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Augustin-Pyramus de Candolle's L'Heritier Reliquiae: A volume of miscellaneous prints kept in Geneva

Hans Walter Lack, Katrin Böhme & Martin W. Callmander

Abstract

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A bound volume of miscellaneous prints previously owned by Augustin-Pyramus de Candolle and today kept in the library of the Conservatoire et Jardin botaniques in Geneva is analysed. It consists of six very rare leaflets published by Charles-Louis L'Héritier de Brutelle and of several finished and unfinished engravings almost exclusively based on drawings by Pierre-Joseph Redouté. A considerable proportion of these unfinished engravings can be correlated with finished engravings kept in a volume of prints in the Staatsbibliothek zu Berlin, which is all that was published of the last two fascicles of L'Héritier's incomplete *Stirpes novae*. Notes on the taxonomy and nomenclature of the genera *Buchozia* L'Hér. (*Rubiaceae*), *Hymenopappus* L'Hér. (*Asteraceae*), *Louichea* L'Hér. (*Caryophyllaceae*), *Michauxia* L'Hér. (*Campanulaceae*) and *Virgilia* L'Hér. (*Asteraceae*) are included and their respective type species clarified. Lectotypes are designated for four names and the new combination *Buchozia japonica* (Thunb.) Callm. is provided. Furthermore, the complex historical background of the leaflets and the miscellaneous engravings is explained and set into the context of plant taxonomy in Paris during the two final decades of the eighteenth century.

Keywords

Augustin-Pyramus de Candolle – Charles-Louis L'Héritier de Brutelle – Pierre-Joseph Redouté – *Buchozia* – *Hymenopappus* – *Louichea* – *Michauxia* – *Virgilia* – Botanical illustration – New combination – Typification

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Introduction

This paper analyses a bound folio volume of miscellaneous prints that were previously owned by Augustin-Pyramus de Candolle (1778–1841), subsequently cited as Candolle, and are now kept in the library of the Conservatoire et Jardin botaniques in Geneva (CJBG: shelf mark Off Lhe). It consists of very rare leaflets published by Charles-Louis L'Héritier de Brutelle (1746–1800) and copper engravings in various stages of completion commissioned by L'Héritier that were based almost exclusively on drawings by Pierre-Joseph Redouté (1759–1840). So far only the leaflets have been studied (STAFLEU, 1963a; STAFLEU & COWAN, 1981). The content of the folio volume is compared here with other copies of these prints and set into the context of its time. The prints are shown to have been cited by members of the Candolle dynasty and their collaborators in the *Prodromus* and other publications over almost five decades. Furthermore, the taxonomy and nomenclature of the five genera and the five species described by L'Héritier as new to science in the leaflets bound into the volume are presented together with their types and the currently accepted names.

Augustin-Pyramus de Candolle and the acquisition of L'Héritier's herbarium

In his autobiography *Mémoires et souvenirs*, CANDOLLE (2004: 504) wrote: “Une bibliothèque botanique est un accompagnement obligé d'un herbier et un outil nécessaire pour quiconque veut travailler [a botanical library is an obligatory accompaniment of a herbarium and a necessary tool for anyone who wishes to work]”. In the following sentence he stated “en histoire naturelle il faut pouvoir vérifier incessamment la concordance des figures et des descriptions déjà publiées avec l'objet qu'on a sous les yeux, soit pour connaître ce que les auteurs en ont dit, soit pour s'assurer qu'une espèce est inconnue aux naturalistes [in natural history it is necessary to be able to verify incessantly the concordance of the illustrations and the descriptions already published with the object under one's eyes, either in order to know what the authors said about it or to assure oneself that a species is unknown to naturalists]”.

These are iconic statements relevant for all libraries specialised in taxonomy, though surprisingly they were suppressed by Alphonse de Candolle (1806–1893) when he edited his father's autobiography (CANDOLLE, 1862). Placed towards the end of Book 4 under the title “Âge mûr [Mature age]” of the new edition of his autobiography (CANDOLLE, 2004), they may not necessarily refer exclusively to the late period of Candolle's life, but also to his years spent in Paris around 1800. He recollects having been guided as to the creation of a library on the advice of René-Louiche Desfontaines (1750–1833), then one of the professors at the Muséum d'Histoire naturelle in Paris (LAISSUS, 1986), who had suggested to him after dinner “Allons

bouquiner [Let us go to the bouquinistes]” (CANDOLLE, 2004: 505). This meant strolling shops looking for secondhand books in the stalls on the banks of the river Seine, a pastime undertaken during leisure hours in the French capital. Furthermore, Candolle remembered having often consulted the private botanical libraries of Desfontaines and of L'Héritier, both in Paris (CANDOLLE, 2004: 505). This implies that these recollections refer to the years before 1800, when Candolle was still a very young man. The arrangement with L'Héritier came to a sudden end when the latter was murdered on 16 August 1800 near his house in Paris when he was returning from a meeting in the Institut national des Sciences et des Arts, of which he was a full member (STAFLEU, 1963b; BALDI, 2020). From this moment L'Héritier's library was closed to Candolle (CANDOLLE, 2004: 505), and thus he had lost a major resource for his botanical studies.

L'Héritier's fine library, being extremely rich in botanical books, was offered for auction in March 1802 (DEBURE, 1802). However, it was acquired en bloc by the bookseller Jean-Gabriel Mérigot (c. 1738–1818), who finally broke up the collection in 1805 at another auction in Paris (ANON., 1805; BALDI, 2020). In his autobiography Candolle does not mention the auction of L'Héritier's library, but it has been reported that he acquired some items at this sale (STAFLEU, 1967).

