# Basteria

Journal of the Netherlands Malacological Society



# EDITORIAL BOARD

Prof. Dr E. Gittenberger (editor-in-chief), Dr B. Kokshoorn (layout editor), G.C. Kronenberg (editor).

# Associated editors

DR A.C. VAN BRUGGEN (non-marine molluscs),
DR TH.C.M. KEMPERMAN (terrestrial and marine molluscs),
PROF. DR G. VAN DER VELDE (freshwater molluscs),
PROF. DR G. VERMEIJ (fossil and recent marine molluscs),
DR F. Wesselingh (fossil molluscs).

# Editorial address

Netherlands Centre for Biodiversity Naturalis Darwinweg 2, P.O. Box 9517, NL-2300RA Leiden Tel. +31(0)71-5687614, Fax. +31(0)71-5687666, e-mail: info@basteria.nl

# AUTHOR GUIDELINES

For author guidelines, please visit the website at www.basteria.nl

Basteria is the scientific journal of the Netherlands Malacological Society; for information and/or subscription please refer to the Hon. Secretary, c/o NCB Naturalis, P.O. Box 9517, NL-2300RA Leiden, The Netherlands, or visit the website at www.spirula.nl.

The paper in this journal meets the guidelines for permanence and durability of the Committee on Production Guidelines for Book Longevity of the Council on Library Resources.

Printed by High Trade, Zwolle, The Netherlands

# A collation of the three editions of Georg Wolfgang Knorr's conchological work "Vergnügen" (1757–1775)

HENK H. DIJKSTRA

Zoological Museum Amsterdam, University of Amsterdam, Mauritskade 61, NL-1092 AD Amsterdam, The Netherlands; H.H.Dijkstra@uva.nl

In this paper the German, French and Dutch editions of Knorr's conchological work *Vergnügen der Augen und des Gemüths* are collated. The plates of the three editions are also compared. Brief biographical data is given, of the artists, engravers and collectors named on the plates. The French and Dutch publications are not only translated re-editions, but emended, complementary editions of the German work. Many figures of the plates are iconotypes.

Key words: Mollusca, G.W. Knorr, Vergnügen (1757–1773), Delices (1760–1773), Verlustiging (1770–1775).

#### Introduction

Several outstanding conchological works were published in the 18th century. Prominent among them were works by Rumphius (1705), Seba (1734–1765), d'Argenville (1742), Gualtieri (1742), Knorr (1757–1773), Regenfuss (1758), Martini (1769–1777), Chemnitz (1780–1795), and Martyn (1784–1787). Their books were illustrated with beautiful hand-coloured engraved plates but the names therein were non-binominal (ICZN 1954, Opinions 182 to 184, 260, 296;

ICZN 1957, Opinion 456). In the middle of that century Carolus Linnaeus (1758) wrote the 10th edition of his *Systema Naturae*, the starting point for binominal zoological nomenclature. Nearly at the same time Knorr's richly illustrated *Vergnügen* started. The names in the *Vergnügen* are vernacular and as such do not enter into nomenclature. They are so obviously not binominal that no ruling is necessary to declare the book non-binominal. The only Latin binominal names in it are in indices where some figures are tied to Linnaean names and a few stray Linnaean names in the text. As noted herein, a different Knorr work, or more correctly a translation of one of his works, was ruled invalid by the ICZN.

Some of the most important works of the 18th century using binominal nomenclature in the naming of molluscs were not illustrated, particularly those by Linnaeus (1758 and 1767), Gmelin (1791), and Röding (1798). Those authors named species with reference to figures in non-binominal works such as the ones mentioned above, including Knorr. Röding alone referred to 250 Knorr figures. Therefore, these old works are still important not only for comparative historical malacological research, but because their figures are often representatives of the type specimens. These are iconotypes, i.e. pictures of specimens, which are considered not to



Fig. 1. Portrait of Knorr ex Knorr's Thesaurus rei herbariae hortensisque universalis, exhibens figuras florum ... aliarumque plantarum ... nativis coloribus, atque idiomate tam Latino quam Germanico describens eorundem partes ... Editio nova emendata = Allgemeines Blumen-, Kräuter- Frucht- und Garten-Buch, in welchem ganz neue und nach der Natur selbst abgemahlte Figuren von Blumen ... Neue verbesserte Ausgabe (1788-1789). Universiteitsbibliotheek Amsterdam (UvA) Bijzondere Collecties (OTM: 360 A 16).

have been examined by the author of the taxon.

The three editions of Knorr's *Vergnügen der Augen und des Gemüths* (1757–1775), will be considered here in more detail. It is the Knorr work best known to malacologists and a reference to "Knorr" usually needs no further explanation. Here I will attempt to give complete collations with annotations. The German and French editions studied are in the possession of Mr R.E. Petit, the Dutch edition is held by the author.

# CONVENTIONS AND ABBREVIATIONS

The plate numbers in the editions discussed in detail are in Roman numerals followed by asterisks indicating part number. References to particular plates will be in that same form but when plate numbers are listed as being the work of a particular artist or engraver, or drawn from specimens in a certain collection, they will be referenced by part number (an Arabic number) and Arabic numerals.

The work was issued in six parts. The word "part" will be in lower case when used in a general sense, but capitalized when it refers to a specific part or to a plate within that part.

Abbreviations: I.C.Z.N., International Commission on Zoological Nomenclature; M.C.Z., Museum of Comparative Zoology, Harvard University.

# GEORG WOLFGANG KNORR

Georg Wolfgang Knorr was born on December 30th, 1705, in Nuremberg, and died on September 17th in 1761, also in Nuremberg. He spent his whole life in Nuremberg, the last year of which he stayed at the Katharinen monastery. He was buried in the St. Johannis cemetery, grave number 874. His tomb and epitaph are not preserved. He was a child of Georg Jacob Knorr and Magdalena Messerschmidt. In 1730 he married Anna Elisabeth Ulmer and they had four children between 1731 and 1737 (Ludwig, 1998: 346). He had planned a visit to the Netherlands in 1730, but it was cancelled because of his marriage. Knorr was initially apprenticed to his father's trade of wood turning. At age 18, he learned engraving and became a copperplate engraver for Johann Leonhard Blanc, working under Martin Tyroff on the illustrations for Johann Jacob Scheuchzer's "Copper-Bible" Physica sacra (1731–1735). As a result of that work he became

interested in the natural sciences. His tutor Blanc passed away in 1725 and through his own studies, Knorr gained a wide knowledge in art history and the natural sciences. Two of his friends, probably Johann Christoph and Johann Sigmund Dietzsch, tutored him in engraving landscapes. Around 1730 he started a publishing firm, which was continued after his death by his heirs until 1765. From 1726 until 1760, he engraved portraits, landscapes, geological formations, and animal studies after Dürer and the Kilian family. He was a paleontologist, as well as a painter, draftsman, engraver, collector, publisher and art dealer. He published numerous engravings, some as single folios and some in books. An engraved portrait of Knorr with the caption "Georg: Wolfgang: Knorr Chalcographus Norimb: at: 30. Dec: 1705. Denat: d. 17. Sept: 1761., J. E. Ihle Acad.[emiae] Pict.[oria] Dir.[ector] pinx.[it] [J. Ihle Director of the Academy of Arts painted it...], G. W. Knorrii Haeredes excud., L. A. Schweikart Acad. Pict. Florent Socius sc." (36.3 x 24.6 cm) is added in Knorr's Thesaurus rei herbariae hortensisque universalis (1750-1772) (Callery, 1976: 145-150), Naturgeschichte der Versteinerungen (1768-73), and Deliciae Naturae Selectae (1766-67), and in the second revised edition (1778), the French edition (1779) and the Dutch edition (1771) of the last work (Eisinger, 1930: 241-245; Ludwig, 1998: 346-348).

