



The four W's of two 18th century Dutch herbaria: the 'Zierikzee Herbarium' and the herbarium of Simon D'Oignies

G. Thijsse¹

Key words

18th century Dutch herbaria
Jacob Ligtvoet
Pharmacopoea Hagana
printed herbarium ornaments
Martinus Wilhelmus Schwencke

Abstract One of the objects of the Municipal Museum Zierikzee (Province of Zeeland, The Netherlands) is a historical herbarium referred to by the name the 'Zierikzee Herbarium'. The characteristics of the specimens in the Zierikzee Herbarium are so similar to those in a herbarium at Naturalis Biodiversity Center, Leiden (L), that both must originate from the same place and time. About the latter herbarium little is known, except that it was once owned by the army-surgeon Simon(e) d'Oignies (1740–1782). The Zierikzee Herbarium was recently described and analysed in detail by Offerhaus et al. (2021). It is hypothesised that the Zierikzee Herbarium is part of a herbarium made by Professor Martinus Wilhelmus Schwencke (1707–1785) and was used during his lectures for future pharmacists in his botanical garden in The Hague in the 1750s, and auctioned in Leiden in 1785. The presence in the Zierikzee Herbarium of a virtually complete set of medicinal plants mentioned in the 'Pharmacopoea Hagana' (Anonymous 1738) eventually led to the conclusion that these could not have been assembled before 1730. Based on the printed ornaments that are used to mount the plants in these, and the major Dutch herbaria of the 18th century, I argue that the plants in the Zierikzee Herbarium and the herbarium of D'Oignies were remounted at a later date. The hypothesis by Offerhaus et al. (2021: 12) that the Zierikzee Herbarium was started between 1710 and 1720 is rejected. Arguments are given why it is unlikely that the Zierikzee Herbarium, as is suggested by Offerhaus et al. (2021: 12), is the herbarium of the head gardener of the Leiden botanic garden, Jacob Ligtvoet (1684–1752) and was auctioned in 1752.

Citation: Thijsse G. 2021. The four W's of two 18th century Dutch herbaria: the 'Zierikzee Herbarium' and the herbarium of Simon D'Oignies.

Blumea 66 (3): 263–274. <https://doi.org/10.3767/blumea.2021.66.03.09>.

Effectively published online: 20 December 2021.

INTRODUCTION

The Zierikzee Herbarium was donated to the Municipal Museum Zierikzee by Anne Frederike van de Zande-Vleugels Schutter (1931–2013) in 2008 (Fig. 1). It was discovered among the archival documents that were kept at the family estate 'Schuttershof' in Oosterland, a village less than ten kilometers from Zierikzee. In Oosterland, her grandfather Gerbrand Hendrik Vleugels Schutter (1874–1962), and before him her great-grandfather Everard Egidius Vleugels Schutter (1825–1901), had a doctor's practice. In spite of the fact that the 'Schuttershof' was severely damaged in the flood disaster of 1953, the archive and herbarium had fortunately survived because they were stored on an upper floor (Van de Zande-Vleugels Schutter 2001: 5, 44). The Zierikzee Herbarium is fully digitized and can be consulted online at <https://www.stadhuismuseum.nl/archief/herbarium/>.

Little to nothing was known about the origin and maker of the herbarium, except that it had been in the possession of Diederica Helena Schutter (1774–1838). Diederica was one of the eight children of the army captain Diederik Schutter (1730–1777) and often spent time in Oosterland where her brother, Everard Egidius Schutter (1764–1850), was burgo-master. Another of her brothers, Gerbrand Hendrik Schutter (1767–1840), had settled there as a Dutch reformed minister. Diederica remained unmarried and her occupation is unknown,

but she was said to be a competent botanical draftsman (Van de Zande-Vleugels Schutter 2001: 2, 41). Thanks to a bequest from one of her aunts Diederica was financially independent (Offerhaus et al. 2021: 11). After Diederica's death, her assets, among which a herbarium, probably ended up in the possession of one of her brothers in Oosterland.

During the last few years the Zierikzee Herbarium has been extensively studied by Offerhaus et al. (2021). They re-identified the specimens, updated the nomenclature and disclosed the pre-Linnaean names on the original labels that were covered by a blank piece of paper. Based on the paper, the pre-Linnaean



Fig. 1 The Zierikzee Herbarium before conservation in 2010. Municipal Museum Zierikzee, Inv. Nr. 5105 (by courtesy of Marjin de Valk).

¹ Formerly Curator of the Herbarium, Naturalis Biodiversity Centre, Leiden, The Netherlands; e-mail: thijssegerard@gmail.com.

plant names, the plant species, the description of a herbarium sold in 1752 and finally to a lesser extent the printed ornaments that are used to mount the plants, Offerhaus et al. (2021: 12) concluded: “that the Zierikzee Herbarium was created in the Leiden botanical garden. The collection and annotation of this garden herbarium probably started in the years between Boerhaave’s first catalogue (1710) and the last draft of the second edition in 1718, probably by Jacob Ligthvoet, then assistant gardener in the Leiden Hortus botanicus under the direction of Herman Boerhaave, as witnessed by the description of his [= Ligthvoet] herbarium in the auction catalogue”.

The fashion to embellish the herbarium with cut-out prints of decorative vases and labels was not uncommon in The Netherlands in the 18th century. Especially for this purpose different ornament prints were produced. Since only limited attention has been paid to them by Offerhaus et al. (2021: 12), an attempt is made here to investigate what these ornaments might add to their conclusions.

Because the specimens of the Zierikzee Herbarium show great similarity with those in a 6-volume herbarium that is kept at Naturalis Biodiversity Center (Leiden, The Netherlands), the latter is included in this research. About this herbarium not much is known except that it has been in the possession of Simon(e) D’Oignies (1740–1782) who was a surgeon-major at the citadel of Antwerp (D’Oignies 1780). The D’Oignies Herbarium was acquired for the National Library of The Netherlands in The Hague at a book sale in The Hague in 1818 (Scheurleer 1818: 7). In the

catalogue the herbarium was described as follows: “Herbarius vivens collecté tres proprement sur des papier royal, chaque plante avec un ornement, relié en 6 vol. avec un catalogue en mss. sur l’alphabet, grand fol.” (Scheurleer 1818: 7). Translation: Herbarius vivens very neatly collected on royal paper, each plant with an ornament, bound in 6 vol. with a catalogue in mss. in alphabetical order, large fol[io].

According to the written notes in the copy of the catalogue that is kept at the National Library, 12 Guilders and 15 Stivers was paid for it by their librarian [Charles Sulpice] Flament (1758–1836). In 1868 the D’Oignies Herbarium was transferred to the Leiden ‘Rijksherbarium’ (now part of Naturalis Biodiversity Center). The specimens in the first two volumes of the D’Oignies Herbarium can be consulted at: <https://biportal.naturalis.nl>.

In this paper it is tried to answer the four W’s of the Zierikzee Herbarium and the D’Oignies Herbarium and to find out **When** and **Where**, and **Why** and by **Whom** they were made. A renewed investigation into the four W’s of the Zierikzee Herbarium was necessitated after I had come across the ‘Pharmacopoea Hagana’ (Anonymous 1738) by searching the internet for possibly unique combinations of words in the text on the original labels of the Zierikzee Herbarium. Further analysis showed a remarkable congruence of the pre-Linnaean names used in the Zierikzee herbarium and this pharmacopoeia. Moreover, by browsing the auction catalogues of book sales from the 18th and 19th century, a matching description of the Zierikzee Herbarium was found in two catalogues, one of 1785 and another of 1790.



