

Capturing Nature

EXHIBITION



Introduction

The pressing urge of humans to leave marks of their existence is attested by direct prints of hands found in pre-historic caves. This desire to be remembered and documented was among the factors that stimulated the development of human intelligence.

Hailed as the earliest precursor to photography, Nature Printing is the practice of taking impressions directly or indirectly from the surface of natural objects such as leaves, flowers, ferns, seaweed, snakeskin, and more, to produce an image on paper. Nature printing was popular with botanists in the 18th century as an aid in their study of useful and medicinal plants. By printing directly from specimens, they were able to represent plants in an affordable way and to great effect.

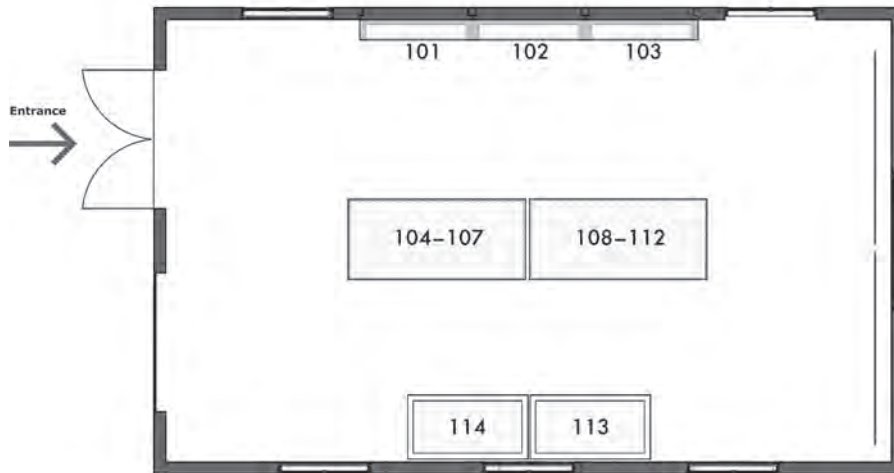
In the 19th century, the desire for life-like scientific images in combination with technological innovations led to developments in nature printing. Significant advances occurred between 1842 and 1868, at the kaiserlich-königliche Hof- und Staatsdruckerei zu Wien [Imperial-Royal Court and State Printing Office in Vienna]. Their nature prints still trick the eye with exceptional detail and life-like appearance.

The exhibition spans over two rooms on level one of the Botanical Art Gallery, featuring artefacts mainly from Europe, but also India, Japan, New Zealand and Southeast Asia, dating from 1748 to the present.

This booklet includes a selection of artefacts related to direct nature printing (pp. 6–11) and indirect nature printing techniques (pp. 12–24). A complete list of all artefacts displayed can be found from page 25.



Direct Impressions

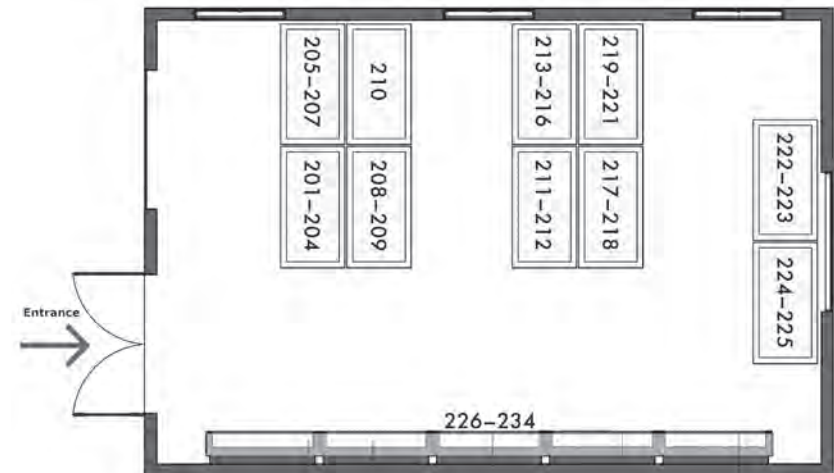


The numbers indicate the placement of the artefacts displayed.

Among methods for printing directly from the surface of natural objects, monotyping is the most widely used. The surface of a fresh or dried plant, or other natural object, is covered with ink and pressed onto paper, leaving a beautifully detailed impression. The pressure can be applied by hand or by using a hand-operated press. The paper is sometimes moistened to obtain clearer results. This process is limited by the fragility of the original specimen. No two prints are the same. The record of such printing on paper in Europe dates as early as ca. 1228. In 1508, Leonardo da Vinci described this nature printing method.

Ghost nature printing (plant impressions without the use of ink), spatter technique (a stencilling method), and cyanotypes (an early photographic process) are also direct impressions.

Indirect Impressions



The numbers indicate the placement of the artefacts displayed.

Relief, intaglio, lithographic, and photographic nature printing belong to this group of methods of printing indirectly from the surface of natural objects. Rather than printing from the inked actual specimen, the impression is transferred onto a printing plate, block, or lithographic stone. When inked and printed, this secondary printing surface provides consistency of the imprint (but not necessarily in the colouring). It also enables many more copies to be made. Overall, nature printing was limited to representing the original in its actual size. This led to large books and varied ways of making the image fit on the page. Later, photography made it possible to alter the size of the artwork.

Highlights of the Exhibition



DIRECT IMPRESSIONS: MONOPRINTING WITH HAND-COLOURING

104 Botanica in Originali seu Herbarium Vivum [Original Botanicals or a Living Herbal]

1757–64

Johann Hieronymus Kniphof

Printed by Johann Gottfried Trampe

COLLECTION OF MATTHEW ZUCKER

These illustrations were produced by Johann Hieronymus Kniphof, who was a professor of medicine at the University of Erfurt and one of the most prolific nature printers of the 18th century. He collaborated with printer-publisher Johann Michael Funcke, and later Johann Gottfried Trampe, on mass-produced books illustrated by nature printing. They used fresh or dried specimens which were inked in black, printed, and often hand-coloured. Fruits, flowers, and other details that were difficult to print due to their volume were sometimes painted in afterwards.