In the second half of the 18th century Nuremberg overtook Augsburg as the centre of production for fine natural history books in Germany, due to the stimulus of C,J. Trew (Wunschmann, 1894: 593-595), a wealthy physician at Nuremberg, who assembled a number of artists and scientists around him. This group included Knorr as well as J.C. Dietzsch, J.C. Keller, C.N. Kleemann, C. Leinberger, A. Hoffer, J.A. Eisenmann and J.F. Schmidt. They contributed to the drawing, engraving and hand-colouring of the plates of several natural history publications. Trew owned a natural history collection and menagerie. Many animals and curiosities described and depicted in the Deliciae Naturae Selectae originated from his collection, as indicated by Ex. Museo Excell. D.D. Chris. Jac. Trew at the bottom of each plate (see below). Knorr also published other scientific works distinguished by the quality of their hand-coloured plates. Two of his most noted works, aside from the one under discussion, are: Sammlung von Merckwürdigkeiten der Natur und Alterthümer

des Erdbodens (1749-1755) "Collection of Curiosities of Nature and Antiquities from the Soil". Knorr was one of the protogeologists, intermediate between the collectors of cabinets of natural history and those who first made use of fossils for the identification and mapping of stratigraphic succession. His geological concerns culminated in this work, comprising about 125 handsome plates in folio with a descriptive text. A French edition appeared in 1768–1778. In this work, Walch (1725-1778), a professor of rhetoric and poetry at the University of Jena, and publisher of the periodical Der Naturforscher (1774–1778), presented the first comprehensive account of systematic paleontology ordered according to the zoological system. Moreover, in addition to basic systematics of all the forms known to him, Walch provided a general paleontology (sedimentation, facies distribution) and a history of paleontology that is still worth reading. Walch also provided a list of all the cabinets of curiosities that he drew upon in completing Knorr's work.

Deliciae naturae selectae oder auserlesenes Naturalien-Cabinet ([1751] 1766–1767 [1768]) "Selected Cabinet of Objects from Nature". This monumental work was first published in German, showing a collection of samples from famous German 'Naturalien' cabinets, i.e. C. J. Trew, J. A. Beurer, P.L. Müller, D. Stedeling, A.M. Schadeloock, D. de Hagen, D. Rudolph, and J.P. Breyn(e). The 91 magnificent hand-coloured plates stand out for their brightness, delicacy and vibrant colouring and depict zoological subjects and metals as follows: corals and seaweeds (15 plates), shells (7), butterflies (6), sea urchins (4), metals and sea anemones (6), crustaceans and spiders (7), starfishes (4), fishes (9), birds (7), mammals (14), reptiles and amphibians (12). The accompanying text is contemplative, anecdotal and unscientific.

This production was enlarged and issued with a French translation in 1766–1768 in two folio volumes edited by Philip Ludwig Statius Müller (1725–1776), professor in philosophy and natural history at the University of Erlangen, who had been a preacher in Amersfoort and Leeuwarden in the Netherlands. To avoid any possible problems arising from Müller's inclusion of some Latin genera, this edition was placed on the Official Index of Rejected and Invalid Works in Zoological Nomenclature (ICZN 1964, Opinion 701). The work is listed there as being by Statius Müller. This

work was also discussed by Iredale (1922: 78–79).

A Dutch translation by Müller in cooperation with Friedrich Christian Meuschen (1719–1811), a merchant in shells in The Hague, was published in 1771 and has a list of subscribers at the beginning of part one.

### VERGNÜGEN DER AUGEN UND DES GEMÜTHS

Vergnügen der Augen und des Gemüths (1757–1773) "Delight of the Eyes and the Mind/Soul". The title and content of these volumes, exceedingly popular in amateur circles, exemplifies the contemporary aesthetization of zoology, especially the colourful molluscs. This famous work was first published in German and totally devoted to Mollusca in the style of Rumphius (1705). The last five Parts were published after Knorr's death by his heirs.

All figures are of marine shells, most of which are tropical gastropods, identifiable at the species level. The figured shells in Part 1 and some in Part 2 are from an unidentified source; shells in the remainder of Part 2 and in Part 3 are from the collections of Philipus Ludovicus Statius Müller (1725–1776), and August Martin Schadeloock, a deacon of the Laurentiuschurch at Nuremberg. Part 4 specimens are from the collections of Schadeloock, Müller and Martinus Houttuyn (1720–1798), physician at Hoorn and Amsterdam; those in Parts 5 and 6 from the collection of Houttuyn and an unknown source, probably from Knorr's estate.

The French edition (1760–1773) is titled *Les delices des* yeux et de l'esprit ou collection générale des différentes espèces de coquillages que la mer renferme "Delight of the eyes and of the mind or general collection of different species of shells, which the ocean holds".

The Dutch edition (1770–1775), *Verlustiging der oogen en van den geest*, was translated, corrected and enlarged by M. Houttuyn (see Collations). The three editions of this work will be described and discussed herein.

In 1768 Knorr's heirs published a six-page paper in the *Nachrichten von Künstlern und Kunstsachen* (Heinecken, 1768) titled *Ehrenrettung* [rehabilitation], in which they defended Knorr against accusations of forgery of engravings. Copies of this *Ehrenrettung* were added to some copies of the *Vergnügen* and other Knorr works. A copy had been added to

a set of the *Vergnügen* recently listed for sale (Faber, 2008: 101–103). Possibly Knorr had copied some engravings of works of Seba, Gualtieri, Argenville and Rumphius, without referring to these publications in the text or in the captions of the plates. This was a common practice of the time. Houttuyn mentioned in the *Berigt* that "Sommigen zouden mooglyk wel wenschen, dat hier de Schryvers waaren aangehaald, in welken deeze Voorwerpen ongekleurd voorkomen; het Derde Deel van Seba, by voorbeeld, Gualthieri [sic], d'Argenville, Rumphius en dergelyken" [Some would appreciate, that herein the authors were referred to, in which these objects appeared uncoloured, like the third part of Seba, Gualtieri, d'Argenville, Rumphius and others].

Schierenberg (2005: 130) alluded to Knorr's propensity to utilize the work of others. In the description of a major botanical work by Knorr he wrote: "The plates were drawn and engraved by Knorr; however they are mostly based on works of Ehret, taken from Trew's 'Plantae selectae' and Weinmann's 'Phytanthoza'. A careful study would probably reveal other pictorial sources."

# Collations of Knorr's Vergnügen der Augen und des Gemüths

The three editions (German, French, Dutch) of this work share most features. Often cited as a "3 volume" work as it is usually bound in three volumes, each edition was issued in six Parts with no mention of volumes. The presence of an index for each of the two parts makes the division into three volumes reasonable. Each Part (German: Theil; French: Partie; Dutch: Deel) consists of descriptive text and plates. The six Parts each contain 30 hand coloured plates. The sixth part contains an additional ten black and white plates. These plates are discussed herein in the section Plates. A source of confusion for those using and citing this work is the unusual system of plate numbers. The plates are identified by Roman numerals in normal order in Part 1. In Part 2 the plates are numbered I–XXX in normal order but each Roman numeral is followed by a superscript \*. This scheme is followed throughout with Part 6 plates being tagged with \*\*\*\*\*. It is thus very easy to read Plate XX\*\*\* as "Part 3, Plate 20" when it is really "Part 4, Plate 20."

The *Vergnügen* has traditionally been difficult to cite, causing problems even for Born (1778: errata pages) who had 21 corrections to his references to Knorr.

It will be noted that the additional French title page in Part 1 of the German edition has the author's name as Georg Guelphe Knorr. The reason for this is unknown, but Georg and George appear in different places. There are also misspellings and misplaced or incorrect accents. These are cited in the collations as printed.

The | indicates a line break, used only where there may be some confusion, especially with hyphenated words. In order to give complete collations in a minimum of space, a | | is used to indicate a break between pages.



Figure 2. Title page of German edition.

German – Vergnügen der Augen und des Gemüths,...

The set at hand is bound in three volumes. In the first two volumes the plates for both parts are bound in the back, listed here in the order in which they are bound.

Each two Parts have a *Systematisches Register* in which the species are listed in "systematic order" with figure references. Most names are vernacular German but a few have Latin names. The first *Register* is stated to be after G. E. Rumpf, his name being rendered as Rumph in the later parts. In the copy at hand the *Register* is placed before the plates. Numbers in bold type are Part (Theil) numbers.