Fig. 2 *Hedera helix* L. in the Zierikzee Herbarium mounted with vase type B (Fig. 6). The name written on the 18th century label in the upper right corner is glued over with a blank piece of paper and a 19th century printed label is added. Leaves with different shape are mounted with a small pennant on the left and right (by courtesy of the Municipal Museum Zierikzee).



Fig. 3 *Leonurus cardiaca* L. in the herbarium of D’Oignies (Naturalis, L 3961004). One of the leaves at the bottom shows the upper surface, the other the lower surface of the leaf.

DESCRIPTION

The Zierikzee Herbarium

The Zierikzee Herbarium comprises 349 loose sheets upon which a (part of a) plant is mounted. All are of the same size (308 by 480 mm) and a coarse kind of paper, defined by De Valk (2010: 4) as 'kardoes' (cartridge) paper. This type of paper was named so because it was also used to package a weighed amount of gunpowder needed to fire a front loader gun or cannon. Distinctive in this paper are the double chain lines (Offerhaus 2021: 3). As is demonstrated by Offerhaus et al. (2021: 3) the sheets of this herbarium have never been bound together into a book. In most cases the plants are mounted with a cut-out engraving of a vase, a bow, or a small pennant. Only on 24 sheets such ornaments are absent. A nicely designed 18th century printed label is or, as witnessed by the traces they have left on the paper, has been present on 185 sheets and make up for more than 50 % of all the sheets that form this herbarium. The pre-Linnaean names on these labels are not visible, because they are pasted over with a blank piece of paper (Fig. 2). After removal of the paper on one label a fine, regular 18th century handwriting was discovered, probably written by someone from the western part of The Netherlands (De Valk 2010: 4).

When the Zierikzee Herbarium was transferred to the museum in Zierikzee, it was arranged in 24 bundles, following Linnaeus' division of the plant kingdom into 24 classes (Linnaeus 1735). The Latin names of the plants on the obviously later added

more modern labels were published by Linnaeus (1753) in his 'Species plantarum'. In total 282 specimens are also provided with a Dutch name. In 206 instances (= 73 %) these names correspond exactly, or almost exactly, with the Dutch names given by Oskamp in his 'Artseny gewassen' (1796–1800). Of the remaining 143 species, 111 are not mentioned by Oskamp. It is therefore very likely that Oskamp's publication was used when these labels were written.

The D'Oignies Herbarium

The herbarium of Simon d'Oignies is bound into 6 volumes in which the plants are arranged in alphabetical order. At the beginning of each volume is written: "Herbarius Vivens A Simone d'Oignies. Chirurgus bataillonis inclit. De Murray &c. &c. Anno 1780". The sheets are all of the same type of thick coarse paper with the same watermark and double chain lines as is used in the Zierikzee Herbarium and show deckle edges on three sides which implies that the D'Oignies Herbarium was started as a collection of loose sheets (Offerhaus et al. 2021: 3).

As in the Zierikzee Herbarium, the plants in the herbarium of D'Oignies are mounted with a cut-out engraving of a vase, a bow or a small pennant. The names on the sheets next to the plants (in the first two volumes) are written by the same person, who has written the text at the beginning of each volume, which was most probably done by D'Oignies himself (Fig. 3). The names are in many cases followed by a number and the initials V:V:R., such as *Carduus spinosissimus*: Fl. Erect., *Carduus paluster*. *Circum Vulg* 14:V:V:R (= Vide Van Royen) referring to the spe-



Fig. 4 *Carduus crispus* L. mounted with a plant pot. This type is up to now found only in the herbarium of D'Oignies. The text 14: V:V:R: refers to the species 14 in the genus *Carduus* in Adriaan van Royen's 'Florae Leydensis Prodromus' (1740) (Naturalis, L 3961006).



Fig. 5 *Verbascum lychnites* L. in the herbarium of D'Oignies (Naturalis, L 3960968). The name of the plant is likely written by D'Oignies. One of the leaves at the bottom shows the upper surface, the other the lower surface of the leaf. The same way of mounting is used in the Zierikzee Herbarium.

cies number listed under this genus in Adriaan van Royen’s ‘*Florae Leydensis Prodomus*’ (1740) (Fig. 4). D’Oignies possibly copied these names from the written alphabetical index that was included when this herbarium was auctioned in 1818 (Scheurleer 1818: 7).

The pages in this herbarium are numbered in the upper right hand corner. A different pagination is present in the lower right hand corner, from which it can be deduced that at some time the plants in this herbarium were re-arranged and bound into their present alphabetical order. This may have been done after D’Oignies had finished adding the names of the plants on the sheets after which the loose sheets could be arranged alphabetically. Where this index is now is unknown.

Other plants in the D’Oignies Herbarium have a label with pre-Linnaean names used by classical authors like Pedanius Dioscorides (c. 40 AD–c. 90 AD) and 16th century botanists such as Pietro Andrea Matthioli (1501–1577), Leonhart Fuchs (1501–1566), Rembert Dodoens (1517–1585) and Hieronymus Bock (1498–1554). The most modern names on these labels are taken from Caspar (1560–1624) and Johan Bauhin (1541–1613) and Joseph Pitton de Tournefort (1700–1703) (Fig. 5). It is not known which publication was used by the writer of these labels, but it seems to have been a composite work about medicinal plants.

The scrappy specimens, often new world species (‘*ex America*’), that are mounted without an ornament seem to have been later additions. The often misspelled names written next to these fragments, however, are likely written by D’Oignies as well.

Similarities and differences

In both herbaria the same ornaments are used to mount the plants, and the paper on which they are glued is of exactly the same kind (Fig. 6). In both herbaria engravings of bows and small pennants are used to mount separate parts of the plant to show the variation in leaf shape, inflorescence and the difference between the upper and lower surfaces of the leaves, etc. (compare Fig. 2 and 8 with 3 and 5). Together, these similarities are sufficient to assume that the Zierikzee Herbarium and the D’Oignies Herbarium have the same origin and even may have formed a whole as is suggested by Offerhaus et al. (2021: 11). A conspicuous difference is the presence of the printed 18th century ornamental labels in the Zierikzee Herbarium and their absence in the herbarium of D’Oignies.

DATING THE HERBARIA — Fig. 7

The herbarium paper

The paper that is used for both herbaria shows a watermark that is a ligature of the letters PVL (Offerhaus et al. 2021: 3).

From 1675 on this watermark was used by the Dutch paper maker Pieter Gerritsz. van der Ley (??–1692) as the countermark for their main watermark(s). His son Jan Pietersz. van der Ley (1669–1750), who continued the paper mill after his father’s death, still used the same countermark in paper with a ‘*Pro Patria*’ watermark in paper made in 1721 and 1740. In paper that was produced by this mill in 1762 another countermark – VDL – is used (Van Leeuwen 2019: 2). The design of the countermark was possibly changed after the death of Jan Pietersz. in 1750. Regrettably, because of the long period this watermark has been in use by the paper mill of Van der Ley, it is not of use to determine the production date of this paper between narrow limits.