DIRECT IMPRESSIONS: MONOPRINTING, SINGLE COLOUR

107 Die Nahrungs-Gefäße in den Blättern der Bäume [The Food Vessels in the Leaves of the Trees]

1748

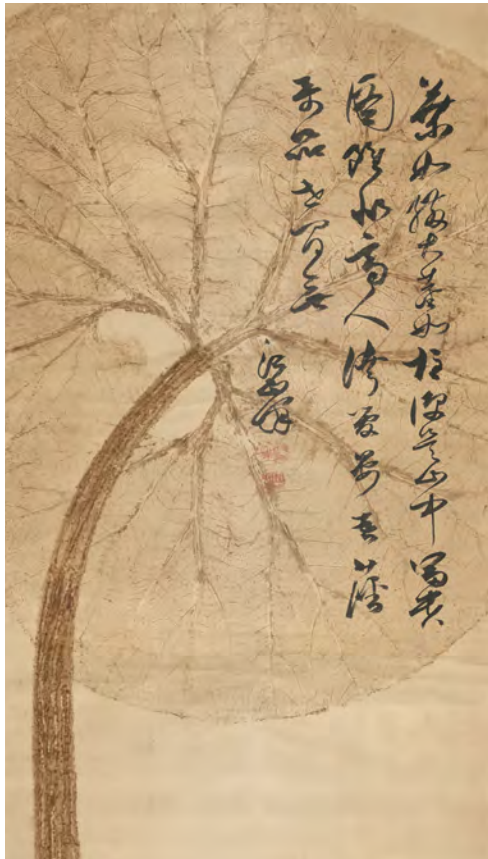
Johann Michael Seligmann

Christoph Jacob Trew

Printed by Johann Joseph Fleischmann

COLLECTION OF MATTHEW ZUCKER

Nature printing's ability to capture intricate leaf venation made it ideal for studying the inner structure of plants. The printer Johann Seligmann and botanist Christoph Trew illustrated their *The Food Vessels in the Leaves of the Trees* by expertly printing directly from skeleton leaves (leaves where the soft tissues had been removed).



DIRECT IMPRESSIONS: JAPANESE SAP MONOPRINTING

102 *Petasites japonicus* (Siebold & Zucc.) Maxim. subsp. *giganteus* Kitam., Japanese Butterbur or Akita-Fuki

1790s to 1850s

Artist unknown

PRIVATE COLLECTION

This giant leaf of Akita-Fuki was likely printed using the plant's own sap in Akita prefecture, Japan, where the plant is native. The details in which this was carried out, however, are not known. The poem on the scroll was written by Okubo Shifutsu (大窪詩仏), a famous poet and calligrapher of the late Edo period (1603–1868). The subject of this poem is the Japanese butterbur itself. In the poem, Okubo compared the size of the plant's leaf to an umbrella, and its stem to a pillar.



DIRECT IMPRESSIONS: MONOPRINTING, SINGLE COLOUR

106 *Petasites japonicus* (Siebold & Zucc.) Maxim. subsp. *giganteus* Kitam., Nature Print on Fabric

Early 20th century

Miyakoshi Seinoshin (active 1875–1913)

PRIVATE COLLECTION

This leaf print of the Japanese butterbur, known as Akita-Fuki (秋田蓴) in Japanese, was nature printed on fabric. It was made by the Miyakoshi (宮越) family using an unknown technique that is still passed down only through the male line of the family. At Japan's first National Industrial Exhibition in 1877, the family was awarded a letter of commendation for their nature prints. Thereafter, some of their prints bore a seal commemorating the commendation, such as the one on the top right corner of this print. Over the generations, Miyakoshi nature prints of Akita-Fuki were used as door screens, table cloths, or hung up as decoration.



DIRECT IMPRESSIONS: MONOPRINTING, SINGLE COLOUR

105 草木寫生 十五品

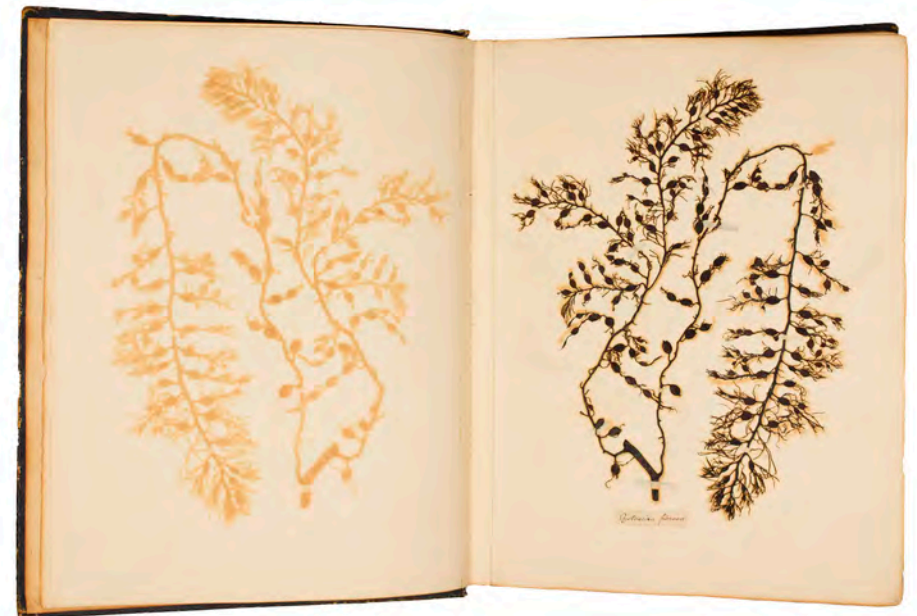
[Nature Drawings of Plants, Fifteen Items]

1797–1826

Yamamoto Tanen (山本探淵)

PRIVATE COLLECTION

This scroll produced between 1797 and 1826 features 15 plants painted in colour. The painting of a Japanese linden tree dated 1803 includes nature-printed leaves and fruit. These leaf-prints were printed using sumi ink, which is typically used for calligraphic writing in East Asia. The scroll was created by Yamamoto Tanen, a Japanese artist active during the late Edo period (1603–1868). Yamamoto was known for painting in the Kano style (狩野派), which was dominant in Japan from the late 15th to the mid-19th century.