Emulating Sir Joseph Banks (1743–1820), President of the Royal Society in London, L'Héritier had not only acquired a library of 7389 volumes valued by Desfontaines at 50,000 francs in November 1800, but also possessed a herbarium of some 8000 sheets as well as plant illustrations and miscellaneous manuscript notes (BALDI, 2020). After his death the herbarium and manuscripts were acquired by Jean-Baptiste Garnery (1764–1843), another bookseller based in Paris, apparently with the intention of continuing the publication of L'Héritier's unfinished works, among them the *Stirpes novae* (CANDOLLE, 2004: 190). By 1799 at the latest, Candolle had started to collaborate with Garnery, who was the publisher of his *Plantarum historia succulentarum* also known as *Plantes grasses* (CANDOLLE, 1799–1805). Since payments to Candolle from Garnery were pending, an arrangement was made whereby both herbarium and manuscripts were bought by Garnery for Candolle and his outstanding debts reduced accordingly (CANDOLLE, 2004: 190–191). This is how it came about that Candolle, then aged 23, became the owner of a substantial herbarium in March 1801, estimated by him to be two to three times as large as all his preexisting collections (BALDI, 2020).

In this context, Candolle may well have acquired the contents of the volume to be discussed here, though hard evidence to substantiate this is lacking. In any case, he produced a table of contents in his own hand (Appendix), called his collection *Caroli Ludovici L'Héritier Reliquiae* and arranged for it to be bound in one volume. The Candolle library, including this volume, subsequently called *L'Héritier's Reliquiae*, was bought

by the city of Geneva on 20 May 1921 for 145,000 CHF (CONSEIL ADMINISTRATIF, 1922: 23), and at the same time the Candolle herbarium was bequeathed to the city of Geneva. Both, the library and the herbarium, were previously owned by Louise de Candolle (1875–1973), the wife of Augustin de Candolle (1868–1920). They both found their permanent home in the Conservatoire botanique in Geneva, now CJBG.

L'Héritier's *Reliquiae* – The leaflets

This volume consists of two elements, i.e. leaflets and miscellaneous copper engravings. According to the *Oxford English Dictionary* a leaflet is “a single sheet of paper, folded or unfolded, containing printed matter”. This definition applies to five of L'Héritier's publications bound into the *Reliquiae*, which have the following titles (1) *Vigilia*, (2) *Buchozia*, (3) *Louichea*, (4) *Hymenopappus* and (5) *Michauxia*. In many respects these are quite unconventional prints: all are in folio, each consists of a single printed page folded once plus a maximum of two engravings in folio as appended illustrations. The title pages, all printed on the recto page, give neither the name of the author nor the name of the publisher, neither the date nor the place of publication. The year of publication for all five leaflets is 1788 (STAFLEU, 1963a). The pages do not bear page numbers (e.g. Fig. 1); the name of the author is given at the bottom of the last printed page. Considering typography and layout, all five leaflets could have been produced by the publisher Philipp-Denis Pierres (1741–1808) in Paris, who had already produced the first installments of the *Stirpes novae* (L'HÉRITIER DE BRUTELLE, 1785–1791). However, from a letter sent by L'Héritier to Banks on 31 December 1787 we learn that at least *Louichea* was printed by Pierre-François Didot (1731–1795), another publisher in Paris (STAFLEU, 1963b). Occasionally the leaflets are reported to have also been sold on the Paris book market and listed in bibliographies (e.g. BRUNET, 1842–1844).

The seven engravings (e.g. Fig. 2), which belong to the five leaflets, are framed, annotated with a scientific name and exclusively based on drawings by Pierre-Joseph Redouté, which are all currently untraceable. In technical terms, the content of the five leaflets would today be called the validation of five generic names and of five species names (see above). Living specimens cultivated in several gardens in Paris, among them the Jardin du Roi (later Jardin des Plantes) and L'Héritier's private garden, were the bases of the names validated in the five leaflets (see above). Additionally, L'Héritier cited a small number of selected herbarium specimens. Considering the standards of his time, the protologues are extremely detailed and offer a wealth of information.

Of the five generic names validated in the leaflets, four are eponyms. While *Virgilia* L'Hér. refers to Publius Vergilius Maro (70 BC–19 BC), the famous Roman poet of the

Augustan period, the three other names refer to L'Héritier's contemporaries: *Buchozia* L'Hér. is dedicated to Pierre-Joseph Buc'hoz (1731–1807), physician and naturalist (see below); *Louichea* L'Hér. to René-Louiche Desfontaines (see above), professor of botany at the Jardin du Roi since 1786, later called Muséum d'Histoire naturelle (LAISSUS, 1986); and *Michauxia* L'Hér. to André Michaux (1746–1802), well-known as traveler and collector first in the Orient (PLUCHET, 2014), later in North America. However, the latter's most important trophy was the Caillou Michaux, a Babylonian kudurru from the reign of Marduk-nanin-akhi which he found near Baghdad and today is one of the most spectacular objects in the Cabinet des médailles, Bibliothèque nationale de France. Desfontaines had gathered seeds in what is now Algeria or Tunisia, Michaux in what is now Syria. From these seeds plants were raised to which L'Héritier gave names dedicated to their respective collectors. Furthermore, Michaux and John Fraser (1750–1811) had collected in the United States seed material of *Hymenopappus scabiosaeus* L'Hér.

The sixth publication of *L'Héritier's Reliquiae* has the title *Kakile, cum animadversionibus in Buniadem, Myagrum et Crambe*, and differs from the five leaflets described above. It has a somewhat smaller format, comprises eleven numbered pages, i.e. [1]–[2], 3–11, it does not include illustrations and has the year of publication “1788” printed on the title page. As to content, this is a proper taxonomic monograph starting with the description of the genus *Kakile* Desf. (recte *Cakile*) (*Brassicaceae*) and the treatment of eleven species that it includes, followed by much more condensed treatments of the genera *Bunias* L., *Myagrum* L. and *Crambe* L., with the species they comprise.