- 1 Title page: Vergnügen der Augen und des Gemüths, in Vorstellung einer allgemeinen Sammlung von Muscheln und andern Geschöpfen, welche im Meer gefunden werden. Herausgegeben von Georg Wolfgang Knorr, in Nürnberg. 1757. [verso blank] | | 2nd Title page in French: Les delices des yeux de l'esprit, | a la representation d'une collection universelle des coquilles et des autres corps, qui sont a trouver dans la mer. Produite par Georg Guelphe Knorr, a Nuremberg. 1757. [verso blank] | | [i]—[ii]: French preface, no heading. Verso signed: à Nuremberg le 4 Novbr. 1756. l'Editeur. George Guelphe Knorr. | | [iii]—[iv]: German preface, no heading. Verso signed: Nürnberg, den 4 November, 1756 der Verleger, Georg Wolfgang Knorr. | | [1]—39: Plate explanations. Verso of page 39 blank.
- 2 Title page dated 1764 with legend at bottom: Zweyter Theil. Herausgegeben von Georg Wolfgang Knorr, Seel[ig = the late, literally blessed]. Erben [heirs] in Nürnberg. 1764. || [3]–4: No heading; a notice from the heirs. Verso signed: Nürnberg, im Monat November, 1764. die Verleger Georg Wolfgang Knorr, Seel. Erben. || [5]–56: Plate explanations. || [i]–[xv]: Systematisches Register. || [xvi]: Nachschrift. || I Theil Frontispiece [see Figure 5] || Plates: I–XXX || II. Theil Frontispiece [see Figure 6] || Plates: I\*–XXX\*.
- **3** − [1]−[2]: Title page as before, dated 1768. | | [3]−[4]: Untitled preface. Verso signed: *Nürnberg, den 29 April,* | 1768. | *Die Verleger* | *Georg Wolfgang Knorr* | *Seel. Erben.* | | [5]−52: Plate explanations.
- **4** [1]–[2]: Title page as before, dated 1769. □ [3]–[4]: Untitled preface. Verso signed: *Nürnberg, den 1. Martii, 1769. Die Verleger, Georg Wolfgang Knorrs seel. Erben.* □ [5]–48: Plate explanations. □ [i]–[xiv]: *Systematisches Register.* □ III. Theil

Frontispiece [see Figure 7]. | | Plates: I\*\*–XXX\*\* | | IV. Theil Frontispiece [see Figure 8]. | | Plates: I\*\*–XXX\*\*\*.

- **5** [1]–[2]: Title page as before, dated 1771. || [3]– 4: Untitled preface. Verso signed: *Nürnberg, den 30. September* 1771. *Georg Wolfgang Knorr* | *Seel. Erben.* ||
- [5]–46: Plate explanations. | | V. Theil Frontispiece [see Figure 9]. Plates: I\*\*\*\*–XXX\*\*\*\*.
- 6 [1]–[2]: Title page as before, dated 1772. || [3]– 4: Untitled preface. Verso signed: *Nürnberg den 6. August 1772. Georg Wolfgang Knorr Seel. Erben.* || [5]–76: Plate explanations. || 1–18: *Systematisches Register.* [Note use of Arabic numerals instead of Roman as in previous parts.] || VI. Theil Frontispiece [see Figure 10]. || Plates: I\*\*\*\*\*–XL\*\*\*\*\*.

German – Vergnügen der Augen und des Gemüths,...

– 2nd Edition

According to two sources (Agassiz, 1852: 375; Bequaert, 1950: 149), two volumes of an entirely new German edition were published. The first part appeared in 1776 with revised text by P.E.S. Müller, and the second part in 1784 with a revised text by Meuschen. The pagination is stated to be continuous through the two parts (pages 1–240). Both Agassiz and Bequaert referred to Boehmer (1786), a work I have not seen. No copy of this edition has been located by me.

French – Les delices des yeux et de l'esprit,...

Dates stated in the French edition are: [AP = avant propos; TP = title page; FP = frontispiece; numbers in bold are part numbers]. 1: 1756 AP; 1760 TP; 2: 1764 AP; 1765 TP; 3: 1768 FP, TP, AP; 4: 1769 FP; 1770 TP, AP; 5: 1771 FP, TP, AP; 6: 1773 FP, TP, AP.

The omission of accents in the titles are, in most instances, probably artifacts of the use of all capital letters; also the reason for the strange e'e accent where the accent mark is between the letters. The various misusages of  $\hat{a}$ ,  $\hat{a}$  and  $\hat{a}$  are surely typesetters errors as are other spelling errors

1 – Frontispiece: Collection des differentes espèces de Coquillages qu'on trouve dans les Mers rassemblée & communiquée au Public par George Wolfgang Knorr à Nuremberg Première Partie. [verso blank; bound with FP facing TP] | | Title Page: Les delices des yeux et de l'esprit, ou collection generale des differentes especes de coquillages que la mer renferme, communiquee au public par George Wolffgang Knorr, a Nuremberg. 1760. [Verso blank. No accents appear in the title. George is spelled with a final "e" on all title pages and frontispieces in the French edition. Wolffgang is spelled with a double "f" on TP and Preface.] | | [3–4]: Preface, titled: Avant-propos. Signed: Nuremberg, le 4 Novembr. 1756. l'Editeur. George Wolffgang Knorr. | | [5]–52: text | | Plates: I–XXX [interleaved with text]. [The FP reproduced by Dance (1986: Plate XIV) captioned as "Title page" and dated 1764]

- 2 Frontispiece: Collection des differentes espèces de Coquillages qu'on trouve dans les Mers rassemblée & communiquée au Public par George Wolfgang Knorr à Nuremberg. II<sup>de</sup> Partie\* || Title page: Les delices des yeux et de l'esprit, ou collection generale des differentes especes de coquillages que la mer renferme, communiquee au public par les heritiers de George Wolffgang Knorr. a Nuremberg. II. Partie.1765. [Verso blank. No accents appear in the title. 1765; Wolfgang with a double "f" on TP and Preface.] || [3–4]: Avant-propos. Signed: Nuremberg, en No- | vembre, 1764 Les Heritiers de George Wolffgang Knorr, Editeurs. || [5]–65: text || Plates: I\*–XXX\* [interleaved with text] || [i–xvi]: Table sistematique des Limaçons & des Moules representez dans les deux Premieres Parties || [xvii]: Postface.
- 3 Frontispiece: Collection des differentes espèces de Coquillages qu'on trouve dans les Mers, rassemblée et communiquée au Public par les Heritiers de George Wolf- | gang Knorr â Nuremberg 1768. III<sup>me</sup> Partie\*\* || Title page: Les delices des yeux et de l'esprit, ou collection generale des differentes especes de coquillages que la mer renferme, communiquee au public par les heritiers de George Wolfgang Knorr. a Nuremberg. III. Partie. 1768. [Verso blank. No accents appear in the title. Wolfgang with a single "f" on TP and Preface.] || [3–4]: Avant-propos. Signed: Nuremberg, le 29. Avril, 1768. Les Heritiers de George Wolfgang Knorr, Editeurs. || [5]–55: text [recto of 55 blank] || Plates: I\*\*—XXX\*\* [interleaved with text].
- **4** Frontispiece: \*\*\* | *IV*<sup>me</sup> Partie de la Collection des differentes espèces de Coquillages qu'on trouve dans les Mers, rassemblée et communiquée au Public par les Heritiers de George Wolfgang Knorr à Nuremberg 1769 | | Title page: Les delices des yeux et de l'esprit, ou collection generale des differentes especes de

# LES DELICES

DES YEUX ET DE L'ESPRIT.

οU

# COLLECTION GENERALE

DIFFERENTES ESPECES

# **COQUILLAGES**

QUE LA MER RENFERME.

COMMUNIQUEE

# AU PUBLIC

GEORGE WOLFFGANG KNORR,

NUREMBERG.

1760.

Figure 3. Title page of French edition.

coquillages que la mer renferme, communiquee au public par les heritiers de George Wolfgang Knorr. a Nuremberg. IV. Partie.1770. [Verso blank. No accents appear in the title. Wolfgang with a single "f" on TP and Preface. Note difference in date on FP and TP.] || [3–4]: Avant-propos. Signed: Nuremberg, ce 1". de Mars, 1770. Les Editeurs, Héritiers de feu George Wolfgang Knorr. [This is first instance of an accent in Héritiers.] || [5]–54: text || [i–xiv]: 14 unnumbered pages: Continuation de la table sistematique des Limaçons & des Moules représentés dans la troisieme & quatrieme parties de cet ouvrage.

[Note: représentés is accented and ends with an s instead of a z.] | | [1]—4: Avant-propos a l'occasion de cette table selon l'ordre de M. de Linnaeus

[5]–24: Table selon l'ordre de Linnaeus ou essai de table sistematique faite d'apres la douzieme edition du sisteme de la nature de M. le Chevalier de Linnaeus. [The figures are tied to Linnaean names with numbers in both the 10<sup>th</sup> and 12<sup>th</sup> editions. There are no new names and only one spelling error is noted (*Conus germanus* for *C. genuanus*) but there may be others.] | | Plates: I\*\*\*–XXX\*\*\*\* [interleaved with text].