The pre-Linnaean names in the Zierikzee Herbarium

Comparison of the pre-Linnaean names in the Zierikzee Herbarium with the names in pharmacopoeias published in different cities in The Netherlands in the 17th and 18th century, lead to a more concrete indication about the date of origin of this herbarium. A nearly perfect correspondence was found between the names on the ornamental labels and the names of the plants that are mentioned in the section with the heading ‘*folia, gemmae, herbae, oculi*’, the leaves, buds and herbs in the ‘*Pharmacopoea Hagana*’ (Anonymous 1738). The synonyms that follow the names listed in this section are in most cases taken from Bauhin’s ‘*Pinax Theatri botanici*’ (1623) or Dodoens ‘*Stirpium historiae pemptades*’ (1583). Only in few cases the writer failed to copy all synonyms in full onto the labels.

Of this pharmacopoeia an earlier version exist, the ‘*Pharmacopoea Hagiensis*’ (Anonymous 1659). This edition cannot have been the source of the names on the labels, because herein only the pharmacist’s names are given without references to Caspar Bauhin’s ‘*Pinax Theatri botanici*’ (1623) or other botanical literature like in the ‘*Pharmacopoea Hagana*’ (Anonymous 1738). Other pharmacopoeias that have been consulted are amongst other the ‘*Pharmacopoea Leidensis*’ (Anonymous 1718) and the ‘*Pharmacopoea Harlemensis*’ (Anonymous 1741). Although, the same pharmacist’s names are given in the Leiden pharmacopoeia from 1718 and that of Haarlem from 1741, the subsequent synonyms and/or eventual Dutch names herein differ from those on the labels in the Zierikzee Herbarium.

The names in the ‘*Pharmacopoea Hagana*’ (Anonymous 1738), are given in alphabetical order and are not numbered. The numbering of the labels in the Zierikzee Herbarium, however, follows exactly the alphabetical order in which the names in this section are presented. Only one of these labels has no number and is attached on a sheet with a Lily. This species is not included in the list of the leaves, buds and herbs, but in the section mentioning the names of the ‘*bulbos et radices*’ (bulbs and roots) which explains the lack of a number. In case the root







							
	Type A	Type B	Type C	Type D ¹	Type D ²	Type E	Other vases
Zierikzee herbarium	60%	27%	10%	2%	–	1%	–
Herbarium D’Oignies	5%	29%	34%	–	1%	21%	10%

Fig. 6 The types of vases in the Zierikzee Herbarium and the first two volumes of the D’Oignies Herbarium and their presence in percentage of the total of vases encountered.

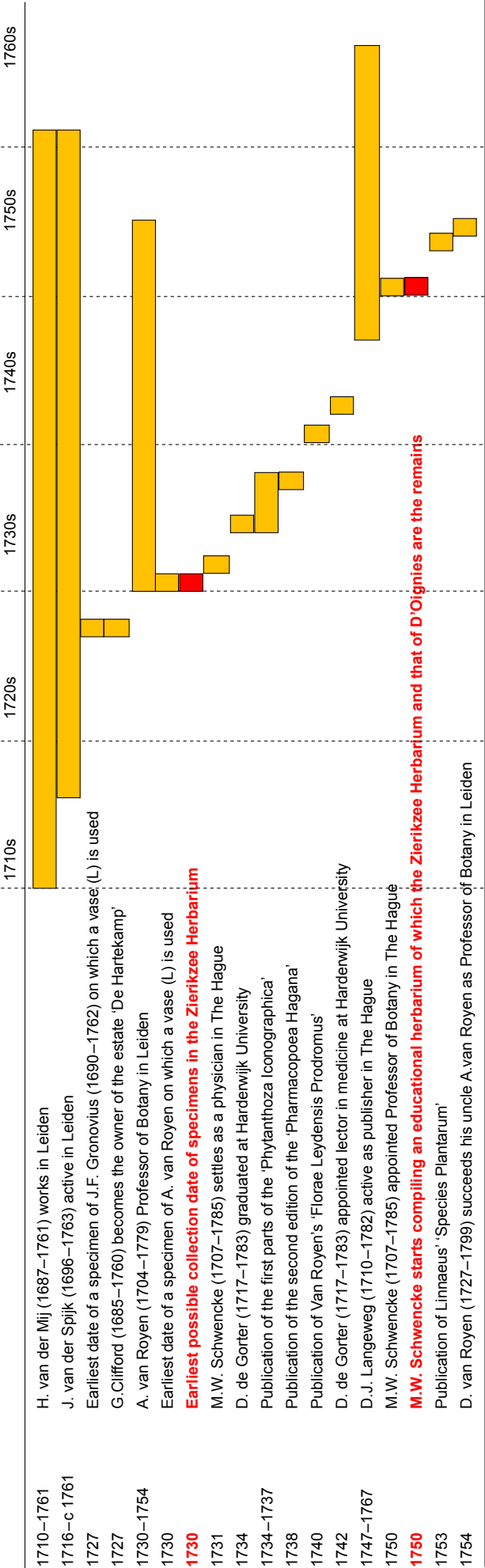


Fig. 7 Years of events relevant to the dating of the Zierikzee and D'Oignies Herbarium. The red squares indicate the possible collection dates of the Zierikzee specimens.

or bark has to be used, then this is indicated by the addition 'V. Rad.' [= Vide Radices] or 'V. Cort.' [= Vide Cortices]. The full names and references are then missing, but can be found in the lists with the names of the bulbs and roots or in the list of medicinal barks.

The section in the 'Pharmacopoea Hagana' (Anonymous 1738) enumerating the leaves, buds and herbs covers 183 species, only three (the 28th, 106th and 155th) are now missing. Of number 94 and number 122 each two collections are present. The 94th entry reads: 'Laurifolia, laurus latifolia, mas et foemina'. Accordingly, on one of the two sheets with a label with number 94 a male plant is mounted and on the other sheet a female specimen. The 122th entry reads: 'Persicaria Mitis, Maculosa et non Maculosa', in other words; one kind of Persicaria mitis with a spot (on its leaves) and another without such a spot. Completely consistent, both kinds are present. The original name of the first specimen nr. 122 is: 'Persicaria Mitis maculosa', the second specimen is named 'Persicaria Mitis non Maculosa'. Clearly, the maker of the Zierikzee Herbarium had the intention to compile a set of exactly those plants mentioned in the 'Pharmacopoea Hagana'.

The printed ornaments in the Zierikzee and the D'Oignies Herbarium

The specimens in the Zierikzee Herbarium that belong to the set of plants mentioned in the 'Pharmacopoea Hagana' (Anonymous 1738) all have or had an ornamental label (Fig. 2) which



Fig. 8 *Cynoglossum officinale* L. in the Zierikzee Herbarium mounted with a type A vase designed by Ehret (by courtesy of the Municipal Museum Zierikzee). One of the leaves at the bottom shows the upper surface, the other the lower surface of the leaf.

