1867. After a period of time as assistant to the famous Heidelberger surgeon Karl Otto Weber (1827–1767) he undertook pathological-anatomical studies with Friedrich Daniel von Recklinghausen (1833–1910) at Würzburg, and then in 1868 moved to the pathological institute in Berlin as assistant to Rudolf Virchow (1821–1902), becoming 1st assistant in 1873. Whilst in Berlin he published on the pathology of the liver and spleen, as well as the blood and bone marrow, embolism of the mesenteric artery. Ponfick was appointed ordinaris of pathology at Rostock in 1873, succeeding Theodor Ackermann (1825–1896). In 1875 he accompanied the grand duke of Mecklenburg on an expedition to Egypt, Nubia, Sinai, Cyprus, and Constantinople. In 1876 Ponfick moved to Göttingen, where he was appointed to a foundation chair of pathology, and there continued his work on haemato-logical topics such as myelogenous leukaemia and haemaglobulinaemia. In 1878 he succeeded Julius Friedrich Cohnheim (1839–1884) in Breslau (Wrocław), where he became director of the pathological institute and from 1884 also Medicinalrath and member of the Provinzial-Medizinal-Kollegium, eventually becoming Geheimer Medicinalrath. Ponfick remained in Breslau until his death. - Hirsch-H. IV, 606 f. ; whonamedit.com





Fig. 1.

Abcessus otiticus lobi temporalis dextri

Handwritten text: *Handwritten text*



Fig. 2.

## Museum of Fishes

**BLOCH, Marcus Elieser.**

### **Oeconomische Naturgeschichte der Fische Deutschlands.**

*Erster bis Dritter Theil. – Berlin: auf Kosten des Verfassers und in Commission bei dem Buchhändler Hr. Hesse, 1782, 1783 and 1784. Quarto (280 x 215 mm) (8), (6), 258 pp.; (8), 192 pp.; (8), 234 pp. with three engraved title-vignette by Bodenehr & J. C. W. Rosenberg. (and)*

*D. Marcus Elieser Bloch's ... Naturgeschichte der ausländischen Fische ... Erster bis neunter Theil. Berlin: auf Kosten des Verfassers und in Commission in der Buchhandlung der Realschule, 1785, 1786, 1787 (ab Vierter Theil: Berlin: bey den Akademischen Kunsthändlern J. Morino & Comp., 1790, 1791, 1792, 1793, 1794) (ab Neunter Theil: Berlin: im Verlage der Morinoschen Kunsthandlung, 1795) Quarto (245 x 220 mm) (8), 136 pp.; (8), 160 pp.; X, (4), 146 pp.;*

*X, (2), 128 pp.; (8), 152 pp.; (6), 126 pp.; X, (2), 144 pp.; (6), 174 pp.; (4), 192 pp. 12 parts text in 4 vols. and atlas with plates in 4 Vols. Plate volumes with engraved titles and 432 engraved plates of fish, printed in black, bistre and green and coloured by hand, some heightened with silver and gold. Contemporary blue paper-covered boards (glacé paper card boards), with two labels, binding dated 1827 in the last vol., rubbed and soiled, morocco lettering pieces partly defective, one vol. bound to style, some plates with middle fold (due to sending of the plates ?). A few plates short cut as the text. Otherwise a fine, complete copy.*