The five leaflets *Buchozia*, *Hymenopappus*, *Louichea*, *Michauxia* and *Virgilia* are rare and known from a very small number of copies. Remarkably, there is no copy of these five works in the Bibliothèque nationale de France, but only in the Bibliothèque de l'Institut de France, Bibliothèque Centrale of the Muséum national d'Histoire naturelle [MNHN] in Paris and Bibliothèque Universitaire of Montpellier University. Further copies are to be found in the library of the Royal Botanic Gardens, Kew, the Linnean Society and the Natural History Museum in London, and of the Statens Naturhistoriske Museum in Copenhagen. The copy of the five works in the CJBG is the only one in Switzerland, and the copy in the Universitätsbibliothek of Vienna University is the only one in Austria. In contrast there is currently no copy in Germany, although all five leaflets have been listed in the bibliography of the fourth edition of Linnaeus's *Species Plantarum*, published in Berlin (WILLDENOW, 1797: xxiv). Unfortunately, the catalogues do not distinguish between the first and second edition of *Michauxia*, both published in 1788 (STAFLEU, 1963a; STAFLEU & COWAN, 1981) within an interval of a few months and differing only in the addition of two lines in the synonymy

HYMENOPAPPUS.

(SYNGENESIA polyg. æqual.)

CHARACTER ESSENTIALIS.

CALYX polyphyllus. *Corolla* tubulosa, uniformis. *Filamenta* quinque. *Pappus* polyphyllus, membranaceus. *Receptaculum* nudum.

A vocibus græcis ὕμην, membrana, et πάππος, pappus, quia semina gaudent pappo membranaceo maximo.

HYMENOPAPPUS scabiosæus.

HABITAT in Carolinâ. Michaux, Fraser. ☉

PLANTA annua, habitu inprimisque inflorescentiâ *Scabiosæ*.

* *Descensus.*

RADIX annua, descendens, subfusiformis, subcarnosa, lateribus parce ramosa, badia.

* *Ascensus.*

CAULIS erectus, subramosus, angulatus, sublanatus, lanam exuens, bipedalis.

RAMI alterni, patuli, cauli conformes.

* *Frondescencia.*

FOLIA alterna, radicalia petiolata, caulina sensim sessilia, bipinnatifida: laciniis lanceolatis, acutis; nervosa: costâ nervisque infra teretibus, supra planis; costâ quandoque purpurascens; margine subrevoluta, sublanato-villosa, supra viridia calloso-punctata, infra tomentosa cana, patentia, plana, 6-8 poll. long., 3 poll. lat.

PETIOLI hinc teretes, inde plani, foliis breviores, sensim nulli, lanato-tomentosi, nonnunquam uti costa purpurascens, sæpius incani.

* *Inflorescentia.*

CORYMBUS terminalis, laxissimus, erectus, basi angulatus, bracteatus, villosus, 8 poll. lat.

PEDUNCULI alterni, ramosi, striati, villosi. *Pedicelli* teretes, subtomentosi, unciales, uniflori.

FLORES albi, odoratissimi, 10-12 lin. long.

BRACTEÆ sparsæ, lanceolatae, acutæ.

* *Fructificatio.*

CALYX communis polyphyllus: *foliolis* in duplici serie, laxis, oblongis, obtusis, basi pubescentibus viridibus, superne albidis; persistens, 10 lin. long.

Fig. 1. – First page of the leaflet of the genus *Hymenopappus* L'Hér., 1788.
[L'Heritier's Reliquiae] [Bibliothèque, Conservatoire et Jardin botaniques de Genève]

(LACK & CALLMANDER, in press). However, from inspection we know that the copies in Geneva and Vienna belong to the first edition, and the copy in the Linnean Society to the second edition.

Though they are rare, all six leaflets have been listed in standard bibliographies, such as the *Thesaurus literaturae botanicae* (PRITZEL, 1847–1852: n° 5845–5850, 1871–1882: n° 5271–5276) and the second edition of *Taxonomic literature* (STAFLEU & COWAN, 1981: n° 4486–4491). Consequently, L'Héritier's leaflets cannot be regarded as unknown. The seven engravings included in the leaflets that Candolle called “Dissertationes” in his table of contents (Appendix) have also been included in standard lists of printed plant illustrations, i.e. *Iconum botanicarum index* (PRITZEL, 1855, 1866) and *Index Londinensis* (STAFLEU, 1929–1931).

Why did L'Héritier choose the rather unconventional method of publishing novelties in leaflets? We do not know, but there is a consideration: the naming of organisms was and is an extremely competitive field. Several plant taxonomists based in Paris were simultaneously active in 1788 and, as a consequence, L'Héritier did everything to publish his novelties as speedily as possible. By choosing the leaflet as a medium he was under no obligation to wait for more substantial texts to be completed, the indices to be compiled, index proofs to be read etc., which all served to delay publication. The race for the publication of new names can be exemplified by the name *Michauxia campanuloides* L'Hér. published in March–April 1788. Additionally, L'Héritier considered republishing the contents of the leaflets in his *Stirpes novae* at a later moment, writing to Dryander in London on 18 August 1788 “Mon intention est bien de publier un jour de nouveau le *Michauxia* et toutes autres monographies de ce genre dans mes *Stirpes* [My intention is to republish someday *Michauxia* and all other monographs of this sort in my *Stirpes novae*]” (cited in STAFLEU, 1963a). However, he did only this for *Louichea* (see below).

In contrast to Candolle's statement in his table of contents of *L'Heritier's Reliquiae* (Appendix) and a more recent note (STAFLEU, 1963a: 46, 1963b: xxv), *Kakile* seems to have actually been published, although the number of copies known is even smaller. This work, which does not contain taxonomic novelties, is known from the libraries in Copenhagen, Geneva and Vienna listed above and the Bibliothèque Centrale, MNHN. When the library of L'Héritier was first offered at auction in 1802, the catalogue lists under lot 911 his *Opera omnia botanica* (DEBURE, 1802), which also comprised the six leaflets, and under lot 912 a second copy that lacks *Kakile*. Their whereabouts remain unknown. Of the seven engravings published in the leaflets, L'Héritier re-issued a single one: the sixth installment of the *Stirpes novae* contains as tab. 65 the engraving included in *Louichea*, albeit renamed *Louichea pteranthus* (L.) L'Hér. (see above).