DIRECT IMPRESSIONS: GHOST NATURE PRINTING

111 Algae Specimens

19th century

D.J. Kirkpatrick

COLLECTION OF MATTHEW ZUCKER

No ink is required to make this print, only time and pressure. On the right is a dried specimen. Over time its image was transferred to the facing page making a “ghost print.” Ghost nature prints can be commonly found in herbaria around the world, where plant specimens that have been stacked and left untouched for a long time naturally leave their mark behind.



201 Gutta-percha
(*Palaquium gutta* (Hook.) Baill.)
Resin

1901

Collected by Charles Curtis from Penang,
Malaysia

COLLECTION OF THE SINGAPORE HERBARIUM



202 *Palaquium gutta* (Hook.) Baill. Herbarium Specimen

17 July 1918

Collected by Mohamed Nur from Waterfall Gardens (Penang Botanic Gardens),
Malaysia

COLLECTION OF THE SINGAPORE HERBARIUM

Gutta-percha is a coagulum of *Palaquium* tree latex and resin, the highest grade being those tapped from trees of *Palaquium gutta*. For centuries, especially after its introduction to the European market in 1843, gutta-percha has been used to make a variety of products ranging from horse whips and submarine cables to dental fillings and surgical tools. What is less well-known is the fact that it was also used in nature printing, in galvanoplastic (electrotype) and stereotype moulds. Gutta-percha is a relatively easy material to work with as the resin becomes soft when heated, and it can be moulded easily into the desired shape. By the early 20th century, the felling of *Palaquium gutta* trees for the purpose of extracting their latex had become so extensive that the Inspector-General of Forests of India, H.C. Hill, recommended to halt the felling of them during his Malay Peninsula inspection tour. Despite banning exports, the felling of these trees continued unabated. As a result, any small parcels of land containing this species were designated as forest reserves to protect the trees.



INDIRECT IMPRESSIONS: GUTTA-PERCHA, ELECTROTYPING, INTAGLIO PRINTING

203 Der Polygraphische Apparat [The Polygraphic Apparatus]

1853

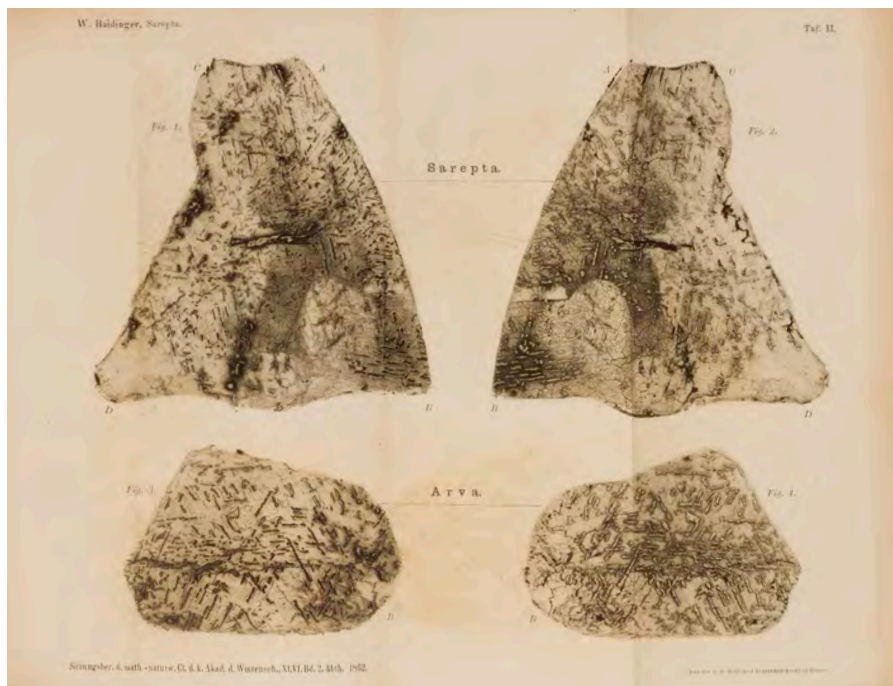
Alois Auer von Welsbach

Printed by the Vienna Staatsdruckerei

COLLECTION OF MATTHEW ZUCKER

This fossil fish print is an example of a nature print made using a gutta-percha coated mould. It was one of the prints made at the Vienna Staatsdruckerei under the direction of its director, Alois Auer, as part of a series of experiments to devise new nature printing techniques. The use of gutta-percha allowed bulky objects that were unable to go through the press to be printed. It also prevented damage to irreplaceable objects during the nature printing process.

Gutta-percha, softened in hot water, was first used to coat the surface to be replicated. After the gutta-percha cast solidified, it was removed from the surface and used to make a copper plate using electrotyping. As it was difficult to completely smoothen the gutta-percha surface, however, the resulting electrotype copy had a surface from which it was difficult to remove surplus ink. This makes it extremely hard to obtain a clean intaglio print. The very fine print here is testimony of the skills of the Vienna Staatsdruckerei.