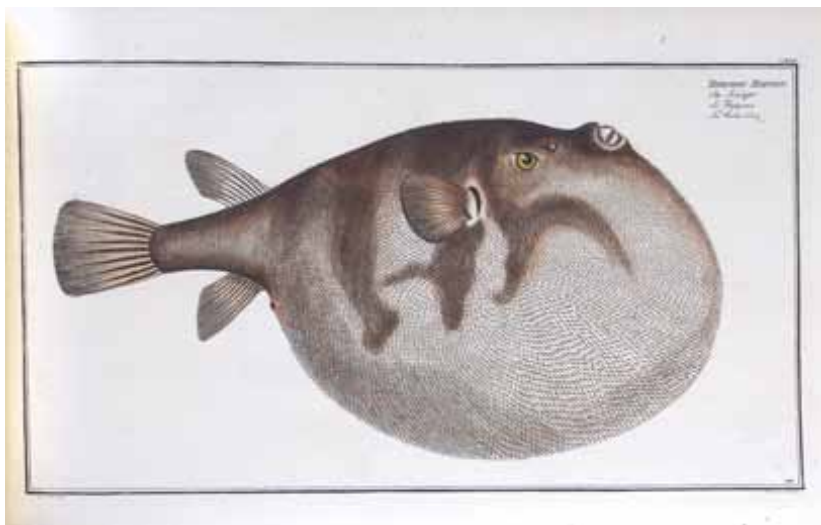


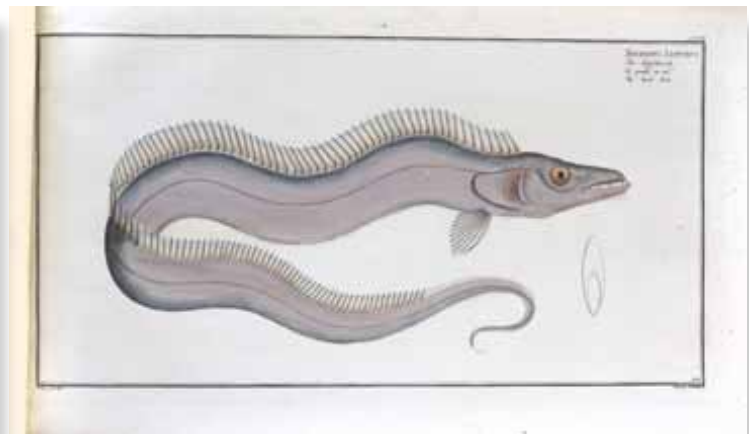
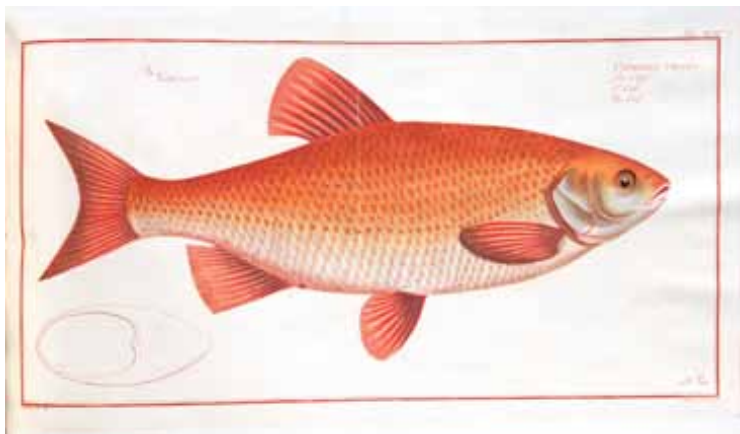
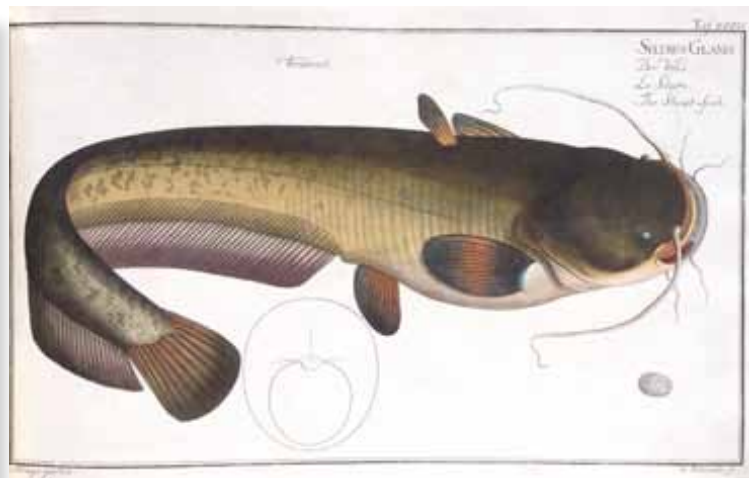
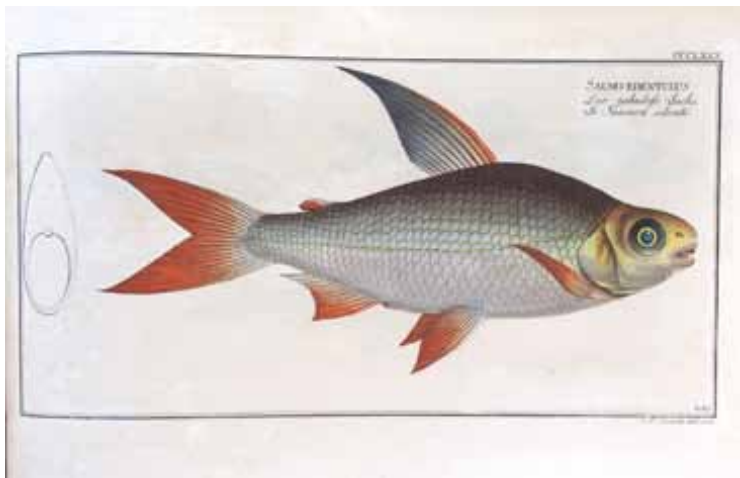
EUR 80.000.-