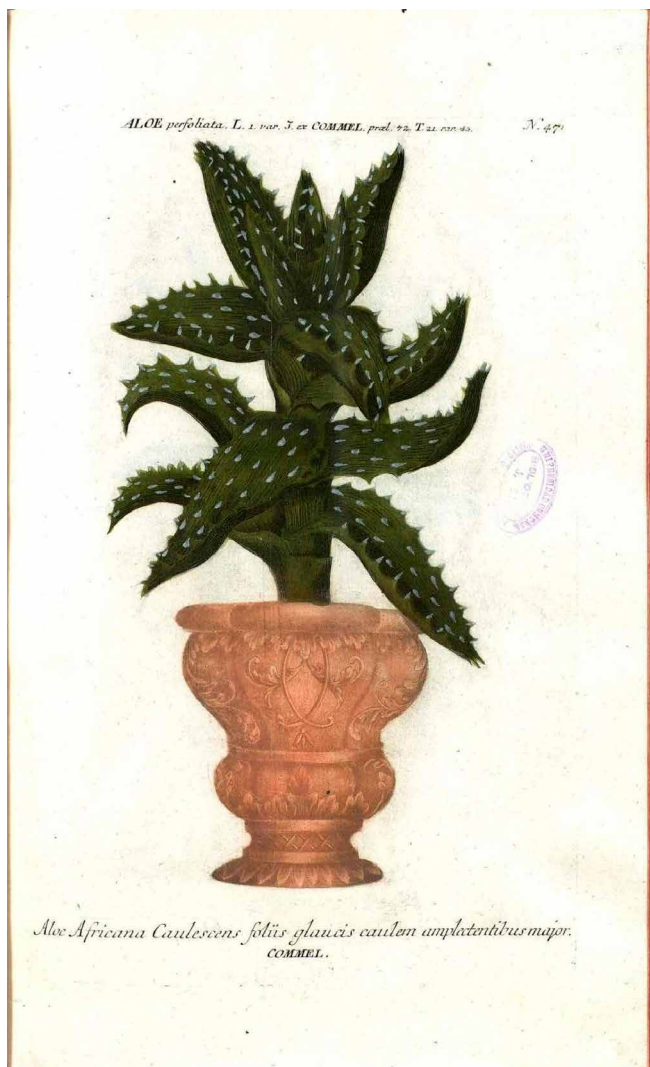


Fig. 9 *Aloe Africana caulescens foliis glaucis*. Plate 47 in the first volume of Weinmann's 'Phytanthoza Iconographia' (1734–1737) (Bibliotheca Digital del Real Jardin Botánico de Madrid). The original drawing for this plate was made by Ehret.

emphasizes that they form a special part of the herbarium. Such labels are absent on the remaining specimens in the Zierikzee Herbarium and are also not found in the D'Oignies Herbarium.

Of the five different designs of vases that were used to mount the plants in the Zierikzee Herbarium, four of them also occur in the herbarium of D'Oignies (Fig. 6). A pot-shaped type of vase is up to now only found in the herbarium of D'Oignies (Fig. 4). The type A vase and the type C vase are also found in the herbarium of the Harderwijk Professor of Botany David de Gorter (1717–1783). De Gorter likely started collecting specimens for a herbarium shortly after he had finished his studies in 1734. A large set of his specimens, including only part of all the specimens he must have once possessed is housed at Naturalis Biodiversity Center (Van Ooststroom 1941: 258).

The type A vase is clearly a copy of the vase that can be seen on a plate in the first volume of Weinmann's 'Phytanthoza Iconographia' (1734–1737) that is illustrating an African *Aloe* (Fig. 8, 9). The original illustration for this plate was made by Georg Dionysius Ehret (1708–1770) (Ehret 1895: 42). An example of a specimen in David de Gorter's herbarium that is mounted with a type A vase is a *Spiraea* 'ex Astrachano' (= Astrachania, Southern European Russia) that was collected by the German born Russian military physician and botanist Johann Jakob Lerche (1703–1780) (Fig. 10). Not long after De Gorter had arrived in Russia in 1754 Lerche had given him a number



Fig. 10 A *Spiraea* from the herbarium of David de Gorter, mounted with vase type A (Fig. 6) after a design by Ehret (Naturalis). This specimen was collected in 'Astrachano' by Johann Jakob Lerche (1703–1780).

of his herbarium specimens (De Gorter 1772: 206). In 1762, after De Gorter had returned to The Netherlands, Lerche had sent him more herbarium specimens from Russia (De Gorter 1762). It, therefore, cannot be said with certainty when this *Spiraea* was received by David De Gorter. The mounting of this specimen must in any case have been done after 1754.

Specimens mounted with this type A vase are also encountered in the herbarium of the head gardener of the Leiden botanic garden, Nicolaas Meerburg (1734–1814), whose herbarium is also kept at Naturalis Biodiversity Center. Meerburg had started working at the Leiden botanic garden as an assistant gardener in 1752 and was appointed head gardener in 1770 (Karstens & Kleibrink 1982: 46). Around 1764 he began making his herbarium (see the newspaper *Leydse Courant* of 22 April 1825, <https://www.erfgoedleiden.nl/collecties/kranten>). Certainly not all plants that Meerburg had assembled were collected by himself (Scheurleer 1817: 130). Browsing through his herbarium, it becomes clear that it also contains mounted specimens from other, earlier herbaria. The presence in itself of a specimen with a certain type of vase in his herbarium, therefore, does not mean that it was glued on the sheet by Meerburg himself. This will also have been the case with a set of specimens in his herbarium that show references, written in a so far unknown hand, to the 'Species plantarum' (Linnaeus 1753) (Fig. 11, 12). Regardless who has been the actual collector, the specimens in Meerburg's herbarium making part of this set and mounted with a vase of type A or C may have been mounted in that way after the publication of the 'Species Plantarum' (Linnaeus 1753).



Fig. 11 *Solidago virgaurea* L. in the herbarium of Meerburg, mounted with vase type A (Fig. 6) after a design by Ehret (Naturalis, L 0077520). The reference to Linnaeus (1753) 'Species Plantarum' is written in an unknown hand. The attribution to [Engelbert] Gothe (1703–1775) from Sweden is wrong.



Fig. 12 *Ecballium elaterium* (L.) A.Rich., in the herbarium of Meerburg, mounted with vase type C (Naturalis, L 0077107; Fig. 6). The reference to Linnaeus (1753) 'Species Plantarum' is written in an unknown hand.

Specimens in David de Gorter's herbarium that are mounted with one of these types cannot date from before 1734.

'Leiden ornaments'

Absent in the Zierikzee Herbarium, but scarcely (< 10 %) encountered in the D'Oignies Herbarium are the types of vases F–I and the label J (Fig. 15). All are present on a complete ornament print that is kept in the Victoria and Albert Museum in London (Fig. 14). An almost identical print has survived at Naturalis Biodiversity Center in Leiden (Fig. 15). On the Leiden print, the elongated label and the rococo style cartouche have been replaced by more pennants. The elongated label is still vaguely visible on the Leiden print and must therefore be a later version made with a partly re-engraved copper plate that was used for the Victoria & Albert print. Both prints were produced in Leiden and signed by the maker of the designs, the painter Hieronymus van der Mij (1687–1761). Van der Mij worked in Leiden between 1710 and 1761 (<https://rkd.nl/nl/explore/artists/56059>). The engraving was done by Johannes van der Spijk (1696–1763) who was active in Leiden from 1716 till c. 1761 (Waller 1938: 234, 310).

It is known that the Leiden copies were produced for David van Royen (1727–1799). He had taken over the herbarium of his uncle Adriaan van Royen (1704–1779) when he succeeded him as Professor of Botany in Leiden in 1754. It is likely that he ordered a new set of prints around that time. The ornaments on this print occur next to none in the Van Royen Herbarium.