INDIRECT IMPRESSIONS: METEORITE, ELECTROTYPING, INTAGLIO PRINTING

207 Das Meteoreisen von Sarepta [The Meteoric Iron of Sarepta]

In *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Classe*, volume 46, section 2, pages 286 to 297

1862

Wilhelm von Haidinger

Printed by the Vienna Staatsdruckerei

COLLECTION OF MATTHEW ZUCKER

This stereotype nature print depicts iron meteorites found in two locations. The top two figures feature a meteorite discovered in the Kalmyk Steppe near Sarepta (now Krasnoarmeyskiy Rayon), Russia, in 1854, while the bottom two are impressions of a meteorite uncovered from Magura, Arva, then part of the Kingdom of Hungary (presently part of Slovakia), in 1840. Haidinger, an Austrian mineralogist, decided to print the two meteorites on the same page due to their structural similarity, allowing a direct comparison. He treated the meteorite surfaces with acid using a technique earlier employed by Schreibers (artefact 205). The treated meteorite was then impressed onto a mould, which was used to produce a copper printing plate by electrotyping.

INDIRECT IMPRESSIONS: ELECTROTYPING, INTAGLIO PRINTING

210 Nature Printing According to Auer and Worrying's Method

2012

Pia Östlund

COLLECTION OF PIA ÖSTLUND

London-based, Swedish printmaker Pia Östlund has reconstructed the *Naturelselfdruck* process developed by Alois Auer and Andreas Worrying. Östlund's plates show the different stages involved in Auer and Worrying's intaglio nature printing method for plants from 1852.



1. Lead plate. Here a dried oak leaf has been pressed into the lead using great force. Due to the soft nature of lead, the plant leaves behind a detailed impression. The soft lead plate cannot be used as a printing plate.

210 Nature Printing According to Auer and Worring's Method



2. First copper electrotype (relief plate). This plate was made by suspending the original lead plate in an electrolyte bath together with a sheet of pure copper. By connecting the lead and the copper plate to a power source, the free copper particles (ions) in the electrolyte become attracted to the surface of the lead plate. Gradually, atom by atom, a shell builds up. Once the shell is thick enough, the lead plate is peeled off. Since the resulting copper electrotype shows the leaf impression in relief, a second stage is required to obtain the desired negative (intaglio) printing surface.



3. Second copper electrotype (the final printing plate). This plate was made by suspending the previous copper relief plate (see 2) in the electrolyte bath and repeating the copper depositing process. This time, the resulting shell showed the oak impression in negative. The plate was polished and prepared for printing. This plate has been steel-faced in order to be more hard-wearing.



4. Oak leaf impression on paper (2012). The colours were applied à la poupée, an intaglio printmaking method whereby several different colours are worked into the recesses of the plate and printed in one run through the intaglio printing press.



INDIRECT IMPRESSIONS: ELECTROTYPING INTAGLIO PRINTING

211 *Rosa pendulina* L., Alpine Rose

In *Faust: Polygraphisch-Illustrirte Zeitschrift für Kunst, Wissenschaft, Industrie und Geselliges Leben*, volume II, no. 24

1855

Printed and published by Alois Auer von Welsbach

COLLECTION OF MATTHEW ZUCKER

212 *Rosa pendulina* L., Alpine Rose

In *Physiotypia Plantarum Austriacarum: der Naturselbstdruck in seiner Anwendung auf die Gefäßpflanzen des Österreichischen Kaiserstaates*

1856

Constantin von Ettingshausen

Alois Pokorny

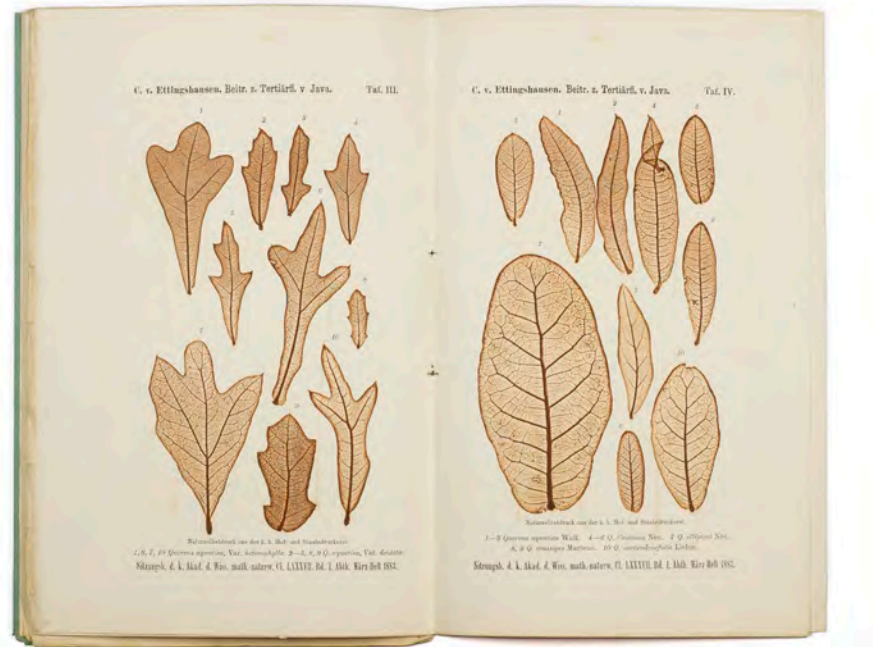
Printed by the Vienna Staatsdruckerei

COLLECTION OF MATTHEW ZUCKER



These two prints feature the Alpine rose and were printed using the *Naturselbstdruck* process developed by Alois Auer. They were both printed from the same copper plate but using different coloured inks. The plate printed in sepia was part of *Physiotypia Plantarum Austriacarum*, a publication featuring 500 nature prints of Austrian plants. In contrast, the multicoloured plate was published in *Faust*, a publication that showcases a variety of items printed using Auer's *Naturselbstdruck* method such as lace, minerals, fossils and plants.