**First edition, complete, always rare with around six auction records in the last 20 years for a complete copy.**

Marcus Eliser Bloch's *Allgemeine Naturgeschichte der Fische* (1782– 1795) is one of the most impressive early attempts to represent fish from all over the world accurately and handsomely. This encyclopedic effort was highly esteemed by contemporaries and remained a classic in ichthyology well into the nineteenth century. The work consists of two parts: the *Oekonomische Naturgeschichte der Fische Deutschlands*, which attempted to unite descriptions of local (chiefly German) fish which had been published in separate and smaller volumes, and the *Naturgeschichte der auslaendischen Fische*, a repertoire of foreign and exotic fish. The second volume, which classified and described species of fish which Bloch had never seen, relied on information provided by others. The descriptions of American species were reproduced from the work of Father Plumier, a French missionary. Although partly derivative, Bloch's work became the most comprehensive book on ichthyology then in existence. Drawn by Johann Friedrich August Krueger and engraved by Ludwig Schmidt, two Berlin artists, the plates are unmatched in the delicate beauty and fine quality of their drawings, their copper etchings, and their hand-coloring. - Nissen, ZBI 41 5; Nissen, *Schöne Fischbücher* 22; Thieme/ Becker XXI, 600 u. XXIX, 14; Brunet I, 975. Provenance: Hartung & Karl, 12.5.1987; Hans Dedi (20th. cent.); early stamp Paessler (?).

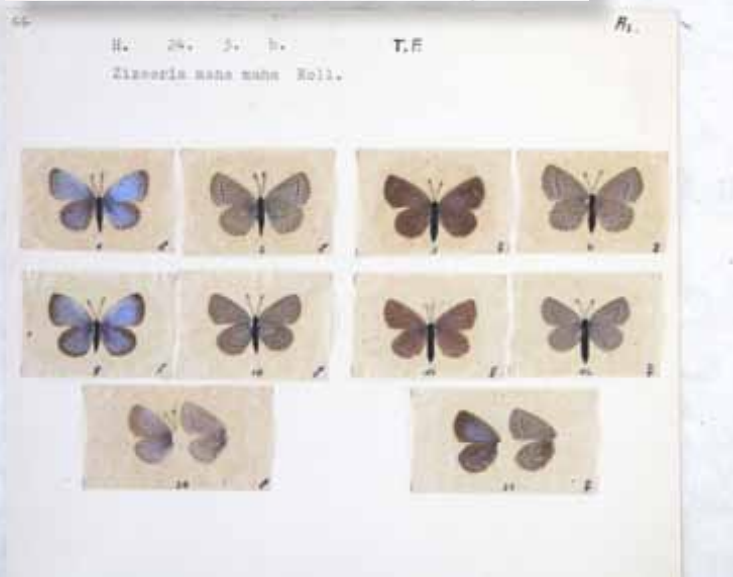






*Diodon Mola*  
*Der Stachelhais*  
*Le. Mola*  
*The Sea-pike*





## Nature Printed Butterflies

### Neuhaus, R. Collection of around 530 species of Indian Butterflies

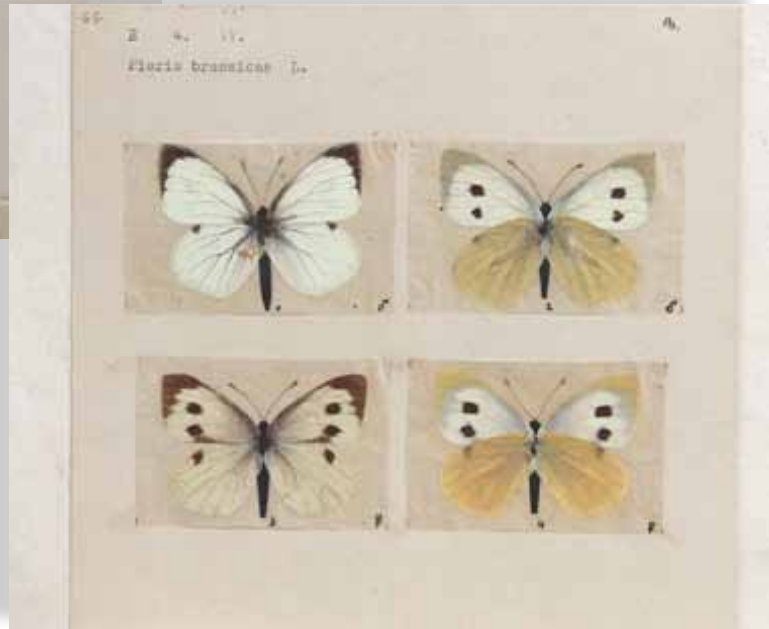
*with parts of the original wings of the butterflies transferred to approx. 730 paper mounts (size: 190 x 190 mm), collected in 25 square-folio albums (size: 235 x 340 mm) with around 1800 preserved butterfly wings. Each sheet with name or classification of the specimen after Evans. A few specimens slightly damaged, a few cards lost since its preparation in India in 1948 to 1950. (Assam, India, 1948-1950).*