For an unknown reason David van Royen must have made no or little use of them and that must be why a remarkably large number of complete copies of this print have survived.

The Victoria & Albert print may have been initially designed for the Leiden burgomaster and botanist Johan Frederik Gronovius (1690–1762). Of his extensive herbarium, only the specimens collected by the English botanist John Clayton (1694 / 1695–1773) in Virginia (USA) are preserved (Meuschen 1778: 143). All four types of vases are rarely found in this part of his herbarium and on Gronovius' specimens in the Meerburg Herbarium (Fig. 13). Clayton's specimens came into the hands of Gronovius about 1736, when the English naturalist Mark Catesby (1682–1749) had asked Clayton to send Gronovius plants from the New World (Sliggers 2017: 166). Clayton's specimens are now kept in the Natural History Museum in London (BM) and can be consulted online (Jarvis 2016a).

Support for the assumption that the Victoria & Albert print was made for Gronovius is the (possibly earlier) type of vase with a portrait cartouche (F). Instead of a portrait, this vase shows a mirror monogram that is formed by his initials JFG (Fig. 16) and not AVR (Adriaan van Royen) as was thought so far (Wijnands & Heniger 1991: 137, Thijssse 2018: 141). The monogram vase and the vases L and M are found regularly in Gronovius' Clayton herbarium, in the herbarium of Meerburg, on Adriaan van Royen's specimens, especially on specimens that form the basis of his 'Florae Leydensis Prodomus' (1740), and also in the herbarium of the Dutch / English banker George Clifford III



Fig. 13 Ornament print with designs by the Leiden painter Van der Mij and engraved by Van der Spijk (Victoria & Albert Museum, Inv. Nr. 28584.4). Copyright Victoria and Albert Museum, London.

(1685–1760) (Fig. 17). The vases L and M are variants of the vases H and I on the Victoria & Albert and Leiden print and are most likely the work of Van der Mij and Van der Spijk as well. Examples of datable specimens found so far, with one of these two variants suggest these types of vases were used in the period 1727 and 1732. Clifford’s herbarium at BM and the Clifford set at Naturalis Biodiversity Center are also fully digitized (Ek 2011, Jarvis 2016b).

‘The Hague ornaments’?

The name of the draughtsman and/or engraver of the vase of type A is unknown. The design of the transition between the foot and the body of the type A vase is the same as in the vase of type B and is probably the work of the same person. Another type of vase of which this transition, though not exactly the same, resembles that of types A and B, occurs occasionally in the herbarium of David de Gorter. This type of vase is signed ‘D. Langeweg excudit’ (printed by D. Langeweg) (Fig. 18). He is Daniel Johannes Langeweg (1710–1782), an engraver and publisher, who was active in The Hague in the period 1747–1776 (Ledeboer 1877: 51). It is tempting to assume that



Fig. 14 Ornament print with designs by the Leiden painter Van der Mij and engraved by Van der Spijk (Naturalis). This print was produced for David van Royen.

the vases of type A and B were produced by Langeweg in The Hague as well. If this really was the case, this would mean that these ornaments were added on the specimens in the Zierikzee Herbarium and the D’Oignies Herbarium after 1747.

ORIGINAL OWNER AND FUNCTION

Not in the Zierikzee herbarium, nor in the herbarium of D’Oignies, evidence was found by whom they could have been made. The use of a pharmacopoeia might well mean that the person who collected the plants in the Zierikzee Herbarium was not a botanist, but more likely someone with a medical profession such as a physician or a pharmacist. Coincidentally, the nephew of Diederica Helena Schutter, former owner of the Zierikzee Herbarium, Cornelis Anne Schutter (1808–x), was a pharmacist. Cornelis was the son of Gerbrand Hendrik Schutter and had studied at the Medical School in Middelburg (Province of Zeeland) in 1825–1826 (De Man 1902: 14). In 1830 he had bought a pharmacy in Zierikzee, which he sold again in 1834. In 1837 he emigrated to Albany (USA) (newspaper ‘Zierikzeesche Courant’ 21 October 1834, <https://krantenbankzeeland.nl/>






					
	Type F	Type G	Type H	Type I	Type J
Simon D’Oignies					
Johan Frederik Gronovius					
Nicolaas Meerburg or Adriaan van Royen					
David van Royen					
David de Gorter					
George Clifford					

Fig. 15 The ornaments on the complete ornament print kept at the Victoria & Albert and Naturalis and their presence in the major Dutch 18th century herbaria. Specimens at Naturalis mounted with these types are difficult to attribute to Meerburg or Adriaan van Royen and possibly originate all from Johan Frederik Gronovius.



Fig. 16 A vase (type K; Fig. 17) with a cartouche showing the monogram JFG (Johan Frederik Gronovius). This type is probably an earlier variant of the vase (type F; Fig. 15) with a portrait cartouche that is found on the complete prints that are kept in the Victoria & Albert Museum in London and at Naturalis in Leiden.

[periodicals/zco](#); Van Hoorn 1989: 27, Van de Zande-Vleugels Schutter 2001: 243). Could the Zierikzee Herbarium have come into the possession of his aunt through him? For this, however, no evidence was found.

By browsing the auction catalogues of book sales from the 18th and 19th century, a description matching the Zierikzee Herbarium was found in a catalogue of a sale in Leiden in 1790. The herbarium was sold to an unknown buyer for 18 guilders (Anonymous 1790: 52): “Een fraaie *Herbarius Vivus*, zynde de Kruiden zeer net gedroogd en vastgemaakt op losse halve vellen Cardoespapier, leggende tusschen Oliphantspapier, met de naamen der Kruiden, zindelyk bewaard, en gebonden in 6 parysche banden, groot folio, waarby twee koperen ge-graveerde Plaaten, hebbende gediend tot het Vignet en de Potten van deze Herbarius” (Anonymous 1790: 52). Translation: A beautiful *Herbarius Vivus*, the Herbs being very neatly dried

and attached to loose half sheets of ‘kardoes’ paper; laying between Elephant paper; with the names of the Herbs; neatly preserved, and bound in 6 Parisian book bands, large folio; with two copper engraved plates, that have served for the Vignette and the Pots of this Herbarius.

Exactly as is shown by Offerhaus et al. (2021: 3), the half sheets of ‘kardoes’ paper were not bound into a book, but inserted between the pages of six books. Moreover, the specimens were mounted with printed labels and vases. According to the catalogue the books that were sold formed part of the library of the late Pieter van Dorp (1712–1789) and the late Leiden solicitor Izaac Elias Luzac (1727–1790), the younger brother of the enlightened printer-bookseller Elie Luzac (1721–1796) (Anonymous 1790: 52). However, because of their profession, it is not very likely that one of them was the maker of the auctioned herbarium.

Apart from the numbers of volumes, the description of the herbarium sold in The Hague in 1790 is strongly reminiscent of a herbarium that was auctioned after the death of the Professor of Botany, Martinus Wilhelmus Schwencke (1707–1785).

“*Herbarius Vivus Alter*, seu Collectio, siccatum Plantarum Altera, quas maxima parte CL. DEFUNCTUS Juvenis adhuc collegit, & quasi manuductioni ad Botaniam inserviit; hoc omnes tantum non nostrates, vel saltem Europaea, cuique nomen adscriptum X. Volumina Imper. Forma corio rubro (vulgo Paryze Band) religata collectionum hanc 1168. Plantarum. continent” (Anonymous 1785: 111). Translation: “*Herbarius Vivus Alter*, or Second Collection of Dried Plants, for the larger part assembled by the deceased in his youth and having served as a manual in botany. These are almost all Indigenous, or at least European and are provided with their names, in 10 volumes Imper[ial] format bound in red leather (common Paris Bands) which contain 1168 specimens”.