5 – Frontispiece: Collection des differentes espèces de Coquillages qu'on trouve dans les Mers, rassemblée et communiquée au Public par les Heritiers de George Wolfgang Knorr á Nuremberg 1771 V<sup>me</sup> Partie | | Title page: Les delices des yeux et de l'esprit, ou collection generale des differentes espèces de coquillages que la mer renferme, communiquee au public par les heritiers de George Wolfgang Knorr, Cinquieme Partie. à Nuremberg. | 1771. | | [Verso blank. An accent appears in communiquée but it is between the letters as *communique'e* with the accent not being higher than the letters. Also, note grave  $\hat{a}$ ; also below.] [3–4]: Avant-propos. Signed: à Nuremberg le 30. Septembre 1771. [1]-11: Continuation de la table des coquilles contenues dans cet ouvrage, d'apres la XII.<sup>e</sup> edition du systeme de la nature de Mr. de *Linne*. | | [verso of page 11 blank] [Note: the 10<sup>th</sup> edition of Linnaeus is not mentioned.] | | [1]–18: Continuation de la table sistematique des coquilles representees dans les cinquieme et sixime parties de cet ouvage suivant le systeme de Mr. G. E. Rumph. [It is obvious that the above two sections belong at the end of Part VI. In a collation they should be placed last.] | | [5]–48: text | | Plates:  $I^{****}$ –XXX\*\*\*\* [interleaved with text1.

6 – Frontispiece: Collection des differentes espèces de Coquillages qu'on trouve dans les Mers, rassemblée et communiquée au Public par les Heritiers de George Wolfgang Knorr â [sic; circumflex â] Nuremberg 1773 VI<sup>me</sup> Partie \*\*\*\*\*. | | Title page: Les delices des yeux et de l'esprit, ou collection generale des differentes espéces de coquillages que la mer renferme, communique'e au public par les heritiers de George Wolfgang Knorr, Sixieme Partie. à Nuremberg. 1773. [Verso blank; accents as in Part 5.] [3–4]: Avant-propos. Signed: à Nuremberg le 6. Août 1773. Les Heritiers de George Wolfgang Knorr. | | [5]–76: text | | Plates: I\*\*\*\*-XL\*\*\*\*\* [interleaved with text; last ten plates black & white].

# Dutch - Verlustiging der oogen en van den geest,...

There has been some confusion about the translation into Nederduitsch [Dutch] of the German edition. The translator is not mentioned in the Berigt van den Nederduitschen uitgeever [Notice of the Dutch publisher] of March 26th 1769. Several authors inferred that the entire Dutch edition is a translation of the original edition, of which the text was attributed to Philip Ludwig Statius Müller after Knorr's death. Landwehr (1976: 121) also mentioned Martinus Houttuyn, who contributed "a large part of the text". Nissen (1969, 1978) stated that the text of Parts I-III should be attributed to Müller and Parts IV-VI to Houttuyn. Boeseman & de Ligny (2004: 68-71) describe Houttuyn's involvement and clarify details of authorship. Houttuyn was very closely involved with the text and plates based upon the references to all the parts, and certainly the last three parts, of the Dutch edition in the "Natuurlyke Historie, volumes 15 and 16 of Part I," published in 1771. In the *Berigt* the publisher also referred to this work of Houttuyn as an important source for the Dutch edition. In the Systematische bladwyzer [Systematic index] 14 unnumbered pages are added to the Dutch edition. The page numbers after the Dutch names refer to the detailed descriptions in Houttuyn's Natuurlyke Historie, Part I, volumes 15 and 16. The plates of all parts are interleaved with the text. There are no frontispieces present in this edition.

1 – Title page: G. W. Knorrs Verlustiging der oogen en van den geest, of verzameling van allerley bekende Hoorens en Schulpen, die in haar eigen kleuren afgebeeld zyn: |

Eerste deel. | Thans nagezien, verbeterd, vervolgd, en met een geheel nieuwe nederduitsche beschryving uitgegeven. | te Amsterdam, By de Erven van F. Houttuyn. MDCCLXX. [= 1770] | | [2] blanco | | [3–6] Voorreede van den heer Knorr. [text] | Neurenburg | 4 November 1756. Georg Wolfgang Knorr. | | [7–10] Berigt van den nederduitschen uitgeever. [text] | | Amsterdam 26 Maart 1769. | | [1]–44: Verzameling van allerley bekende hoorens en schulpen in haar eigen kleuren. Eerste deel. | [text] | | Plates: I–XXX. [interleaved with text].

**2** – G. W. Knorrs Verlustiging der oogen en van den geest, of verzameling van allerley bekende Hoorens en Schulpen, die in haar eigen kleuren afgebeeld zyn.

Tweede deel. Thans nagezien, verbeterd, vervolgd, en met een

geheel nieuwe nederduitsche beschryving uitgegeven. te Amsterdam, By de Erven van F. Houttuyn. MDCCLXXI. [= 1771] || 45–82. Verzameling van allerley bekende hoorens en schulpen in haar eigen kleuren. Tweede deel. [text] || Plates I\*–XXX\*. [interleaved with text].

**3** – G. W. Knorrs Verlustiging der oogen en van den geest, of verzameling van allerley bekende Hoorens en Schulpen, die in haar eigen kleuren afgebeeld zyn.

Derde deel. Thans nagezien, verbeterd, vervolgd, en met een geheel nieuwe nederduitsche beschryving uitgegeven. te Amster-



Figure 4. Title page of Dutch edition.

dam, By de Erven van F. Houttuyn. MDCCLXXII. [= 1772] || 83–118. Verzameling van allerley bekende hoorens en schulpen in haar eigen kleuren. Derde deel. [text] || Plates: I.\*\*–XXX\*\* [interleaved with text].

- **4** G. W. Knorrs Verlustiging der oogen en van den geest, of verzameling van allerley bekende Hoorens en Schulpen, | die in haar eigen kleuren afgebeeld zyn: Vierde deel. Thans nagezien, verbeterd, vervolgd, en met een geheel nieuwe nederduitsche beschryving uitgegeven. te Amsterdam, By de Erven van F. Houttuyn. MDCCLXXIII. [= 1773] | | [1]–34. Verzameling van allerley bekende hoorens en schulpen in haar eigen kleuren. Vierde deel. [text] | | Plates: I.\*\*\*–XXX.\*\*\*\*. [interleaved with text].
- **5** G. W. Knorrs Verlustiging der oogen en van den geest, of verzameling van allerley bekende Hoorens en Schulpen, die in haar eigen kleuren afgebeeld zyn: Vyfde deel. Thans nagezien, verbeterd, vervolgd, en met een geheel nieuwe nederduitsche beschryving uitgegeven. te Amsterdam, By de Erven van F. Houttuyn. MDCCLXXIV. [= 1774] | | 35–62. Verzameling van allerley bekende hoorens en schulpen in haar eigen kleuren. Vyfde deel. [text] | | Plates: I\*\*\*\*-XXX\*\*\*\*. [interleaved with text].
- **6** G. W. Knorrs Verlustiging der oogen en van den geest, of verzameling van allerley bekende Hoorens en Schulpen, die in haar eigen kleuren afgebeeld zyn:

Zesde deel. Thans nagezien, verbeterd, vervolgd, en met een geheel nieuwe nederduitsche beschryving uitgegeven. te Amsterdam, By de Erven van F. Houttuyn. MDCCLXXV. [= 1775] || 63–[118]. Verzameling van allerley bekende hoorens en schulpen in haar eigen kleuren. Zesde deel. [text] || Plates: I\*\*\*\*-XL\*\*\*\*\*. [interleaved with text] || [119–132]: Systematische bladwyzer der hoorens en schulpen, die in dit werk afgebeeld zyn. [text] || [133–142]: Bladwyzer der hoorens en schulpen. [text].

#### PLATES

The Knorr plates are often praised for their beauty and colour. The delineation of the shells is generally very good and far superior to many other works of the time. Some of the plates are quite striking, especially those showing large shells. The colour, as in any hand coloured work, varies from copy to copy. In this case it also varies from edition to edition. A few plates in the French edition are poorly coloured but this may not be true of all copies of the edition.

It is the hand coloured plates that make the editions of Knorr's *Vergnügen* both desirable and expensive. At the time of this writing (September 2009) a number of Knorr plates are on sale by natural history print dealers at \$125 each. It is because of this market for such prints that the price of a set of Knorr has increased from about \$13.000 to \$22.000 (advertised in 2009) in only a few years.

Beginning with Part 3 most plates indicate the names of both the artist and the engraver. They are listed below. The abbreviations used to identify their work are listed below but are not otherwise included except for odd instances.

Many of the Plates and Frontispieces were re-engraved. Differences are noted on the Part 3 Frontispiece which was engraved by Trautner (*fecit*. 1768) in the German editon but the drawing was re-engraved by Hoffer for the French edition. In the main inscription area below 1768 is inscribed: *Paul Küffner scrips. et sculpsit*. It is probable that Küffner was responsible for the lettering as he is shown in the same manner on the Part 4 Frontispiece for both the German and French editions and on the one in Part 5 of the German edition.