The multicoloured plate was used to support the theory that nature itself is the greatest artist, with the flower, leaves, bud and stem being captured true to nature. The only thing missing was its scent.



INDIRECT IMPRESSIONS: ELECTROTYPING, INTAGLIO PRINTING

219 Beitrag zur Kenntniss der Tertiärflora der Insel Java
[Contribution to the Knowledge of the Tertiary Flora of the Java Island]

In *Sitzungsberichte der Mathematisch-Naturwissenschaftliche Classe der Kaiserlichen Akademie der Wissenschaften* 87 (1883), Abteilung I, pages 175–193.

1883

Constantin von Ettingshausen

Printed by the Vienna Staatsdruckerei

PRIVATE COLLECTION

220 Beitrag zur Kenntniss der Tertiärflora von Sumatra
[Contribution to the Knowledge of the Tertiary Flora of Sumatra]

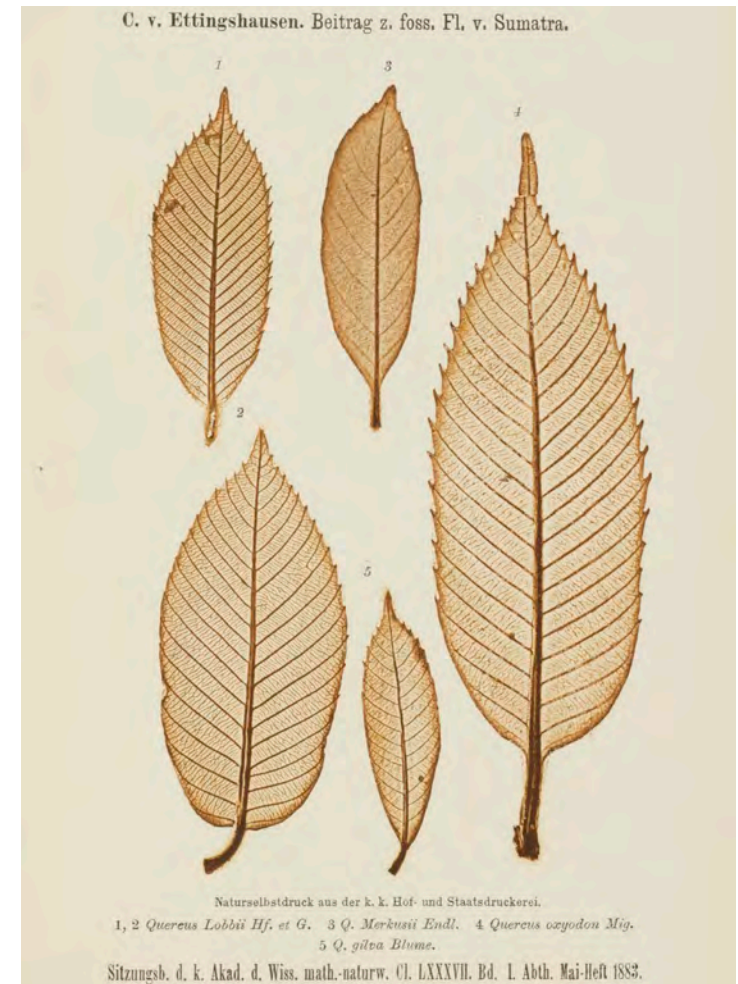
In *Sitzungsberichte der Mathematisch-Naturwissenschaftliche Classe der Kaiserlichen Akademie der Wissenschaften* 87 (1883), Abteilung I, pages 395–403.

1883

Constantin von Ettingshausen

Printed by the Vienna Staatsdruckerei

PRIVATE COLLECTION



The renowned Austrian botanist Constantin von Ettingshausen was most known for his research on paleobotany – the study of ancient plants through the examination of plant fossils. This led him naturally to the examination of leaf venations of extant living plants. By comparing living and fossil plants, Ettingshausen concluded that the prehistoric flora differed drastically from the contemporary ones. He gathered that the flora of Sumatra and Java from the Tertiary Era, an obsolete geological term used for the period from 66 million to 2.6 million years ago, is more closely related to other Tertiary floras than to their present-day flora. He therefore hoped to establish the history of the evolution of plant species and the causes underlying their current distributions.