L'Heritier's Reliquiae – The engravings

L'Heritier's Reliquiae consists of a miscellaneous collection of other engravings not associated with text in addition to the six leaflets and the engravings they comprise (of which the two documenting *Michauxia campanuloides* are missing; Table 1). Although bound in no apparent order, with e.g. the engraving showing *Podocarpus elongatus* (Ait.) L'Hér. ex Pers. after the title page of *Kakile*, they can be arranged in two groups: (1) finished engravings, i.e. with the names of the plant illustrated, the illustrator and the engraver printed on them and the image framed, (2) unfinished engravings, i.e. without the printed name of the plant illustrated, or without the printed name of the illustrator and/or of the engraver, either framed or unframed, but often with a name added in manuscript. Examples may illustrate this point. The engraving showing *Solanum muricatum* Ait., a subshrub native to the Andes, stands for the first group. It is provided with the name of the plant in print, the name of the illustrator and the engraver are printed on it and it is framed (Fig. 3). It is the only engraving of *L'Heritier's Reliquiae* printed in color (see above). The second group is represented by the engraving showing *Cytisus anagyrius* L'Hér., a shrub native to Central Spain (Fig. 4). The name of the plant is added in manuscript, neither the name of the illustrator nor that of the engraver is given, and the frame is missing. In the manuscript annotations of the second group, different hands can be discerned – Candolle's in ink (e.g. Fig. 4, here wrongly annotated as *C. divaricatus* L'Hér. instead of *C. anagyrius*) and another, so far unidentified hand in pencil, probably written at a later date.

Although no descriptions or pertinent texts are associated with the engravings, it is nevertheless possible to discover a little information on the background of the plants illustrated. *Salvia tiliifolia* Vahl, an herbaceous annual plant from tropical Mesoamerica provided in *L'Heritier's Reliquiae* with the name of the plant (with the original spelling “*Salvia tiliaefolia*”), the name of the illustrator and the engraver, all printed and framed, is documented in the famous Collection des Vélins, today conserved in the Bibliothèque Centrale of the MNHN in Paris (i.e. vol. 19: tab. 53, undated and ascribed to Gérard van Spaendock though possibly by Pierre-Joseph Redouté). Another engraving provided in *L'Heritier's Reliquiae* represents *Solanum giganteum* Jacq., a large, prickly-stemmed shrub to small tree native in tropical and southern Africa. It is based on a dated grisaille by Pierre-Joseph Redouté with his name stamped in black on it conserved in the Collections Artistiques de l'Université in Liège (LAMY, 2017). This is set out in detail here, in order to exemplify the complexity of the miscellaneous engravings forming part of *L'Heritier's Reliquiae*.



Fig. 2. – *Hymenopappus scabiosaeus* L'Hér. Copper engraving based on P.-J. Redouté, 1788. [*L'Heritier's Reliquiae*] [Bibliothèque, Conservatoire et Jardin botaniques de Genève]



Fig. 3. – *Solanum muricatum* Ait. Copper engraving based on P.-J. Redouté, no date. [L'Héritier's *Reliquiae*] [Bibliothèque, Conservatoire et Jardin botaniques de Genève]

Staatsbibliothek zu Berlin, *Tabulae ineditae*: An enigma solved

Twelve of the unfinished engravings and four of the finished engravings discussed above (see Table 1) can be associated with finished engravings, printed in black, kept and bound in a single folio volume in the Staatsbibliothek zu Berlin (SBB: shelf mark 2° Ma 11635-Tab. ined.). This book, which has not been provided with a printed title page, has been catalogued with the provisional title *Tabulae ineditae* by the librarians of the Staatsbibliothek. They rightly associated these engravings with L'Héritier's *Stirpes novae*, which remained incomplete with the last published engraving being tab. 84. There is logic behind this interpretation: the engravings in the *Tabulae ineditae* are numbered 85–107, 109–124, though tab. 117 carries in error the number “107”. In short, the four finished, but still unnumbered engravings of the *L'Heritier's Reliquiae* are identical to tab. 120–121 and tab. 123–124, the twelve unfinished engravings have their finished equivalents in tab. 85–86, 88, 90–91, 95–96, 106, 109, 111, 114–115. For example, the unfinished engraving showing *Cytisus anagyrius* (Fig. 4) in Geneva has its equivalent in the finished engraving (Fig. 5) in Berlin. There are two anomalies: the colour print of *Solanum muricatum* in *L'Heritier's Reliquiae* in Geneva (Fig. 3)

has a black equivalent in the *Tabulae ineditae* in Berlin; because of its size, tab. 107 in Berlin remained without a frame like its equivalent in Geneva. Furthermore, the *Tabulae ineditae* contains re-issues of the engravings first published in the two leaflets *Michauxia* and *Virgilia* (Table 1). These carry additional numbers, i.e. tab. 116 (Fig. 6) and tab. 117 illustrating *Michauxia campanuloides*, tab. 118 and 119 illustrating *Virgilia helioides* L'Hér.