Not only were some plates re-engraved with shells being moved to different positions on the plates but some were redrawn using different specimens, usually of the same species. The Achatina on Plate 3\*\*, figure 1, in Part 3 was redrawn from a specimen of a different species in the French edition. The difference was recognized by Bequaert (1950: 148–150), but he incorrectly considered there to be two printings of both the French and German editions, possibly due to the presence of a French title page in the German edition. Bequaert stated (1950: 149 footnote) that "the library of the M.C.Z. has two French copies of the first edition, each with a different printing of the Plates for part 3." In response to an inquiry from Katherine V. W. Palmer, William J. Clench, Curator of Malacology at the M.C.Z., wrote her on 25 May 1962 that "I think that Dr. Bequaert made an error. I checked both of our sets and the plates in part 3 of each are the same." Bequaert copied both Knorr figures, identifying the German edition figure as Archachatina knorrii (Jonas, 1839) and the French edition figure as Archachatina marginata marginata (Swainson, 1821). Bequaert's paper was mentioned by Dance (1986: 241) with a caveat that its accuracy "is suspect."



Figure 5. Frontispiece to Part 1 of the German edition.

Dance & Heppell (1991) figured Knorr's Plate 1\*\*\*\*\* from Part 6 which has at its center *Conus cedonulli* Linnaeus, 1767, and gave the history of this famous shell. They figured the plate from the Dutch edition of 1775 but did not mention that the same plate appeared earlier in the French and German editions. The Plates are identical in all editions except that *Cedo nulli* [sic] was engraved above the figure number in the French and Dutch editions, an addition not in the German edition.

The French Part 5 frontispiece [see Figure 11] is completely different from the one in Part 5 of the German edition. It depicts a fountain unlike any of the others; with a river in the background with a man and a boy, or two men,

in a boat hauling in a net. The inscription on the fountain is: Collection des differentes espèces de coquillages qu'on trouve dans les Mers rassemblée et communiquée au Public par les Heritiers de George Wolfgang Knorr a Nuremberg 1771 V<sup>me</sup> Partie. This is the only frontispiece that does not show, somewhere in the inscription, the number of asterisks [\*] on the plates in the part. Both were drawn by Keller, with the German one being engraved by Hoffer and the French version by Trautner. However, the German Part 5 frontispiece has, in very small engraving in the upper inscription area under 1771, P. Küffner sculps. As the artist's and engraver's names are



Figure 6. Frontispiece to Part 2 of the German edition.

shown in the usual positions, the reason for Küffner's name is unknown. Possibly he just did the lettering.

A most unusual feature of this work is the appearance of an additional ten uncoloured plates in Part 6 (Plates XXXI\*\*\*\*\*-XL\*\*\*\*\*). Dance (1966: 74; 1986: 50) stated that the last ten plates are "white on a dark ground" as they were issued after Knorr's death, a statement quoted by some antiquarian book dealers although most of the work was published after Knorr's death. The reason is given within the work (Dutch edition, Part 6, page 107) where it is stated that since most of the specimens figured are white and could be not figured on a white background, it was decided to illustrate them uncoloured on a black background. These ten "black and white" plates are not coloured white but are uncoloured and the black background is painted in. White



Figure 7. Frontispiece to Part 3 of the German edition.



Figure 8. Frontispiece to Part 4 of the German edition.

paint was applied over the imprinted plate numbers so that they could be read. A few of the shells on these ten plates received some shading in gray. The *Argonauta* on Pl. XXXI\*\*\*\* has been shaded with brown and light brown bands have been added to a muricid on Plate XL\*\*\*\*\*.

Some of the plates in Part 1 show Knorr as artist and some do not. The first two plates in Part 2 do not bear the name of an artist and it is my opinion that these two are also by Knorr.

#### ARTISTS

The artists and engravers used various abbreviations to denote their work in addition to what had, by that time, become rather standard procedure for the artist's name to appear in the lower left of the plate and the engraver's name in the lower right. Abbreviations used in the editions of the *Vergnügen* are:

ad nat. pinxit. — drawn from nature

delin. or delineavit — he drew it

exc. Norib. — produced in Nuremberg

*fecit.* — he made it

inv. et delin.he devised and drew itinv. et delineavithe devised and drew it

sc.; sculps., or sculpsit. — he engraved it

Admiral, Jacob l', Jr. (1700–1770): artist and engraver at Amsterdam. Named for his father, also an artist, he is sometimes designated as "II" instead of "Jr." An amateur entomologist, he made 25 copper etchings of the metamorphosis of various butterflies that were published in 1740. After his death an additional 8 plates were added and published in a new edition edited by Houttuyn in 1774 (Nissen 1969: 240). In Knorr's work, Plate 30 of Part 4, in all editions, was drawn by l'Admiral. No other plates bear his name.

**Colve**, Joh. Ludwig (1750–1799): artist at Nuremberg. I have failed to locate any biographical data for this artist. He produced some plates for Knorr's *Déliciae naturae selectae* and three plates for the *Vernügen*. These three plates appear only in the German edition in Part 3, plates 1, 2 and 4. These plates were reengraved for the other editions as discussed elsewhere herein.

**Keller**, Johann Christoph (1737–1795): engraver and professor of drawing at the University of Erlangen. He drew the Frontispieces for Parts 3–6 of the German and French editions. He also drew, in Part 2 of the Dutch and French editions, Plates 14–15, 25–26 and 28–29. He drew Plates 1–3 and 5–30 in Part 3 and Plates 1–27 of Part 4 of all editions.

**Kleemann**, Christoph Nikolaus (1737–1797): artist and engraver at Nuremberg. Plates 12–13, 16, 18–19 and 22 in Part 2 of all editions are attributed to C.N. Kleemann as well as Plates 14, 15, 17 and 21 in the German edition.

**Kleemann**, Johann Conrad (1741–1788): painter of landscapes at Nuremberg. Plates 5–8 and 10–11 in Part 2 of all editions are attributed to J. C. Kleemann.

**Knorr**, Georg Wolfgang (1705–1761): artist, engraver and publisher at Nuremberg. From the position of his name, it is probable that the few plates on which his name appears were both drawn and engraved by Knorr. Plates 1–3 and 7 in Part 1 of all editions are inscribed: G. W. Knorr *exc. Norib*. No other plates exhibit his name.

**Leinberger**, Christian (1706–1770): artist and engraver at Erlangen. He drew Plates 20 and 23–30 of Part 2 in the German edition and Plate 20 of Part 2 in the French and Dutch editions.

Wartenaar, J[ohannes]. (1744–?): son of the Amsterdam map maker Lambertus Wartenaar and older brother of the better-known artist Gerrit Wartenaar. His name appears only on Plate 30 of Part 6 where the inscription is: "Ex Museo Hoúttúijniano. J. Wartenaar omn. Part V. & Part VI. Tabul. prototypa ad objecta fecit. J.A. Eisenmann sculpsit."

# Engravers

**Bischoff**, Valentin (1740–1805): engraver and publisher at Nuremberg. Engraved the frontispiece for Part 6 of the German edition. He also engraved, in all editions: Part 3, Plates 15, 20, 22, 23, 28–30; Part 4, Plates 1–3, 5, 8, 9, 12, 13, 18, 20, 21, 23, 24, 26.

**Dietzsch**, Johann Christoph (1710–1768): engraver and painter of landscapes at Nuremberg. Plates 3, 4 & 9 in Part 2 of all editions are attributed to Dietzsch.

**Eisenmann**, Jacob Andreas (1748–1782): engraver at Nuremberg. Engraved, in all editions: Part 3 Plates 6, 7, 10; Part 5, Plates 12, 18, 19; Part 6, Plates 4, 7, 10, 12, 18, 20, 27, 30.

Hoffer, Andreas (1704–after 1780): engraver at Nuremberg. Hoffer engraved the frontispieces for Parts 3 and 5 of the Geman and French editions. He also engraved these plates in all editions: Part 4, Pls 10, 11, 15, 22, 27, 29, 30; Part 5, 1, 5, 7, 21, 22, 25, 27; Part 6, 2, 6, 9, 21, 22, 25, 26, 28, 29. Additionally, he engraved Plate 4 of Part 3 for the French and Dutch editions.

Joninger, Johann Adam (1737–?): engraver at Nurem-

berg. Engraved for all editions: Part 3, Plates 8, 9, 26, 27; Part 4, Plates 6, 7, 19, 25; Part 5, Plates 2–4, 6, 9, 10, 14; Part 6, Plates 8, 11.