INDIRECT IMPRESSIONS: CHROMOLITHOGRAPHY

222 Album Jacquard. Flore Des Dessinateurs
[Album Jacquard. Flora of Designers]

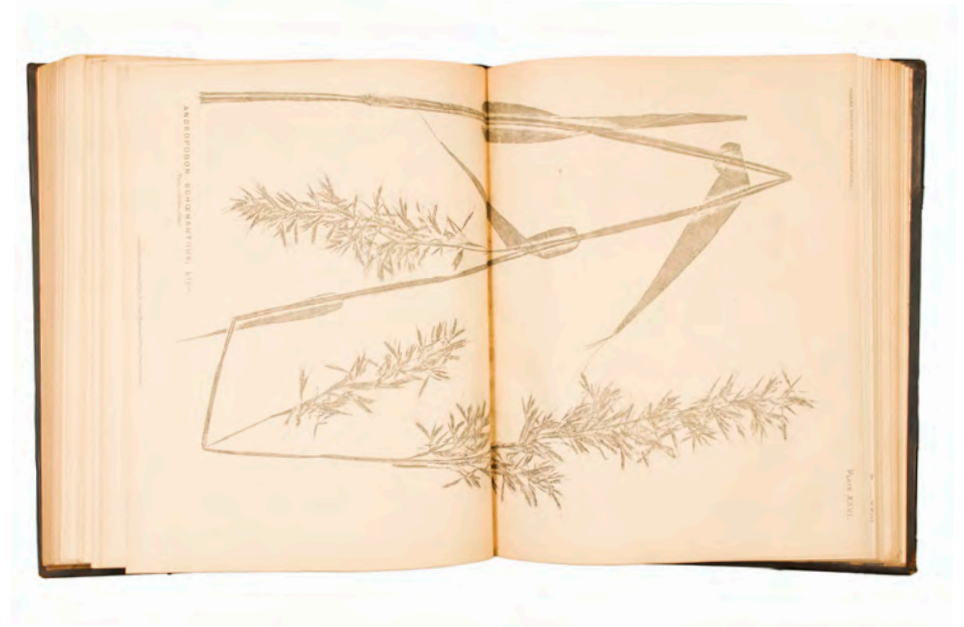
1856

Augustin Balleydier de Hell

Printed by Imprimerie Marie

COLLECTION OF MATTHEW ZUCKER

Some animals were captured in ink, too. This lithographic plate is part of a French album of 100 coloured lithographic nature prints depicting mainly marine organisms. It shows a starfish entangled in a mass of seaweed. The album was created over 12 years as an inspirational source for designers by the renowned French Jacquard weaving factory. These nature prints were used in the design of numerous products displayed at the 1855 Exposition Universelle [Universal Exhibition] held in Paris under the patronage of Emperor Napoleon III and Empress Eugénie of France.



INDIRECT IMPRESSIONS: LITHOGRAPHIC TRANSFER PRINTING

225 Illustrations of the Indigenous Fodder Grasses of the Plains
of North-Western India

1886–87

John Firminger Duthie

Printed by Thomas D. Bona

SINGAPORE BOTANIC GARDENS LIBRARY

This book, published in two parts between 1886 and 1887, consists of 80 illustrations of fodder grasses from north-western India. The plates were printed using lithographic transfer printing. Although the technique was already in use in Europe, Bona independently developed the process in the Punjab region. The botanical accuracy of the prints, which Duthie vouched for, made it possible for agricultural officers and farmers to identify the grasses easily. The prints were also meant to be a companion to Duthie's more text-heavy *The Fodder Grasses of Northern India* published in 1888.



INDIRECT IMPRESSIONS: ELECTROTYPING, INTAGLIO & RELIEF PRINTING

234 Beiträge zur Kenntnis der Flächen-Skelete der Farnkräuter
[Contributions to the Knowledge of Surface Skeletons of Ferns]

1864

Constantin von Ettingshausen

In *Denkschriften der Kaiserlichen Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Classe*, volume 22, part I, pages 37–111

COLLECTION OF MATTHEW ZUCKER

List of Artefacts on Display

- 101 Botanica in Originali seu Herbarium Vivum [Original Botanicals or a Living Herbal]**
1757–64, Johann Hieronymus Kniphof, Printed by Johann Gottfried Trampe
COLLECTION OF MATTHEW ZUCKER – 12 plates
- 102 *Petasites japonicus* (Siebold & Zucc.) Maxim. subsp. *giganteus* Kitam. Japanese Butterbur or Akita-Fuki**
1790s to 1850s, artist unknown
PRIVATE COLLECTION – Japanese hanging scroll
- 103 Varieties of the British Species of Ferns (Nature-printed)**
1876–80, printed by Arthur Mowbray Jones
COLLECTION OF MATTHEW ZUCKER – eight plates
- 104 Botanica in Originali seu Herbarium Vivum [Original Botanicals or a Living Herbal]**
1757–64, Johann Hieronymus Kniphof, Printed by Johann Gottfried Trampe
COLLECTION OF MATTHEW ZUCKER – bound volume
- 105 草木寫生 十五品 [Nature Drawings of Plants, Fifteen Items]**
1797–1826, Yamamoto Tanen (山本探淵)
PRIVATE COLLECTION – Japanese handscroll
- 106 *Petasites japonicus* (Siebold & Zucc.) Maxim. subsp. *giganteus* Kitam.**
Early 20th century, Miyakoshi Seinoshin (active 1875–1913)
PRIVATE COLLECTION – print on fabric, paper wrapper
- 107 Die Nahrungs-Gefäse in den Blättern der Bäume [The Food Vessels in the Leaves of the Trees]**
1748, Johann Michael Seligmann, Christoph Jacob Trew, printed by Johann Joseph Fleischmann
COLLECTION OF MATTHEW ZUCKER – one plate
- 108 Empreintes de Plantes et de Feuillages [Imprints of Plants and Foliage]**
1901, Victor Claro
COLLECTION OF MATTHEW ZUCKER – bound volume
- 109 Some of My Studies in Nature-Printing, Drawings, and Photography**
1871, Richard Cockle Lucas
COLLECTION OF MATTHEW ZUCKER – bound volume
- 110 Album** (spatter technique)
1868
Artist unknown
COLLECTION OF MATTHEW ZUCKER – bound volume