EUR 18.000.-

A now unobtainable collection of Indian butterflies from Assam assembled during an imprisonment in 1948 to 1950. With a letter (dated 1982) from the collector, describing his work. „This collection was created by me (R. Neuhaus, Munich) in the years 1948 to 1950 inclusive. The collecting area was Assam in India. Mainly the Kashi Hills around Shillong, the Cherrapunji area in East Pakistan, Imphal Mountains, Brahmaputra area around Dibrugarh, and the restricted border areas around Sadiya. ... The numbering and Latin names of the individual species in my collection are based solely on the book by Evans (The classification of Indian butterflies. Madras, 1932). In Evans work, 675 species are listed for the above-mentioned areas in Assam. My collection contains about 75% of the species scientifically known and published to 1950. In my collection are 543 species. In the collection are over 1900 butterflies prepared on about 650 cards.“

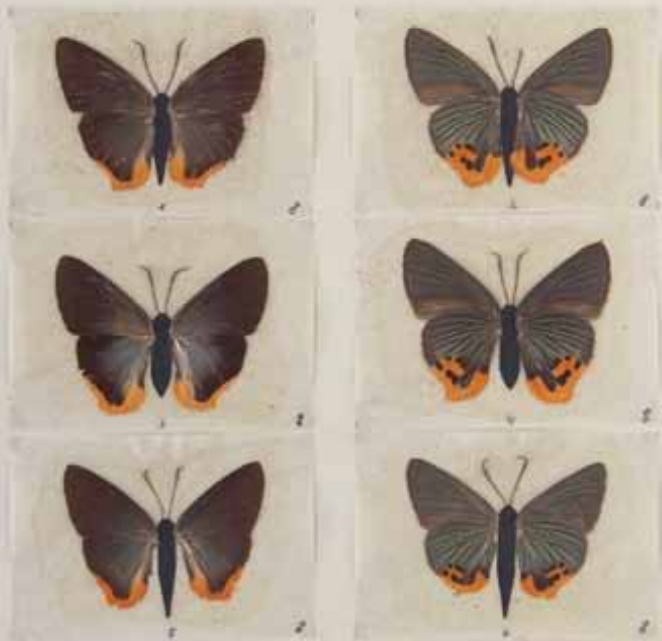


**R. Neuhaus**, a German soldier and prisoner of war, imprisoned in a detention camp in Dehra Dun from 1943 to 1949 together with the famous mountaineer Heinrich Harrer, was an amateur naturalist, especially interested in entomology. From 1948 to 1950 he collected the butterflies and prepared them similar to the lepidochromy technique developed by Yasushi Nawa (1857–1926), a Japanese entomologist, who obtained a patent for it. Historically, butterflies and moths have been preserved as dried, pinned specimens with their wings spread, allowing for aesthetically pleasing displays and access to genitalia, the dissection of which has been a standard for



I. 4. a. b.

*Choraspes benjamini xanthropogon* Koll.







**JÜRGENS, Georg Heinrich Bernhard.**  
**Algae aquaticae quas et in littora maris dynastiam**  
**Jeveranam et Frisium orientaliem alluentis rejectas.**

*Decas Prima - [title repeated in German: Waſſer Algen auf der Nordwest= Küſte Deutschlands, beſonders Jever- und Oſtfrieslands, und in deren Gewäſſer geſammelt]. Parts 1–6 (of 19). - Hannover, Hahn [Jever, C. L. Mettecker and Hahn], [1816–822] Folio (310 x 195 mm) Title, descriptions and excicate. 158 (of 160) ſpecimens mounted or looſely inserted, a few with 2 examples, printed captions, ſtitched in original printed wrappers, preſerved in ſolander box.*

EUR 2.800.-

Exceedingly scarce early nineteenth century collection of seaweeds from the German North Sea collected between Jever and Ostfriesland, compiled with descriptions by the botanist & lawyer Georg Jürgens (1771–1846). Jürgens was active in Jever as a lawyer and notary and held from 1829 to 1845 the office of the mayor. He devoted himself with great passion to natural history, especially botany, and made himself a name in the scientific world as an algae researcher. His extensive research library includes works by Carl von Linné as well as magnificently illustrated volumes on the marine algae flora was given to the Mariengymnasium Jever. The conservation and description of the library is still going on. Heft 1, 6-7 were published in 1818; Heft 2 in 1816; Heft 3-5 were

distributed in 1817; Heft 8-10 in 1819; Index centuriae primae. Heft 11-16 were distributed in 1822; later parts were given out in 1824.