**Küffner**, Paul (1713–1786): engraver at Nuremberg. Engraved for all editions: Part 3, Plate 14; Part 4, Plates 4, 14; Part 6, plates 3, 19.

**Trautner**, Gustav Philipp (1739–after 1780): engraver at Nuremberg around 1757 until 1774. He engraved the frontispiece in Part 3 of the French edition. In the French and Dutch editions he engraved, in Part 2, Plates 21, 25, 26, 18 and 29 and in Part 3, Plates 1–3. For all editions he is responsible for the engraving of Part 3 Plates 5, 11–13, 16, 17, 21, 24 and 25.

**Tyroff**, Hermann Jacob (1742–1798/1809): engraver at Nuremberg, son of Martin Tyroff (1704–1759), artist, engraver and publisher at Nuremberg. He engraved only six plates for this work but they appear in all editions. They are: Part 3, Plates 18, 19; Part 4, plates 16, 17; Part 5, Plates 26, 28.

#### Collectors

The collectors who are acknowledged on the plates are listed here, with brief sketches about them if known. Sources of additional information about most of these collectors may be found in Coan et al. (2009). Also listed here are the dedications and/or acknowledgements from the plates showing their specimens. Although the number of figures (one to nine on each plate) are similar in the editions (996 figures on 190 plates), there are notable differences. The figures attributed to various collectors/collections are the following. In the German edition there are 231 figures on 45 plates from an unknown source (232 figures on 46 plates in the Dutch edition), 219 figures on 46 plates of the Schadeloock collection (240 figures on 52 plates in the Dutch edition), 120 figures on 25 plates of the Müller collection (104 figures on 24 plates in the Dutch edition), 20 figures on 4 plates of the Breyn collection (not specified in the Dutch collection), 22 figures on 4 plates of the Sommer collection (22 figures on 4 plates in the Dutch edition), 350 figures on 58 plates of the Houttuyn collection (349 figures on 58 plates in the Dutch edition), 3 figures on one plate in the Van der Meulen collection (similar in the Dutch edition), 15 figures on 4 plates in

the Brandt collection (also similar in the Dutch edition). Several figures on one plate in both editions are attributed to two collections, others are not clearly assigned, i.e. Breyn and Schadeloock (5 figures on one plate in the German edition, 15 figures on 3 plates in the Dutch edition), Müller and Sommer (11 figures on 2 plates in both editions), and Müller and Schadeloock (5 figure on one plate in the Dutch edition). The collectors recognized are:

**Brandt**, Joan Coenraad (1703–1791): a chemist at Amsterdam, he possessed a large shell cabinet. His portrait appears in Dance (1986: pl. 23). Several shells of his collection are still preserved in the collection of the Zoological Museum at Amsterdam. His cabinet is credited only in Part 5. In all editions, Plate 2 of that Part has the legend *Ex Museo Dni*. *Brandt, Mercatoris Amstelodamensis* and three other Plates have *Ex Museo Brandtiano*.

**Breyn**, Johann Philipp (1680–1764): a physician at Dresden. Breyn's collection was acknowledged in the German edition in Part 3, plates 1–4. His shells are attributed as: *Ex Museo quondam Breyniano*. Also, Plate 5 was attributed to shells from both Breyn and Schadeloock. In the French and Dutch editions Plates 1–4 were redrawn, mostly from different specimens and the legend on Plates 1 and 4 credits both Breyn and Schadeloock. Plates 2 and 3 were evidently redrawn using only Schadeloock material as Breyn is not listed.

Houttuyn, Martinus (1720–1798): a physician at Hoorn and Amsterdam. He possessed an extensive shell cabinet and was an important and influential collector of his time. He wrote an edition of Linnaeus' Systema Naturae, "Natuurlyke Historie, of uitvoerige beschryving der Dieren, Planten en Mineraalen, volgens het Samenstel van den Heer Linnaeus" (1761-1785, 37 volumes), but it was not strictly binominal. His biography, bibliography and portrait have been published by Boeseman & de Ligny (2004). Plates of his shells are inscribed: Ex Museo Excell. Dni. M. Hoúttúijn, Med. Doct. Amstelodamensis; Ex Museo Hoúttúijniano or Ex Museo Hoúttúyniano.

**Meulen**, Willem van der (?–1782): a wealthy merchant at Amsterdam. He possessed a large mineral and shell cabinet. However, only Plate 1 of Part 5, all editions, is attributed to him. That plate is inscribed: *Ex Museo D.*<sup>ni</sup> *W. van der Meulen*,



Figure 9. Frontispiece to Part 5 of the German edition.

*Civ. Capitan Amstelodam vigilantissimi*. Plate 11 in Part 6 of all editions is inscribed *Fig. 2–6 Ex Museo Hoúttúyniano* without mention of Figure 1. In the Dutch edition (p. 75) that specimen of *Corculum* is stated to be from W. van der Meulen.

**Müller**, Philip Ludwig Statius (1725–1776): a Lutheran clergyman at Amersfoort and Leeuwarden, later professor in natural history at the University of Erlangen. He produced an edition of Knorr's *Deliciae naturae selectae* as discussed earlier under Knorr's publications. His shells are acknowledged on the plates as: *Ex Museo Excell. D. P. L. St. Mülleri*, *Doct. & Prof. Phil. & Hist. Nat. ord. Erlang*, or sometimes more

simply as *Ex Museo Mülleriano*. His shells were used in all editions for four Plates in Part 2, 10 Plates in Part 3, and 4 Plates in Part 4. In the German edition there are five Plates that were redrawn for later editions and on those redrawn Plates credit is given to both Müller and Schadeloock. Additionally, four Plates in Part 4 of all editions are attributed *Ex Museo Mülleriano & Sommeriano*.

**Schadeloock**, August Martin (1707–1774): deacon of the Laurentius church at Nuremberg. Plate legends engraved *Ex Museo Schadeloockiano* appear in all editions on 16 plates in Part 1 and 14 Plates in Part 4. One Plate in Part 3 in all with a joint inscription including Breyn. Redrawn Plates in the French and German editions have legends as mentioned



Figure 10. Frontispiece to Part 6 of the German edition.

under Breyn and also three Plates in Part 2 that were redrawn using some Müller shells.

**Sommer**, J. H. (?-?): unknown. I have located this name in the conchological literature only in a reference to "the 1759 Paris auction of the collection of the British collector Sommer" (Dietz 2006: 378). I consider it unlikely that this is the Sommer whose shells were figured on Plates 5 and 13–15 and 17 of Part 4. Those plates are inscribed *Ex Museo Sommeriano*. Also in Part 4, Plates 9, 16, and 18–19 are composed of specimens from both the Sommer and Schadeloock collec-



Figure 11. Frontispiece to Part 5 of the French edition.

tions. On those his collection is referenced as *Museo Excell*. *D.J.H. Sommeri, J.V.D. im med a Consil*.

## Acknowledgements

I am much indebted to a number of people for assistance with this paper. For translations and constructive comment I thank Dr. Rüdiger Bieler, Field Museum of Natural History, Chicago, Dr Gary Rosenberg, Academy of Natural Sciences, Philadelphia and Dr Daniel L. Geiger, Santa Barbara Museum of Natural History, Santa Barbara.

For information about the editions of Knorr, bibliographic information on other works, and data on references, I specially acknowledge with appreciation the assistance of Mr Richard E. Petit, North Myrtle Beach, South Carolina, U.S.A.; and further Ms Lynda Brooks, The Linnean Society, London; Ms Monique Fasel, University Library, Special Collections, University of Amsterdam; Ms Virginie Héros, Museum National d'Histoire Naturelle, Paris; Mr Marijn A.M. van Hoorn, Teyler Museum, Haarlem; Dr Harry G. Lee, Jacksonville, Florida; Mr Robert [Rob] G. M. Moolenbeek and Mr Abraham [Bram] AN. van der Bijl, Zoological Museum Amsterdam, Amsterdam; and Ms Anneliese Stumpf, University of Erlangen-Nuremberg.

Mr Paul Callomon, Academy of Natural Sciences, Philadelphia, and Dr Bas Kokshoorn, Netherlands Centre for Biodiversity 'Naturalis', Leiden, provided the figures and plates for this paper.

# REFERENCES

Agassız, L., 1852. Bibliographia Zoologie et Geologiae: Vol. 3: 1-657. London.

Bequaert, J.C., 1950. Studies in the Achatininae, a group of African land snails. –Bulletin of the Museum of Comparative Zoology 105: 1–216.