- 111 Algae Specimens**
19th century, D.J. Kirkpatrick
COLLECTION OF MATTHEW ZUCKER – bound volume
- 112 Mud Hand Prints**
1984, Richard Long
COLLECTION OF MATTHEW ZUCKER – bound volume
- 113 Ectypa Plantarum Ratisbonensium [Imprints of the Plants of Regensburg]**
1787–93, David Heinrich Hoppe, printed and published by Johann Mayr
COLLECTION OF MATTHEW ZUCKER – three plates
- 114 How to Make a Direct Nature Print**
2023
Dry leaves, ink, roller, samples of printed leaves
- 201 Gutta-percha (*Palaquium gutta* (Hook.) Baill.)**
1901, Collected by Charles Curtis from Penang, Malaysia
COLLECTION OF THE SINGAPORE HERBARIUM – resin sample
- 202 *Palaquium gutta* (Hook.) Baill.**
17 July 1918, collected by Mohamed Nur from Waterfall Gardens (Penang Botanic Gardens) Malaysia
COLLECTION OF THE SINGAPORE HERBARIUM – herbarium specimen
- 203 Der Polygraphische Apparat [The Polygraphic Apparatus]**
1853, Alois Auer von Welsbach, printed by the Vienna Staatsdruckerei
COLLECTION OF MATTHEW ZUCKER – bound volume
- 204 Die Vier Jahreszeiten [The Four Seasons]**
1855, Emil Adolf Rossmässler, printed by Eduard Kretzschmar, published by Hugo Scheube
PRIVATE COLLECTION – bound volume
- 205 Beiträge zur Geschichte und Kenntniß meteorischer Stein- und Metall-Massen [Contributions to the History and Knowledge of Meteoric Stone and Metal Masses]**
1820, Carl Franz Anton von Schreibers, published by J.B. Huebner
COLLECTION OF MATTHEW ZUCKER – bound volume
- 206 Die hohlen Geschiebe aus dem Leithagebirge [The Hollow Boulders from the Leitha Mountains]**
In *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften. Mathematisch-naturwissenschaftliche Classe*, volume 21, pages 480 to 491
1856, Wilhelm von Haidinger, printed by the Vienna Staatsdruckerei
COLLECTION OF MATTHEW ZUCKER – one plate
- 207 Das Meteoreisen von Sarepta [The Meteoric Iron of Sarepta]**
In *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften. Mathematisch-naturwissenschaftliche Classe*, volume 46, section 2, pages 286 to 297
1862, Wilhelm von Haidinger, printed by the Vienna Staatsdruckerei
COLLECTION OF MATTHEW ZUCKER – bound volume
- 208 Copper Plates Used in Auer's Nature Printing Process in Vienna**
1856, Alois Auer von Welsbach
COLLECTION OF MATTHEW ZUCKER – two copper plates
- 209 Die Entdeckung des Naturselbstdruckes [The Discovery of the Natural Printing-Process]**
1854, Alois Auer von Welsbach
Printed by the Vienna Staatsdruckerei
COLLECTION OF MATTHEW ZUCKER – bound volume
- 210 Nature Printing According to Auer and Worring's Method**
2012, Pia Östlund
COLLECTION OF PIA ÖSTLUND – one oak leaf, one lead plate, two copper plates, one print
- 211 Faust: polygraphisch-illustrirte Zeitschrift für Kunst, Wissenschaft, Industrie und geselliges Leben [Faust: Polygraphic-Illustrated Magazine for Art, Science, Industry and Social Life]**, volume II, no. 24 – *Rosa pendulina* L., Alpine Rose
1855, Printed and published by Alois Auer von Welsbach
COLLECTION OF MATTHEW ZUCKER – bound volume
- 212 Physiotypia Plantarum Austriacarum: der Naturselbstdruck in Anwendung auf die Gefäßpflanzen des Österreichischen Kaiserstaates [Physiotypes of Austrian Plants: The Nature Self-Print in its Application to the Vascular Plants of the Austrian Imperial State]**
1856, Constantin von Ettingshausen, Alois Pokorny, printed by the Vienna Staatsdruckerei
COLLECTION OF MATTHEW ZUCKER – one plate: *Rosa pendulina* L., Alpine Rose.
- 213 The Octavo Nature-Printed British Ferns**
1859, Thomas Moore, printed by Henry Bradbury
COLLECTION OF MATTHEW ZUCKER – bound volume
- 214 The Nature-Printed British Sea-Weeds**
1859–60, William Grosart Johnstone, Alexander Croall, printed by Henry Bradbury
COLLECTION OF MATTHEW ZUCKER – bound volume
- 215 Flora dell'Italia Settentrionale Rappresentata Colla Fisiotipia [Flora of Northern Italy Represented with Physiotype]**
1854–71, Carlo and Agostino Perini, printed by Tipografia Perini
PRIVATE COLLECTION – two plates