We can trace no other copies sold at auction, the present copy being that from Eton College Natural History Museum, sold at Bonhams, 15 October 1996, lot 22; Kayser I, 617 (16 Hefte);

KVK: Oldenburg; NHM London; Leiden (only complete sets); also Regensburg (as here); Leipzig (10 parts); Stabi Berlin (only register); Pavia (1 vol.; 18 parts ?); Geneve (17 parts); not in OCLC (USA)

6) *Conferva Jurgensii* n. sp.

filii longissimi, terribiles, gracillimi, gracillae Alulae, caeterum i. sp. et aliter et in speciem distincta. In speciem sedem ad speciem collata, etiamque distinctum item parum videtur. Sicutum etiam distinctum, Herveyi Herp.  
1. vel. Aperte similis rebus vulgaribus, in eam cadentes (Herveyi).  
2. vel. pariter in longi conferva esse Dillii. Tab. 90. sed non distincta sunt Dillii.  
In illa tunc non distincta, sed non distincta, sed tunc non distincta (Herveyi).  
conferuntur. Nomenclaturam, et in illa tunc, ad eam tunc distincta Dillii, qui distincta non distincta, et tunc distincta Dillii.

7) *Conferva riparia* Mertensii.

filii alio modo dicit, dicitur longiori, terribiles, caeterum, sp. et aliter et in speciem distincta. In speciem sedem ad speciem collata, etiamque distinctum item parum videtur. Sicutum etiam distinctum, Herveyi Herp.

Roth. cat. bot. pag. 226.

In illa tunc non distincta, sed non distincta, sed tunc non distincta (Herveyi).  
conferuntur. Nomenclaturam, et in illa tunc, ad eam tunc distincta Dillii, qui distincta non distincta, et tunc distincta Dillii.

8) *Conferva utuarii* n. sp.

filii longissimi, terribiles, caeterum, sp. et aliter et in speciem distincta. In speciem sedem ad speciem collata, etiamque distinctum item parum videtur. Sicutum etiam distinctum, Herveyi Herp.  
1. vel. Aperte similis rebus vulgaribus, in eam cadentes (Herveyi).  
2. vel. pariter in longi conferva esse Dillii. Tab. 90. sed non distincta sunt Dillii.  
In illa tunc non distincta, sed non distincta, sed tunc non distincta (Herveyi).  
conferuntur. Nomenclaturam, et in illa tunc, ad eam tunc distincta Dillii, qui distincta non distincta, et tunc distincta Dillii.

9) *Conferva bipartita* Dillii.

filii longissimi, terribiles, caeterum, sp. et aliter et in speciem distincta. In speciem sedem ad speciem collata, etiamque distinctum item parum videtur. Sicutum etiam distinctum, Herveyi Herp.

Dillii. synopf. Tab. 105.

In illa tunc non distincta, sed non distincta, sed tunc non distincta (Herveyi).  
conferuntur. Nomenclaturam, et in illa tunc, ad eam tunc distincta Dillii, qui distincta non distincta, et tunc distincta Dillii.

10) *Conferva Rothii* Dillii.

filii longissimi, terribiles, caeterum, sp. et aliter et in speciem distincta. In speciem sedem ad speciem collata, etiamque distinctum item parum videtur. Sicutum etiam distinctum, Herveyi Herp.

Dillii. synopf. Tab. 77.

Conf. violacea Roth.

In illa tunc non distincta, sed non distincta, sed tunc non distincta (Herveyi).  
conferuntur. Nomenclaturam, et in illa tunc, ad eam tunc distincta Dillii, qui distincta non distincta, et tunc distincta Dillii.

Roth. cat. bot. Fasc. III, pag. 224.

In illa tunc non distincta, sed non distincta, sed tunc non distincta (Herveyi).  
conferuntur. Nomenclaturam, et in illa tunc, ad eam tunc distincta Dillii, qui distincta non distincta, et tunc distincta Dillii.