Although very rare, the *Tabulae ineditae* is not a unique item. Copies conserved in Cambridge (Cambridge University, Botany School), Kew (Royal Botanic Gardens), London (Natural History Museum, Lindley Library, Linnean Society), Paris (Bibliothèque Centrale, MNHN) and Pittsburgh (Hunt Botanical Library) have been traced and a personal inspection made (BUCHHEIM, 1965: 43, 53). However, the copy in the Staatsbibliothek is only mentioned in this paper, but not analysed. The copy owned by Giuseppe Moretti (1782–1853) and explicitly stated in the *Iconum botanicarum index* (PRITZEL, 1866; 2: xii) to possess “40 unedirte Tafeln [40 unpublished plates]” seems to be kept today in the Biblioteca dell' Orto Botanico of Padua University. Due to repair works, this library is temporarily closed and therefore the Moretti copy could not be analysed by the present authors. Since the bibliographer

Table 1. – Conspectus of illustrations in *Tabulae ineditae* (SBB) and in *L'Heritier Reliquiae* (CJBG) with annotations. With the exception of tab. 91, 94 and 107 copper engravings based on Pierre-Joseph Redouté. Tab. 108 is missing in all known copies of “Tab. ined.” (see BUCHHEIM, 1965). Abbreviations: a.l.l. = avant la lettre; + / – = present / absent.

Tab.	Plant name	<i>Tabulae ineditae</i>		<i>L'Heritier's Reliquiae</i>	
		+ / –	remarks	+ / –	remarks
85	<i>Spartium nubigenum</i> Ait. [as <i>nubigena</i>]	+		+	a.l.l.
86	<i>Spartium virgatum</i> Ait.	+		+	a.l.l.
87	<i>Spartium patens</i> L.	+		–	
88	<i>Spartium umbellatum</i> L'Hér.	+		+	a.l.l., unframed
89	<i>Spartium album</i> Desf.	+		–	
90	<i>Spartium ferox</i> Poir.	+		+	a.l.l., unframed
91	<i>Genista triquetra</i> L'Hér.	+		+	a.l.l., unframed
92	<i>Genista pedunculata</i> L'Hér.	+		–	
93	<i>Genista linifolia</i> L.	+		–	
94	<i>Cytisus biflorus</i> L'Hér.	+		–	
95	<i>Cytisus anagyrius</i> L'Hér.	+	Fig. 5	+	a.l.l., unframed; Fig. 4
96	<i>Cytisus foliolosus</i> Ait.	+		+	a.l.l., unframed
97	<i>Cytisus triflorus</i> L'Hér.	+		–	
98	<i>Solanum cornutum</i> Lam.	+		–	
99	<i>Solanum pyracanthos</i> Lam.	+		–	
100	<i>Solanum xanthocarpum</i> Schrad.	+		–	

Tab.	Plant name	Tabulae ineditae	L'Heritier's Reliquiae
		+ / – remarks	+ / – remarks
101	<i>Solanum fuscatum</i> L.	+	–
102	<i>Solanum ciliatum</i> Lam.	+	–
103	<i>Solanum milleri</i> Jacq.	+	–
104	<i>Solanum polyacanthos</i> L'Hér. ex Dunal [as <i>polycanthos</i>]	+	–
105	<i>Solanum lanceifolium</i> Jacq. [as <i>lanceaeifolium</i>]	+	–
106	<i>Solanum muricatum</i> Ait.	+	+ annotated '105', printed in color; Fig. 3
107	<i>Solanum giganteum</i> Jacq.	+ a.l.l., unframed	+ a.l.l., unframed
109	<i>Solanum pinnatifidum</i> Lam.	+	+ a.l.l., unframed
110	<i>Solanum multifidum</i> Lam.	+	–
111	<i>Solanum corymbosum</i> Jacq.	+	+
112	<i>Solanum nodiflorum</i> Jacq.	+	+ a.l.l., unframed
113	<i>Solanum procumbens</i> Lour.	+	–
114	<i>Solanum auriculatum</i> Ait.	+	+ a.l.l.
115	<i>Cestrum campanulatum</i> Lam.	+	+ a.l.l., unframed
116	<i>Michauxia campanuloides</i> L'Hér.	additional number 1; Fig. 6	– only text, no illustration
117	<i>Michauxia campanuloides</i> L'Hér.	+ additional number 2	– only text, no illustration
118	<i>Virgilia helioides</i> L'Hér.	+	+ part of <i>Virgilia</i> , different plate number, i.e. 1
119	<i>Virgilia helioides</i> L'Hér.	+ additional number 2	+ part of <i>Virgilia</i> , different plate number, i.e. 2
120	<i>Tricratus admirabilis</i> L'Hér. ex Willd.	+	+ two copies
121	<i>Cissus biternata</i> L'Hér.	+ Fig. 9	+
122	<i>Broussonetia papyrifera</i> (L.) L'Hér. ex Vent.	+	–
123	<i>Salvia tiliifolia</i> Vahl [as <i>tiliaefolia</i>]	+	+
124	<i>Chrysanthemum pinnatifidum</i> L. f.	+	+
–	<i>Buchozia coprosimoides</i> L'Hér.	–	+ part of <i>Buchozia</i>
–	<i>Hymenopappus scabiosaeus</i> L'Hér.	–	+ part of <i>Hymenopappus</i> ; Fig. 2
–	<i>Louichea cervina</i> L'Hér.	–	+ part of <i>Louichea</i>
–	<i>Oxybaphus viscosus</i> (Cav.) L'Hér. ex Willd.	–	+
–	<i>Podocarpus elongatus</i> (Ait.) L'Hér. ex Pers.	–	+
–	“ <i>Salvia digitata</i> ”	–	+
–	<i>Centaurea</i> sp.	–	+ a.l.l.
–	<i>Solanum</i> sp.	–	+ 2 different plates – all a.l.l.
–	<i>Teucrium abutiloides</i> L'Hér.	–	+
–	<i>Fabaceae</i>	–	+ 5 different plates – all a.l.l.