- 216 Pflanzenblätter in Naturdruck mit der Botanischen Kunstsprache für die Blattform [Plant Leaves in Nature Print with the Botanical Art Language for Leaf Shape]**
1872, Georg Christian Reuss, printed by Josef Niederbühl,
published by E. Schweizerbart'sche Verlagshandlung (Eduard Koch)
COLLECTION OF MATTHEW ZUCKER – bound volume
- 217 Physiotypia Plantarum Austriacarum: der Naturselbstdruck in seiner Anwendung auf die Gefässpflanzen des Österreichischen Kaiserstaates [Physiotypes of Austrian Plants: The Nature Self-Print in its Application to the Vascular Plants of the Austrian Imperial State]**
1856, Constantin von Ettingshausen, Alois Pokorny, printed by the Vienna Staatsdruckerei
PRIVATE COLLECTION – one plate: *Convallaria multiflora* L.
- 218 Photographisches Album der Flora Österreichs [Photographic Album of the Flora of Austria]**
1864, Constantin von Ettingshausen, printed by the Vienna Staatsdruckerei
COLLECTION OF MATTHEW ZUCKER – bound volume
- 219 Beitrag zur Kenntniss der Tertiärflora der Insel Java [Contribution to the Knowledge of the Tertiary Flora of the Java Island]**
In *Sitzungsberichte der Mathematisch-Naturwissenschaftliche Classe der Kaiserlichen Akademie der Wissenschaften* 87 (1883), Abteilung I, pages 175–193.
1883, Constantin von Ettingshausen, printed by the Vienna Staatsdruckerei
PRIVATE COLLECTION – pamphlet
- 220 Beitrag zur Kenntniss der Tertiärflora von Sumatra [Contribution to the Knowledge of the Tertiary Flora of Sumatra]**
In *Sitzungsberichte der Mathematisch-Naturwissenschaftliche Classe der Kaiserlichen Akademie der Wissenschaften* 87 (1883), Abteilung I, pages 395–403.
1883, Constantin von Ettingshausen, printed by the Vienna Staatsdruckerei
PRIVATE COLLECTION – pamphlet
- 221 Physiographie der Medicinal-Pflanzen: Nebst einem Clavis zur Bestimmung der Pflanzen mit Besonderer Berücksichtigung der Nervation der Blätter [Physiography of Medicinal Plants: Together with a Key for the Identification of Plants with Special Reference to the Venation of the Leaves]**
1862, Constantin von Ettingshausen, printed by the Vienna Staatsdruckerei, published by Wilhelm Braumüller
COLLECTION OF MATTHEW ZUCKER – bound volume
- 222 Album Jacquard. Flore Des Dessinateurs [Album Jacquard. Flora of Designers]**
1856, Augustin Balleydier de Hell, printed by Imprimerie Marie
COLLECTION OF MATTHEW ZUCKER – two plates
- 223 The Indigenous Grasses of New Zealand**
1878–80, John Buchanan, printed by John Buchanan and John Earle
COLLECTION OF MATTHEW ZUCKER – bound volume
- 224 Flore Fourragère de la France, Reproduite par la Méthode de Compression dite Phytoxygraphique [Fodder Plants of France, Reproduced by the Phytoxygraphic Compression Method]**
1866, Edme Ansberque, printed by Edme Ansberque and Imprimerie Marie
PRIVATE COLLECTION – bound volume
- 225 Illustrations of the Indigenous Fodder Grasses of the Plains of North-Western India**
1886–87, John Firminger Duthie, printed by Thomas D. Bona
SINGAPORE BOTANIC GARDENS LIBRARY – bound volume
- 226 De Materia Medica**
1228, Pedanius Dioscorides, Bihnam the Christian
Reproduced in Cave, Roderick. (2010) *Impressions of Nature: A History of Nature Printing*. London: The British Library; New York: Mark Batty Publisher.
PRIVATE COLLECTION – bound volume
- 227 Botanica in Originali seu Herbarium Vivum [Original Botanicals or a Living Herbal]**
1757–64, Johann Hieronymus Kniphof, Printed by Johann Gottfried Trampe
COLLECTION OF MATTHEW ZUCKER – one plate
- 228 American Currency Six Dollars**
1774, Anne Catharine and Frederick Green
COLLECTION OF MATTHEW ZUCKER – one banknote
- 229 Kosmos. Zeitschrift für Angewandte Naturwissenschaften [Cosmos. Journal for Applied Natural Sciences]**
number 5
1857, Alois Auer
PRIVATE COLLECTION – one plate
- 230 Die Entdeckung des Naturselbstdruckes [The Discovery of the Natural Printing-Process]**
1854, Alois Auer von Welsbach
Printed by the Vienna Staatsdruckerei
COLLECTION OF MATTHEW ZUCKER – bound volume

231 *Physiotypia Plantarum Austriacarum: der Naturselbstdruck in seiner Anwendung auf die Gefässpflanzen des Österreichischen Kaiserstaates*
[Physiotypes of Austrian Plants: The Nature Self-Print in its Application to the Vascular Plants of the Austrian Imperial State]

1856, Constantin von Ettingshausen, Alois Pokorny, printed by the Vienna Staatsdruckerei
PRIVATE COLLECTION – one plate: *Campanula bononiensis* L.

232 *Über die Anwendung der Buchdruckerpresse zur Darstellung Physiotypischer Pflanzenabdrücke*
[On the Use of the Letterpress Printer for the Presentation of Physiotypical Plant Imprints]

1856, Alois Pokorny
In Sitzungsberichte der Akademie der Wissenschaften. Mathematisch-naturwissenschaftliche Klasse, volume 21, pages 6–18
COLLECTION OF MATTHEW ZUCKER – bound volume

233 *Petasites japonicus (Siebold & Zucc.) Maxim. subsp. giganteus Kitam., Japanese butterbur or Akita-fuki*

Undated, Miyakoshi family
PRIVATE COLLECTION – Japanese hanging scroll

234 *Beiträge zur Kenntnis der Flächen-Skelete der Farnkräuter*
[Contributions to the Knowledge of Surface Skeletons of Ferns]

1864, Constantin von Ettingshausen
In Denkschriften der Kaiserlichen Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Classe, volume 22, part I, pages 37–111
COLLECTION OF MATTHEW ZUCKER – bound volume

Capturing Nature

Curators: Capturing Nature: Matthew Zucker, Pia Östlund
NParks: Michele Rodda, Martina Yeo

Photography: Martin Slivka, Oleg Baburin

This exhibition would not have been possible without the loan of materials from Matthew Zucker and Pia Östlund, and generous donations through the Garden City Fund.

About Capturing Nature

Capturing Nature is an initiative co-founded by Matthew Zucker, a rare art book dealer, publisher and collector from Berkshires, Massachusetts, and Pia Östlund, a Swedish printmaker and artist based in London. Their shared passion for nature printing has led them around the world, connecting with botanists, institutions, collectors, and green-minded companies to explore the various aspects of this ancient art form. They co-authored *Capturing Nature* (Zucker Art Books, 2022 & Princeton Architectural Press 2023), an award-winning visual exploration of nature printing, featuring 45 different techniques and hundreds of astonishing rare images.

If you would like to know more about Capturing Nature, please visit www.capturingnature.com

Capturing Nature

EXHIBITION

Botanical Art Gallery

29 September 2023 – 31 March 2024

Gallop Extension, Singapore Botanic Gardens

Opens daily 9 am – 6 pm*

* closed every last Thursday of the month

Support the Botanical Art Gallery

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Botanic Garden

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