Apparently, after the herbarium was sold in 1785, four of the 10 volumes of Schwencke’s teaching herbarium were lost. Schwencke had come from Maastricht to Leiden around 1730














			
	Type K	Type L	Type M
Simon D'Oignies			
Johan Frederik Gronovius		1727	
Nicolaas Meerburg			
Adriaan van Royen		1731	1732
George Clifford			

Fig. 17 Three types of vases that are often encountered in the herbarium of Johan Frederik Gronovius, Adriaan van Royen, Meerburg and Clifford. The vases L and M are combination of the vases H and I (Fig. 15). Examples of the vase L in the Meerburg Herbarium are often vague and may have been printed from a worn copper-plate. The years are the oldest so far found on a collections in these herbaria.



Fig. 18 '*Fritillaria flore albo pyrenaica*' in the herbarium of David de Gorter mounted with a large type of vase that is signed 'D. Langeweg excudit' (printed by D. Langeweg) (Naturalis). Langeweg was active in The Hague in the period 1747–1776.

to study medicine. In 1731 he obtained his doctorate and settled as a physician in The Hague and became city physician in 1737 (Schwencke 1731, Van Zanten 1747: 63). In 1750 he was appointed Professor titular of Botany (Krul 1891: 56). Close to the garden with medicinal plants he had laid out earlier he bought the farmstead 'Zandvliet' in The Hague in 1752. At the rear Schwencke created a much larger 'Hortus Medicus' where he gave his lessons in botany to future surgeons and pharmacists (Stoeder 1891: 250, Kuijlen 1983: 25).

DISCUSSION

When?

As argued above, the maker of this herbarium must have had the express intention to form a collection containing exactly the same set of plants as mentioned in the 'Pharmacopoea Hagana' (Anonymous 1738). Already as early as 1713, the city council of The Hague had decided that a new edition of the 'Pharmacopoea Hagiensis' (Anonymous 1659) was necessary. Probably little progress was made and in 1729, to speed up the publication, the physicians were requested to provide a new edition (Krul 1891: 51, Stoeder 1891: 246, Wittop Koning 1949: 209). Although no evidence is found for this, Martinus Schwencke and perhaps also his older brother Thomas Schwencke (1694–1767), may have been co-writers of this edition. Thomas Schwencke had settled in The Hague in 1718 and was appointed Professor of Anatomy and Surgery by the 'Societas Hagensis' in 1723 (Hillen 2010). After finishing

his study in Leiden in 1731, Martinus Schwencke also went to The Hague. As a consequence, it is not impossible that he was familiar with the final text before it was officially published and may have been able to collect a complete set or the aforementioned plants before 1738.

The most often encountered vase (A) in the Zierikzee Herbarium was designed by Ehret not long before the publication of the first parts of Weinmann's 'Phytanthoza Iconographia' (1734–1737), which indicates that it could not have been used as a herbarium ornament until 1734 at the earliest. In the herbarium of David de Gorter and that of Meerburg also a few specimens mounted with this type of vase are present; where they probably have ended up by exchange or as a gift. Something that is not unlikely, because De Gorter must have been in regular contact with Meerburg, as is witnessed by his contributions of finds of mainly mosses and lichens, that are published in De Gorter's 'Flora VII Provinciarum' and because De Gorter was befriended with Schwencke (De Gorter 1781: iii, iv). The mounting of specimens with the type A vase in the herbarium of De Gorter was likely not done before 1734 when De Gorter studied in Harderwijk. One datable specimen with this type of vase in his herbarium was mounted after 1754. Such specimens in Meerburg's herbarium have references to Linnaeus (1753) 'Species plantarum' and may have been mounted after 1753.

Offerhaus et al. (2021: 7, 11) concluded that the collection and annotation of the Zierikzee Herbarium was probably started between 1710 and 1718. The fact that the publication date of the 'Phytanthoza Iconographia' is contradicting such an early origin of the Zierikzee, is explained by assuming that the type A vase (Fig. 8–10) had ended up in this publication as late as that because of the popularity of this design (Offerhaus et al. 2021: 4). Of this type of vase some slightly different variants are known to exist, which can be seen as an indication that large numbers of prints have been produced of it. Yet, this exact same version is only found in substantial numbers in the Zierikzee and the D'Oignies herbaria. For the assumption that this vase was copied (by Ehret) from a much earlier example no evidence could be found.

The conclusion that the Zierikzee Herbarium was possibly started between 1710 and 1718, was reached by comparing the names on the labels with Boerhaave's catalogues of 1710 and 1720 (Offerhaus et al. 2021: 7, 11). It was found that less than 30 % of the names were identical with those in the 1710 catalogue and less than 14 % were identical with those in the 1720 catalogue (Offerhaus et al. 2021: 8, f. 11). The mere fact that the names on the labels are the same as used by Boerhaave in his catalogues of 1710 and 1720, regardless of the degree of congruence, cannot be sufficient evidence to conclude that the Zierikzee Herbarium was probably started between 1710 and 1720. It seems to me that these labels could just as well have been written (much) later.

Where, why and by whom?

Apart from the number of specimens, the Zierikzee Herbarium matches remarkably well the description of a herbarium that was sold after Schwencke's death in 1785 and that he had used in teaching the 'materia medica' to future surgeons and pharmacists in his garden in The Hague. At that time this herbarium contained 1168 species (Anonymous 1785: 111). This is many more than the 349 specimens that are present in the Zierikzee Herbarium now. The obvious thought that comes to mind is whether the D'Oignies Herbarium represents the missing specimens. This, however, is impossible because when Schwencke's botanical legacy was sold in 1785 this herbarium was already in the possession of D'Oignies. This, however, is impossible because when Schwencke's botanical estate was

sold in 1785, this herbarium was already in the possession of D'Oignies.

The way the plants in the Zierikzee Herbarium are mounted, showing the variation in leaf shape and the difference between the upper and lower surfaces of the leaves, indeed gives the impression that it was made for educational purposes. The very same method of mounting the specimens is also used in the D'Oignies Herbarium and this herbarium will, therefore, also have been used as a teaching tool. The plants in the Zierikzee Herbarium that represent a set of simplicia mentioned in the 'Pharmacopoea Hagana' (Anonymous 1738) differ from the other specimens by the presence of a label. It appears that this particular part of the Zierikzee Herbarium has been used to test the knowledge of candidate pharmacists of the simplicia that had to be present in every pharmacy in The Hague. Presumably, in order to be able to use these specimens at an examination, the names on the labels were covered with a piece of blank paper. When exactly this was done is unknown. The early 19th century labels partially covered the blank pieces of paper and were therefore added later (Fig. 2). From preliminary research on the D'Oignies Herbarium Offerhaus et al. (2021: 11) allude that the Zierikzee Herbarium is only a part of a large herbarium containing the plants in the Leiden botanical garden collected by Ligtvoet: "He [Ligtvoet] had access to the plants and was probably asked to collect specimens in order to create a garden herbarium, a part of which [the Zierikzee Herbarium] ended up in his possession. The larger part [the D'Oignies Herbarium] with comparatively more exotic plants probably ended up in the possession of Boerhaave and was sold after his death" (Anonymous 1739).