Boehmer, D.G.R., 1786. Bibliotheca scriptorum historiae naturalis oeconomiae. Part 2, Zoologi, Vol. 1. Leipzig. [not seen]

Boeseman, M. & Ligny, W. de, 2004. Martinus Houttuyn (1720–1798) and his contribution to the natural sciences, with emphasis on zoology. – Zoologische Verhandelingen 349: 1–222.

Born, I. von, 1778. Index rerum naturalium Musei Caesarei Vindobonensis. Pars I. Testacea: [i-xlii] + 1-458 + [1-82]. Vindobonae

- [Vienna].
- Callery, B.G., 1976. Hunt catalogue notes I. Knorr's Thesaurus. Taxon 25: 141-150.
- Снемлітz, J. H., 1780–1795. Neues systematisches Conchylien Cabinet: Vol. 4 (1780): [1-24] + 1-344, pls CXXII–CLIX; Vol. 5 (1781): [1-20] + 1-324, pls CLX–CLXXXXIII; Vol. 6 (1782): [1-12] + 1-375, pls 1–36; Vol. 7 (1784): [1-12] + 1-356, pls 37–69; Vol. 8 (1785): [1-16] + 1-372, pls 70–102; Vol. 9(1) (1786): [1-12] + 1-151, pls 103–116; Vol. 9(2) (1786): і-ххvі + 1-194, pls 117–136; Vol. 10 (1788): [1-20] + 1-376, pls 137–173; Vol. 11 (1795): [1-20] + 1-310, pls 174–213. Nürnberg. [Also, see F.H.W. Martini.]
- COAN, E.V., KABAT, A. & PETIT, R.E., 2009. 2.400 Years of Malacology.

  World Wide Web,

  http://www.malacological.org/publications/epubs.php: 1-830. [May 2010]
- Dance, S.P., 1966. Shell collecting. An illustrated history: 1-343. London. Dance, S.P., 1986. A history of shell collecting: i-xv + 1-265. Leiden.
- Dance, S.P. & Heppell, D., 1991. Classic natural history prints, shells: 1-128. London.
- DEZALIER D'ARGENVILLE, A.J., 1742. L'Histoire naturelle éclaircie dans deuxde ses parties principales, la Lithologie et la Conchyliologie dont l'une traite des Pierres et l'autre des Coquillages: [1-8], 1-491, [1-28]. Paris.
- DIETZ, B., 2006. Mobile objects: the space of shells in eighteenth-century France. British Journal for the History of Science 39: 363–382.
- EISINGER, F., 1930. Georg Wolfgang Knorr. Kupferstecher in Nürnberg (1705-1761). Entomologische Zeitschrift 20: 241-245.
- FABER, M., 2008. Rare and illustrated books and periodicals on malacology. Catalogue 82: 1-216. Amsterdam.
- GMELIN, J.F., 1791. Caroli a Linnaeus Systema Naturae per regna tria naturae. Editio decima tertia: Vol. 1, pt. 6 (Vermes): 3021–3910. Lipsiae [Leipzig].
- Gualtieri, N., 1742. Index Testarum Conchyliorum quae adservantur in Museo Nicolai Gualtieri [...] et methodice distributae exhibentur tabulis CX: 1-23, pls 1-110. Florentiae [Florence].
- Heinecken, K.H. von, 1768. Nachrichten von Künstlern und Kunstsachen: Vol. 1: 1-24 + 1-436 + [1-12]. Leipzig.
- HOUTTUYN, M., 1771. Natuurlyke Historie, of uitvoerige beschryving der dieren, planten en mineraalen, volgens het samenstel van den Heer Linnaeus: Vol. 1, pt. 15, De Schulpdieren: [1-6] + 1-458; pt. 16, De Hoorens: [1-8] + 1-629 + [1-11]. Amsterdam.
- International Commission on Zoological Nomenclature, 1954. Opini-

- ons 182 to 184. Opinions and Declarations rendered by the International Commission on Zoological Nomenclature 3(30): 4-1-416. [This treats Martini & Chemnitz].
- International Commission on Zoological Nomenclature, 1954. Opinion 296. Opinions and Declarations rendered by the International Commission on Zoological Nomenclature 8(13): 167-178.
- International Commission on Zoological Nomenclature, 1957. Opinion 456. Opinions and Declarations rendered by the International Commission on Zoological Nomenclature 15(22): 393-418. [This treats Martyn].
- International Commission on Zoological Nomenclature, 1964. Opinion 701. Bulletin of Zoological Nomenclature 21: 108–110.
- International Commission on Zoological Nomenclature, 1999. International Code of Zoological Nomenclature. Fourth edition: i-xxix + 1-306 pp. London.
- IREDALE, T., 1922. Book notes. Proceedings of the Malacological Society of London 15: 78–92.
- JONAS, I. H., 1839. Ueber Helix rosacea und H. lucana Mulleri, nebst Diagnosen einiger neuen Conchylien. Archiv für Naturgeschichte 5: 334–345.
- KNORR, G.W., 1749–1755. Sammlung von Merckwürdigkeiten der Natur und Alterthümer des Erdbodens, welche petrificirte Cörper enthält, aufgewiesen und beschrieben, oder versteinte und andere gegrabene Coerper in illuminirten Kupfertafeln, 2 Vols: [1-6], 1-36, pls 1-57. Norimberga [Nuremberg].
- KNORR, G.W., 1750–1772. Thesaurus rei herbariae hortensisque universalis, [...]. Allgemeines Blumen- Kräuter- Frucht und Garten Buch, [...], 3 Volumes: [1-14] + 1-30 + 1-26 + 1-236 + 1-24 + 1-54 + 1-34 + [1-4], pls 1-301. Nürnberg.
- KNORR, G.W., [1751] 1754–1767 [1768]. Deliciae naturae selectae, oder auserlesenes Naturalien-Cabinet, welches aus den drey Reichen der Natur zeiget, was von curiösen Liebhabern aufbehalten und gesammlet zu werden verdienet [...] beschr. von Phil. Ludw. Statius Müller, und in das Franz. übers. von Mathias Verdier de la Blaquière, Vol. 1: [1-26] + [i]–viii + [1]–132, pls 1-38; Vol. 2: [1-4] + [i]–xix + [1] + [1]–144, pls 1-53. Norimberga [Nuremberg]. [Nissen (1969: 229) mentioned [1751-] 1766-1767 as date of publication]. However, 1768 is the latest date in this work.
- KNORR, G.W., 1757–1773. Vergnügen der Augen und des Gemüths, in Vorstellung einer allgemeinen Sammlung von (Schnecken und) Muscheln und andern Geschöpfen, welche im Meer gefunden werden. (Beschrieben von Ph. L. St. Müller und 4–6: M. Houttuyn), Part 1