Fig. 4. – *Cytisus anagyrius* L'Hér. (= *Adenocarpus hispanicus* (Lam.) DC.). Copper engraving based on P.-J. Redouté, avant la lettre, no date. [L'Heritier's Reliquiae] [Bibliothèque, Conservatoire et Jardin botaniques de Genève]



Fig. 5. – *Cytisus anagyrius* L'Hér. (= *Adenocarpus hispanicus* (Lam.) DC.). Copper engraving based on P.-J. Redouté, no date. [Tabulae ineditae: tab. 95] [© Staatsbibliothek zu Berlin]

Georg August Pritzel (1815–1874) had studied the Moretti copy and glued a list of the plant illustrations it contains into the copy of *Tabulae ineditae* in the Staatsbibliothek, it is no surprise that all names appear in his *Iconum botanicarum index* (PRITZEL, 1866). Astonishingly, the more recent standard list of published plant illustrations (STAPF, 1929–1931) does not include the images contained in the *Tabulae ineditae*.

Unfortunately, the catalogues of the Staatsbibliothek do not provide precise information on the year of acquisition of their *Tabulae ineditae*, but it is evident from the entry in the Alter Realkatalog [old subject catalogue] that the volume arrived in the library in the second half of the nineteenth century, many years after the auction of L'Héritier's library in Paris.

The engravings based on drawings by Redouté and others

All engravings of the volume in the Staatsbibliothek are based on drawings of Pierre-Joseph Redouté, with the exception of tab. 91 based on Louis Frairet (Freret, *fl.c.* 1790; see BUCHHEIM, 1965), and tab. 94 based on Henri-Joseph Redouté (1766–1852), the younger brother and assistant of Pierre-Joseph. The situation is more complex for *L'Heritier's Reliquiae*: all unfinished engravings with equivalents in the Staatsbibliothek are based on Pierre-Joseph Redouté, while all unfinished engravings without equivalents remain anonymous. However, one of the anonymous engravings documenting a legume, possibly a species of *Lens* Mill., carries Pierre-Joseph's signature, which implies that at least in this case he was the botanical illustrator of the drawing used by the engraver. All the finished engravings in *L'Heritier's Reliquiae* are based on Pierre-Joseph with two exceptions: the illustrations documenting *Oxybaphus viscosus* (Cav.) L'Hér. ex Willd. and *Podocarpus elongatus* are based on drawings by James Sowerby (1757–1822). While in London, L'Héritier had commissioned both Pierre-Joseph Redouté, who had come over to England, and Sowerby, who was based in London, to produce botanical illustrations for him (HENDERSON, 2015). Since Sowerby is not known to have visited Paris it is likely that the illustrations of these two species were based on specimens cultivated in England.

Coloured prints of the engravings tab. 85–107, 109–124 are known from copies in e.g. the Hunt Botanical Library in Pittsburgh, and the Naturhistorisches Museum in Vienna (fide BUCHHEIM, 1965: 44). However, the Pittsburgh copy could be shown to consist of colour prints only, with the exception of tab. 121 which was finished by hand with a colour wash (Charlotte Tancin, pers. comm.). In addition, the Cymmrodorion Collection in the National Museums & Galleries of Wales, Cardiff is reported to keep a coloured [sic] print of *Michauxia campanuloides* (LAZARUS & PARDOE, 2003).

The workflow in Pierre-Joseph Redouté's studio

It is tempting to speculate briefly about the workflow in Pierre-Joseph Redouté's studio when he was engaged by L'Héritier. The selection of the species to be depicted, which was certainly the first step in this process, was always done by the commissioner, i.e. L'Héritier, who probably often also selected the specimen to be documented. He probably also pointed out which details, such as an individual anther or a cross section of a fruit he wished to see illustrated. The finished drawing, a pencil, a grisaille or a water-colour, as a rule without the name of the plant, was then submitted to L'Héritier for control and, if necessary, amendment. Then, the finished drawing was passed on to the engraver who engraved the copper plate and submitted a proof pull, again without any lettering (this is therefore called *avant la lettre*), together with the finished drawing for comparison, control and correction. Having completed this work, the proof pull was then signed by Pierre-Joseph Redouté, thereby approving its concordance with the drawing. The next step in the production was determined by L'Héritier. He would give orders which plant name and which plate number were to be engraved in the copper plate, to which the names of the plant illustrator and the engraver as well as the frame were in this stage added. This latter work was often done by specialists, because they had to engrave not only in calligraphy but also at the same time in mirror-face. After a second proof print had been taken, the finished copper plate was passed to the printers, who either printed in monochrome (e.g. in black or in green) or in polychrome. The latter, more sophisticated approach made use of different hues of printers' ink that were carefully applied to the engraved plate. Subsequently the surplus ink would be wiped off the copper plate, a sheet of paper put on the inked plate and passed through the press. The final result would be a colour print produced from a single printing form.

In short, a minimum of three hands were involved: the illustrator, whose name was always given in the lower left-hand corner of the engraving; the engraver, whose name was always given in the right hand corner; and the printer, who as a rule remained anonymous.

A London connection

In 1789 a work in three volumes with title *Hortus kewensis; a catalogue of the plants cultivated in the Royal botanic garden at Kew* appeared in London, with William Aiton (1731–1793) indicated on the title page as its author (AITON, 1789). However, the text was largely the result of the efforts of Daniel Solander (1733–1782) and Jonas Dryander (1748–1810), the successive librarians of Sir Joseph Banks (MABBERLEY, 2019). In contrast to the title, this work also includes plants cultivated in other gardens in the London area. In the