Offerhaus et al. (2021: 10) presume that the Zierikzee Herbarium is the very collection of Ligtvoet, the head gardener of the Leiden botanic garden, that was sold after his death in 1752. For this assumption they believe to have found sufficient support in the description in the auction catalogue (Anonymous 1752: 19).

Ligtvoet's herbarium consisted of 13 '*fascibus praegrandibus*' or very large / enormous bundles (Anonymous 1752: 19). The actual size of the Zierikzee Herbarium is, however, certainly not such that it deserves to be described in that way. When the 349 plants were evenly divided over 13 bundles, each would have contained only around 25 sheets. According to the advertisement in the 'Leydse Courant' of 29 September 1752 (<https://www.erfgoedleiden.nl/collecties/kranten>), announcing the sale, the plants in his herbarium were all collected by Ligtvoet himself over a period of more than 50 years. Most plants had been cultivated in the garden long since and were arranged according to the system of Boerhaave (Anonymous 1752: 19). When it had taken Ligtvoet so many years to assemble his herbarium specimens, how likely is it that it is now such a uniform collection? One would expect to see the specimens mounted on more different qualities and sizes of paper, different labels and more diversity in handwriting and inks. Instead all specimens mounted on exactly the same paper and the same ornaments are used throughout the whole herbarium. This makes it, in my opinion, unlikely that the Zierikzee Herbarium is the same as Ligtvoet's herbarium that was auctioned in 1752.

The only concrete indication of a connection between Leiden and the Zierikzee Herbarium and the herbarium of D'Oignies is the presence of a small number of 'Leiden ornaments' in the D'Oignies Herbarium. The use of these types of vases seems to fall in the second half of the 1730s. The fact that many plant names in the D'Oignies Herbarium are followed by a reference to Adriaan van Royen's 'Florae Leydensis Prodrum' (1740) could also be seen as an indication of a connection with the Leiden Hortus, which was arranged to Van Royen's system, if

initially Schwencke's garden had not been organized according to the same system as well (Schwencke 1752: iv). These names and references are likely written by D'Oignies, which he has probably taken from the separate original index that belonged to this herbarium and was still present when it was auctioned in 1818 (Scheurleer 1818: 7).

CONCLUDING REMARKS

Based on the description of a herbarium that was auctioned in Leiden in 1790, it is concluded that the Zierikzee Herbarium consisted of 6 volumes of a 10 volume herbarium that after Schwencke's death was sold in The Hague in 1785. Most of the plants in this herbarium were collected by Schwencke when he was still young (Anonymous 1785: 111, 1790: 52). The earliest collections in the Zierikzee Herbarium may therefore date from the time when Schwencke studied in Leiden in 1730 or when he settled in The Hague in 1731. According to the Latin description in the 1790 catalogue, the herbarium consisted of 1168 specimens and had served as a manual in botany. It is, however, impossible that the specimens in the D'Oignies Herbarium represent the missing specimens, because this herbarium had already changed hands before the auction in 1785.

The way the plants in this herbarium and also in the D'Oignies Herbarium are mounted, showing the variation in leaf shape and the difference between the upper and lower surfaces of the leaves, indeed gives a strong impression that both were made for educational purposes. The separate set of simplicia in the Zierikzee Herbarium is arranged according to the 'Pharmacopoea Hagana' (Anonymous 1738). These specimens in the Zierikzee herbarium distinguish themselves from the other plants in this and in the D'Oignies Herbarium by the presence of a decorative label. This set of plants was probably not only used to teach the students the characteristics of the simplicia that, by order of the city council, had to be present in every pharmacy in The Hague, but was probably also used at some time to test their knowledge at the exam.

Both herbaria now look very uniform, but this was probably not the case from the very beginning. The presence of the four 'Leiden' vases and a label in the D'Oignies Herbarium on the Victoria & Albert print indicates a date of use somewhere between 1730 and 1754. The mounting of the specimen in the herbarium van De Gorter and Meerburch with vases of type A and C must have been done after 1734 and both types were still in use after the publication of Linnaeus (1753) 'Species Plantarum'. The gap between the time when the first plants in the Zierikzee Herbarium were collected and the time when the vases of type A and B were used suggests that Schwencke converted his youth herbarium when, after his appointment as Professor in 1750, he had to teach candidate pharmacists in The Hague. If the vases of type A and B are indeed produced by Langeweg, Schwencke may have commissioned him to make his teaching herbarium. Which means that it must have been after 1747 when Langeweg settled in The Hague.

This hypothesis explains why these two herbaria were both originally loose-leafed and the uniformity in paper and ornaments. Apart from the small number of specimens, it is this uniformity which makes it in my opinion highly unlikely that the Zierikzee Herbarium is the result of more than 50 years of collecting and therefore cannot be, as suggested by Offerhaus et al. (2021: 11, f. 14), Ligtvoet's herbarium that was put up for sale after his death in 1752. The fact that the labels have names that are also used by Boerhaave in the garden catalogues of 1710 and 1720, no matter how similar, can only be proof that the person who wrote them may have had them at hand when he wrote them, but not that this was done between 1710 and 1720.

Acknowledgements I owe special thanks to Pieter Baas (Naturalis Biodiversity Center, Leiden) for his constructive suggestions for improving this paper. Albert Scheffers and Minke van Meerten (Stedelijk Museum Zierikzee) are thanked for supplying digital images of some specimens from the Zierikzee Herbarium and for permission to use them in this paper. Liza Lankhaar (Naturalis Biodiversity Center, Leiden) is thanked for providing images of specimens from the Van Royen Herbarium and Ingrid de Kort for reading manuscript versions and for making Fig. 6, 7, 15, 16 and 17.