- (1757 title, 1756 preface): [1-2] + 1-39 + 1-7, pls 1-30; Part 2 (1764): 1-56 + [1-16], pls 1-30; Part 3 (1768): 1-52, pls 1-30; Part 4 (1769): 1-48 + [1-14] + 1-23, pls 1-30; Part 5 (1771): 1-46, pls 1-30; Part 6 (1772 title page, preface, 1773 frontis): 1-76 + 1-18 + 1-11, pls 1-40. Nürnberg.
- KNORR, G.W., 1757–1773. Vergnügen der Augen und des Gemüths, in Vorstellung einer allgemeinen Sammlung von (Schnecken und) Muscheln und andern Geschöpfen, welche im Meer gefunden werden, Part 1 (1757 title, 1756 preface): [1-7] + 1-39 + 1-7, pls 1-30; Part 2 (1764): 1-56 + [1-16], pls 1-30; Part 3 (1768): 1-52, pls 1-30; Part 4 (1769): 1-48 + [1-16], pls 1-30; Part 5 (1771): 1-46 + 1-23, pls 1-30; Part 6 (1772 title page, preface, 1773 frontis): 1-76 + 1-18 + 1-11 + 1-100, pls 1-40. [Fascimile reprint, Saarbrücken].
- KNORR, G.W., 1760–1773. Les délices des yeux et de l'esprit, ou collection générale des différentes espèces de coquillages que la mer renferme, [...]. Knorr (Hér.), Part 1: [1-5] + 1-52, pls 1-30; Part 2: [1-5] + 1-65, pls 1-30; Part 3: [1-5] + 1-55, pls 1-30; Part 4: [1-5] + 1-54 + [i–xiv] + [1-5] + 1-24, pls 1-30; Part 5: [3–4] + [1]–11 + [1] + 1-18 + [5]–48, pls 1-30; Part 6: [1-5] + 1-76, pls 1-40. Nuremberg.
- KNORR, G.W., 1768–1773. Die Naturgeschichte der Versteinerungen zur Erläuterung der Knorrischen Sammlung von Merkwürdigkeiten der Natur, hrsg. von J. E. I. Walch. (Register von J. S. Schroeter), 2 Volumes: [1-4] + 1-184; [1-6] + 1-303, pls 1-131; [1-8] + 1-235 [= 237], pls 132–159, Suppl.; [1-10] + 1-187, pls 1-57; Register, 1-128 + [1-2]. Nürnberg.
- KNORR, G.W., 1768–1778. Recueil de monumens des catastrophes, que le globe terrestre a essuiées, contenant des pétrifications et d'autres dessinées: gravées et enluminées d'apres les originaux, commencé par feu mr. George Wolfgang Knorr, et continué par ses Héritiers avec l'histoire naturelle de ces corps par mr. Jean Ernest Emanuel Walch [...], Part 1 (1768): 1-59, pls 1-57; Part 2(1) (1768): [1-8] + 1-159, pls 1–81; Part 2(2) (1775): [1-4] + 1-268, pls 82–131; Part 3 (1775): [1-6] + 1-203, pls 132–215; Part 4 (1778): 1-124. Nuremberg. [French edition of Sammlung von Merckwürdigkeiten der Natur und Alterthümer des Erdbodens].
- KNORR, G.W., 1770–1775. Verlustiging der oogen en van den geest, of verzameling van allerley bekende Hoorens en Schulpen, die in haar eigen kleuren afgebeeld zyn. Thans nagezien, verbeterd, vervolgd, en met een geheel nieuwe nederduitsche beschryving uitgegeven, Part 1 (1770): Voorrede [3–6], Berigt [7–10], [1]–44, pls 1-30; Part 2 (1771): 45–82, pls 1-30; Part 3 (1772): 83–118, pls 1-30; Part 4 (1773): [1]–34, pls 1-30; Part 5 (1774): 35–62, pls 1-30; Part 6 (1775): 63–[118], pls 1-40; Syst. Bladwyzer [1-14]; Bladwyzer [1-10]. Amsterdam.

- KNORR, G.W., 1771. Deliciae naturae selectae, of uitgeleezen kabinet van natuurlyke zeldzaamheden; welke drie ryken der natuur aanbieden, om door keurige liefhebberen verzameld te worden, [...] in het nederduitsch overgezet en met aanmerkingen vermeerderd door Philip Ludwigh Statius Müller, [...], Vol. 1: [6], [I]–XXXII, [1]–67, [1], pls 1-38; Vol. 2: [2], [I]–XX, XXXIV, [1]–70, pls 1-53. Dordrecht.
- KNORR, G.W., 1778. Deliciae naturae selectae, oder auserlesenes Naturalien-Cabinet, welches aus den drey Reichen der Natur zeiget, was von curiösen Liebhabern aufbehalten und gesammlet zu werden verdienet [...] beschrieben von Phil. Ludw. Statius Müller, [...] von neuem übersehen, verbessert, und mit einer Vorrede begleitet von Joh. E.I. Walch, vol. 1, pt.1: [1-6], 1-108; vol. 1, pt. 2: i-xvi, 1-112; vol. 2, pt. 1: pls 1-49; vol. 2, pt. 2: pls 1-42. Nürnberg.
- KNORR, G.W., 1779. Delices de la nature, ou choix de tout ce que les trois règnes de la nature renferment de plus digne de recherches d'un curieux pour en former un Cabinet, [...] avec les descriptions et remarques de Philippe Louis Statius Müller. Revu, corrigé et augmenté d'une préface par Mr. Jean Ernest Emanuel Walch. Traduit de l'Allemand par Jaques Frederic Isenflamm [...], Vol. 1: i-xiv + 1-96; Vol. 2: i-xx + 1-108 + [1-4], pls 1-91. Nuremberg.
- KNORR, G.W. & WALCH, J.E.I., 1768–1773. De natuurlyke Historie der Versteeningen, of uitvoerige afbeelding en beschryving van de versteende zaaken, die tot heden op den aardbodem zyn ontdekt. [...]. Uit het hoog- in 't nederduitsch vertaald door M. Houttuyn, met verscheide aanmerkingen, 2 Vols: [1-4] + i-xiv + 1-64; [1-4] + 184; [1-2], 185–484; [1-4] + 1-236, pls 1-272. Amsterdam.
- Landwehr, J., 1976. Studies in Dutch books with coloured plates published 1662–1875. Natural history, topography and travel, costumes and uniforms: ix + 134 [Studies] + xvii + 605 [Catalogue] pp. The Hague.
- LINNAEUS, C., 1758. Systema Naturae per regna tria naturae. Editio decima, reformata, Vol. 1, Regnum animale: 1-824. Holmiae [Stockholm].
- LINNAEUS, C., 1767. Systema Naturae per regna tria naturae. Editio duodecima reformata. Regnum Animale, Vol. 1(2): 533–1327. Holmiae [Stockholm].
- Ludwig, H., 1998. Nürnberger naturgeschichtliche Malerei im 17. und 18. Jahrhundert: [1-] 7-462. Marburg an der Lahn.
- Martini, F.H.W., 1769–1777. Neues systematisches Conchylien Cabinet, Vol. 1 (1769): [1-18] + i-xxviii + 1-408 pp., pls I–XXXI; Vol. 2 (1769): [1-6] + i-xvi + 1-362, pls XXXII–LXV; Vol. 3 (1777): [1-6] + i-vi + 1-434, pls LXV–CXXI; continued by J.H. Chemnitz, q.v.]. Nürnberg.

- Martyn, T., 1784–1787. The universal conchologist, Vols 1, 2 (1784): 1–39, pls 1–80; Vol. 3 (1786): pls 81–120; Vol. 4 (1787): pls 121–160, frontis.] London.
- Müller, P.L.S. & Meuschen, F.C., 1771. Deliciae naturae selectae [...]: 1-2 + pls 1-91. Dordrecht [not seen; listed fide Iredale, 1922: 79].
- NISSEN, C., 1969–1978. Die zoologische Buchillustration. Ihre Bibliographie und Geschichte. Band I, Bibliographie (1969): 1-666; Band II, Geschichte (1978): i-xvi + 1-604. Stuttgart.
- Regenfuss, F. M., 1758. Auserlesne Schnecken, Muscheln und andre Schaalthiere: [i-xiv] + i-xiv + 1-22 + [i-lxxxvii], pls 1-12. Copenhagen.
- RÖDING, P.F., 1798. Museum Boltenianum sive catalogus cimeliorum e tribus regnis naturae quae olim collegerat Joa. Fried. Bolten [...] Pars secunda continens conchylia sive testacea univalvia, bivalvia + multivalvia: i-viii + 1-199. Hamburg.
- Rumphius, G.E., 1705. D'Amboinsche Rariteitkamer, Behelzende eene Beschryvinge van allerhande zoo weeke als harde Schaalvisschen, te weeten raare Krabben, Kreeften, en diergelyke Zeedieren, als mede allerhande Hoorntjes en Schulpen, die men in d'Amboinsche Zee vindt: Daar beneven zommige Mineraalen, Gesteenten, en soorten van Aarde, die in d'Amboinsche, en zommige omleggende Ei-

- landen gevonden worden: [1-28] + 1-340 + [1-43], pls 1-60. Amsterdam.
- Scheuchzer, J.J., 1731–1735. Kupfer-Bibel, in welcher die Physica Sacra, oder geheiligte Natur-Wissenschafft derer in heil. Schrifft vorkommenden naturlichen sachen, deutlich erklart und bewahrt [...]: pls 1-760. Augsburg.
- Seba, A., 1734–1765. Locupletissimi rerum naturalium thesauri accurata descriptio et iconibus artificiosissimis expressio, .... Naaukeurige Beschrijving van het schatrijke Kabinet der voornaamste Seldzaamheden der Natuur [...]: pls 1-449. Amstelaedami [Amsterdam].
- [Schierenberg, A.], 2005. Antiquariaat Junk Catalogue 283: 1-232. Amsterdam.
- Swainson, W., 1820–1823. Zoological illustrations, or original figures and descriptions of new, rare, or interesting animals, selected chiefly from the classes of ornithology, entomology, and conchology, and arranged on the principles of Cuvier and other modern zoologists, 3 Vols: [i-ix] + 182 pls London.
- Walch, J.E.I. (ed.), 1774-1778. Der Naturforscher. Halle. [periodical] Wunschmann, E., 1894. Trew, Christoph Jacob. Allgemeine Deutsche Biographie, Band 38: 1-796. Leipzig.