Fig. 6. – *Michauxia campanuloides* L'Hér. Copper engraving based on P.-J. Redouté, no date. [Tabulae ineditae: tab. 116] [© Staatsbibliothek zu Berlin]

bibliography several works by L'Héritier are listed, among them *Buchozia*, *Cornus* and *Michauxia*, which had appeared just the year before, a fact that testifies to the close connections which existed between Paris and London before the French Revolution and the Napoleonic pause. *Teucrium abutiloides* L'Hér., a name for a critically endangered endemic to Madeira validated in the fourth installment of the *Stirpes novae* in March–April 1788 and still accepted today, offers a good example: in the following year this taxon was already listed in the *Hortus kewensis*. The engraving showing *T. abutiloides* is based on a grisaille by Pierre-Joseph Redouté kept in the Fitzwilliam Museum, Cambridge (PD.122-1972.73) and may well have been prepared during L'Héritier's and Redouté's joint stay in England in 1787. More surprising, however, is the fact that two works by L'Héritier are listed with the explicit note "not yet published". One of them is "Solana aliquot rariora", apparently a title ad interim for a text that remains unpublished, and some of the plates this work was to include were even quoted in the *Hortus kewensis*. The entry for, e.g. *Solanum auriculatum* Ait. contains the brief reference "L'herit. solan. t. 1" and, *S. muricatum* contains the brief note "L'Herit. solan. t. 6". The two references are elements of the protologues of the respective names. However, the two engravings annotated *S. auriculatum* and *S. muricatum*, i.e. tab. 106 and tab. 114 of the *Tabulae ineditae*, can only be selected as lectotypes if it can be shown that they were available to Dryander before the *Hortus kewensis* was published, which is most unlikely. The numbers 1 and 6 occur also in a manuscript list in the Archives of the CJBG (L'HÉRITIER DE BRUTELLE, s.d.; see below). Similar references occur in *Hortus kewensis* for a few species of the genera *Cytisus* Desf., *Genista* L. and *Spartium* L., e.g. in the entry *S. decumbens* Durande we spot the note "Genista pedunculata L'Her. stirp. nov. tab. 89". Again there is no concordance between the published number(s) in the *Hortus kewensis* and those in the Conspectus fasciculi septimi of the *Stirpes novae*, a preview of the seventh fascicle, on the one, and the numbers of the *Tabulae ineditae* on the other hand. Apparently, the numbering was changed prior to the printing process for the illustrations of *Cytisus*, *Genista* and *Spartium* to appear on tab. 85–97 (for further discrepancies between L'Héritier's letters to Dryander and the preview see BUCHHEIM, 1965: 42–43). As explained above, the renumbered engravings can hardly be used for lectotypification of the names *Cytisus anagyrius* (tab. 95), *Genista pedunculata* L'Hér. (tab. 92) and *Spartium umbellatum* L'Hér. (tab. 88) respectively. *Cytisus anagyrius* is regarded today as synonym of *Adenocarpus hispanicus* (Lam.) DC. (J. Compton, pers. comm.), *Genista pedunculata* as a synonym of *Cytisus decumbens* (Durande) Spach (POWO, 2021) and *Spartium umbellatum* is the basionym for *Genista umbellata* (L'Hér.) Poir. (APD, 2021).

On the written request of his commissioner, Pierre-Joseph Redouté had come over to London in 1787 to document rare or

interesting plants for L'Héritier, both living and permanently preserved (HAMY, 1905). Redouté depicted material under the care of Aiton in Kew and then returned to Paris with his drawings. Apparently, lists of the engravings to be prepared and published in Paris (BRITTEN & WOODWARD, 1905) were sent back to London, so that Dryander could refer to them when finishing his manuscript for *Hortus kewensis*. This is explained in a letter sent by Banks in London to L'Héritier in Paris on 29 April 1788 stating "[. . .] as you in your stay here [in London] last year [1787] took drawings of most of our best plants [. . .] I must request you to put me in possession of a list of your drawings made in the English gardens, that I may not inadvertently interfere with you" (cited in CARTER, 1988: 252). The archives of the CJBG keep a copy of one of these lists apparently sent by L'Héritier to London noting in his hand e.g. "t. 6 Solanum muricatum" (Fig. 7) (L'HÉRITIER DE BRUTELLE, s.d.). In return Dryander sent the first sheets of the *Hortus kewensis* to L'Héritier in Paris, who acknowledged receipt on 20 July 1788 (STAFLEU, 1963b).

Information on the provenance of the material documented in the other engravings (both in the *Tabulae ineditae* and in *L'Heritier's Reliquiae*) is totally lacking, as is the year in which the respective illustrations were prepared by the illustrator(s). There is a single exception: the grisaille depicting *Solanum giganteum* (see above) is dated "1788" (LAMY, 2017), the year after Redouté's return from England.

A Berlin connection

In the fourth edition of Linnaeus's *Species Plantarum* by Carl Ludwig Willdenow (1765–1812), professor at the Collegium medico-chirurgicum in Berlin since 1798 (WAGENITZ & LACK, 2015), four references to "L'Herit. monogr. cum icon." can be seen. Two of them are found in the entries for *Hymenopappus scabiosaeus* (WILLDENOW, 1803) and *Michauxia campanuloides* (WILLDENOW, 1799) and indicate that Willdenow either possessed or had access to copies of two of L'Héritier's leaflets.

The other two references are more interesting: they pertain to the entries of *Oxybaphus viscosus* (WILLDENOW, 1797) and *Tricratus admirabilis* L'Hér. ex Willd. (WILLDENOW, 1798). Apparently Willdenow had received the unnumbered engravings, of which today only the copies in Geneva are known, and cited them in his bibliography (WILLDENOW, 1797: xxiv) and the pertinent entries. Both engravings are mentioned with the note "s. l. et a. 1 tab. sine textu [without place and year of publication, plate 1 without text]" in a standard bibliography (PRITZEL, 1871–1882: n° 5277–5278). However, they seem to have been seen only by Willdenow and Pritzel, who may have studied the engravings in Geneva or Willdenow's copies in Berlin. By then, the latter had possibly been acquired by the Königliche Bibliothek in Berlin, now Staatsbibliothek, where Pritzel was one of the curators until 1872 (STAFLEU & COWAN,