REFERENCES

- Anonymous. 1659. *Pharmacopoea Hagiensis* [...]. Joannum Tongerloo, Hagae-Comitum.
- Anonymous. 1718. *Pharmacopoea Leidensis* [...]. Samuelum Luchtmans, Lugduni Batavorum.
- Anonymous. 1738. *Pharmacopoea Hagana* [...]. Fredericum Boucquet, Hagae-Comitum.
- Anonymous. 1739. *Bibliotheca Boerhaaviana, sive catalogus librorum*. Samuelum Luchtmans, Lugduni in Batavis.
- Anonymous. 1741. *Pharmacopoea Harlemensis* [...]. Petri van Assendelft, Harlemi.
- Anonymous. 1752. *Catalogus praestantissimorum & insignium librorum*. Cornelii Haak, Lugduni Batavorum.
- Anonymous. 1785. *Mvsei Schwenckeniani* [...]. C. Plaat et B. Scheurleer. [’s Hage].
- Anonymous. 1790. *Catalogus librorum. Quo continentur juridici & politici* [...]. Nagelaaten door [...] Pieter van Dorp [...] en Izaac Elias Luzac [...]. Welke verkocht zullen worden in de boekwinkel van A. en J. Honkoop, den 29. maart 1790. en volgende dagen. A.J. Honkoop, Leyden.
- Bauhin C. 1623. *Caspari Bauhini Pinax Theatri botanici*. Joannis Regis, Basileae.
- Boerhaave H. 1710. *Index plantarum quae in Horto Academico Lugduno-Batavo reperiuntur* [...]. Cornelium Boutestein, Lugduni Batavorum.
- Boerhaave H. 1720. *Index alter plantarum quae in Horto Academico Lugduno-Batavo aluntur*, 2 Vols. Petrum van der Aa, Lugduni Batavorum.
- De Gorter D. 1762. David de Gorter to Carl Linnaeus, 10 March 1762, The Linnaean correspondence, linnaeus.c18.net, letter L3049 [consulted 4 Mar. 2021].
- De Gorter D. 1772. *Leer der Plantkunde 1*. Jan Willem Smit, Amsterdam.
- De Gorter D. 1781. *Flora VII Provinciarum Belgii Foederati Indigena*. C.H. Bonn & Filium, Harlemi.
- De Man JC. 1902. De Geneeskundige School te Middelburg, hare lectoren en leerlingen 1825–1866. 2e stuk: Korte biografien der Pharmaceutische Leerlingen van de Geneeskundige School te Middelburg, ingeschreven sedert December 1824 tot 1866. Kröber, Middelburg.
- De Valk M. 2010. Het Herbarium van de Stedelijke Musea Zierikzee. Beschrijving en conserveringsadvies. Middelburg (Report).
- D'Oignies S. 1780. Byvoegsel tot Den Vlaemschen Indicateur van den Saterdag 28. October 1780. Numero XVIII. Den Vlaemschen Indicateur ofte Aen-Wyser der Wetenschappen en Vrye-Konsten 4. Gimblet, Gend.
- Dodoens R. 1583. *Stirpium historiae pemptades sex, sive libri XXX*. Christophori Plantini, Antverpiae.
- Ehret GD. 1895. A memoir of Georg Dionysius Ehret: born at Heidelberg, 30 Jan. 1708, died in London, 9 Sept. 1770 / written by himself, and translated, with notes, by E.S. Barton. Proceedings of the Linnean Society of London from November 1893 to June 1894: 41–58.
- Ek R. 2011. George Clifford Herbarium (1685–1760). <https://www.george-clifford.nl/UK/collections.htm>.
- Hillen HFP. 2010. Doctor Thomas Schwencke en Wolfgang Amadeus Mozart. *Nederlands Tijdschrift voor Geneeskunde* 154: A2195.
- Jarvis C. 2016a. Dataset: Clayton Herbarium. Natural History Museum Data Portal (data.nhm.ac.uk). <https://doi.org/10.5519/0063794>.
- Jarvis C. 2016b. Dataset: Clifford Herbarium. Natural History Museum Data Portal (data.nhm.ac.uk). <https://doi.org/10.5519/0022031>.
- Karstens WKH, Kleibrink H. 1982. *De Leidse Hortus*. Een botanische erfenis. Waanders, Zwolle.
- Krul R. 1891. *Haagsche doctoren, chirurgen en apothekers in den ouden tijd*. Van Stockum & Zoon, s’Gravenhage.
- Kuijlen J. 1983. *Onderwijstuinen en particuliere tuinen (1550–1839)*. In: Kuijlen J, Oldenburger-Ebbers CS, Wijnands DO, Paradisus Batavus. Bibliografie van plantencatalogi van onderwijstuinen, particuliere tuinen en kwekerscollecties in de Noordelijke en Zuidelijke Nederlanden (1550–1839). Pudoc, Wageningen.
- Ledeboer AM. 1877. *Chronologisch register op de alfabetische lijst der boekdruckers, boekverkoopers en uitgevers in Noord-Nederland, sedert het jaar 1440 tot het begin dezer eeuw*. Beijers, Utrecht.
- Linnaeus C. 1735. *Systema naturae*. Theodorum Haak, Lugduni Batavorum.
- Linnaeus C. 1753. *Species plantarum*. Laurentii Salvii, Holmiae.
- Meuschen FC. 1778. *Museum Gronovianum sive index rerum naturalium*. Haak & Socios, Lugduni Batavorum.
- Offerhaus A, De Haas E, Porck H, et al. 2021. The Zierikzee Herbarium: An analysis of the contents and origins of an enigmatic herbarium. *Blumea* 66: 1–52.
- Oskamp DL. 1796–1800. *Afbeeldingen der artseny-gewassen met der-zelfver Nederlandsche en Latynsche beschryvingen*, 6 Vols. Sepp & Zoon, Amsterdam.
- Scheurleer B. 1817. *Catalogus van drie fraaije verzamelingen van boeken* [...]. B. Scheurleer jr., ’s Hage.
- Scheurleer B. 1818. *Catalogue alphabetique d’environs quatorze mille volumes ou bibliotheque ancienne et modern* [...]. B. Scheurleer jr., ’s Hage.
- Schwencke MG. 1731. *Dissertatio medico-chirurgica inauguralis de operatione inguinali* [...]. Conradum Wishoff, Lugduni Batavorum.
- Schwencke MG. 1752. *Officinalium Plantarum Catalogus* [...]. Petrum de Hondt, Hagae-Comitum.
- Sliggers BE. 2017. *De verzamelwoede van Martinus van Marum (1750–1837) en de ouderdom van de aarde. Herkomst en functie van het Paleontologisch en Mineralogisch Kabinet van Teylers Museum (Doctoral thesis)*.
- Stoeder W. 1891. *Geschiedenis der Pharmacie in Nederland*. D.B. Centen, Amsterdam.
- Thijsses G. 2018. A contribution to the history of the herbaria of George Clifford III (1685–1760). *Archives of Natural History* 45 (1): 134–148.
- Van de Zande-Vleugels Schutter AF. 2001. *De genealogie van: de familie Schutter / Vleugels Schutter*. Nieuwerkerk.
- Van Hoorn CM. 1989. Vijf eeuwen pharmacie in Zierikzee. Kring voor de geschiedenis van de pharmacie in Benelux, *Bulletin* 76: 1–52.
- Van Leeuwen P. 2019. Van der Ley. Papierfabrikeurs en Reders te Zaandijk. Nieuwsbrief Zomer 2019. Uitgave van de Vereniging “Jacob Honig Js. Jr.”, Zaandijk.
- Van Ooststroom S. 1941. Het herbarium van David de Gorter. *Nederlandsch Kruidkundig Archief* 51: 252–274.
- Van Royen A. 1740. *Florae Leydensis Prodomus, exhibens plantas quae in horto academico Lugduno-Batavo aluntur*. Samuelem Luchtmans, Lugduni Batavorum.
- Van Zanten C. 1747. Bericht, Wegens de gesteltenisse der Hooge Vergaderingen en Collegien, in ’s Gravenhage [...] Voor den Jaare 1747. Cornelis van Zanten, ’s Gravenhage.
- Waller FG. 1938. *Biographisch woordenboek van Noord Nederlandsche graveurs*. Martinus Nijhoff, ’s Gravenhage.
- Weinmann JG. 1734–1737. *Phytanthoza Iconographia* [...] 1. Hieronymum Lenizium, Ratisbonae.
- Wijnands DO, Heniger J. 1991. The origins of Clifford’s herbarium. *Botanical Journal of the Linnean Society* 106: 129–146.
- Wittop Koning DA. 1949. ’s Gravenhage en de Pharmacie. Mededelingen van het Bureau voor Statistiek en Voorlichting der Gemeente ’s Gravenhage 5: 207–212.