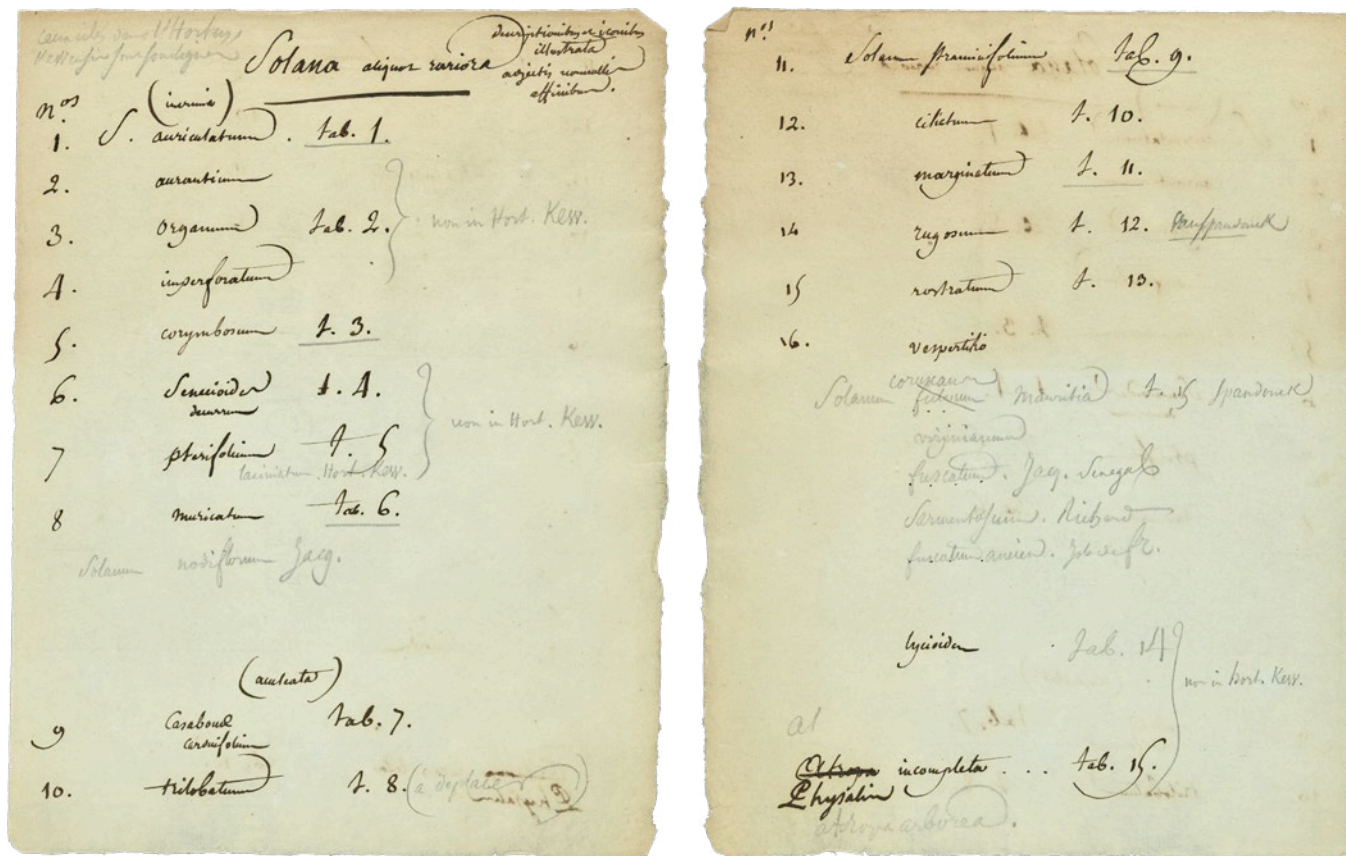


Fig. 7. – Manuscript list of species of the genus *Solanum* L. in L'Héritier's hand, no date. [Archives, Conservatoire et Jardin botaniques de Genève]

1983). In any case, the engraving illustrating *Oxybaphus viscosus* cannot be regarded as published in the sense of the ICN, while the engraving showing *Tricratus admirabilis* has been re-issued as tab. 120 in the *Tabulae ineditae* with the number added. They were both cited as “diss. ic. absq. text. [dissertation image without text]” in the *Prodromus* (CHOISY, 1849), almost five decades after their acquisition by Candolle.

The two engravings illustrating *Oxybaphus viscosus* and *Tricratus admirabilis* are cited with a reference to Willdenow in *Index Londinensis* (STAPF, 1929–1931) which indicates that they have not personally been studied by the compilers. *Oxybaphus viscosus* is currently regarded as a synonym of *Mirabilis viscosa* Cav. and *Tricratus admirabilis* a synonym of *Abronia umbellata* Lam.

Discontinuing the publication of the *Stirpes novae*

CANDOLLE (2004: 192), in his *Mémoires et souvenirs*, recorded the purchase of the herbarium and manuscripts of L'Héritier in 1801, and concerning the latter wrote “Je me mis immédiatement à ranger les manuscrits et je préparai deux livraisons qui devaient faire suite aux *Stirpes novae* de L'Héritier, l'une

composée de genêts et cytises annoncés à la fin de la dernière livraison publiée, l'autre composée des solanums. [I immediately started to arrange the manuscripts and prepared two installments which were to follow L'Héritier's *Stirpes novae*, one to contain the brooms and laburnums as announced at the end of last installment published, the other consisting of the solanums]”. This statement perfectly agrees with the sequences of plates in the *Tabulae ineditae* (see Table 1) and the archival record kept in the CJBG, which includes a title page for the eighth, unpublished installment of the *Stirpes novae* (Fig. 8). Candolle continued “La masse des dessins inédits était de près de huit cents sur lesquels on aurait pu facilement trouver deux ou trois cents planches encore nouvelles pour la science. Ce travail considérable aurait absorbé plusieurs années de ma vie sans grande utilité. J'ai eu le Bonheur d'avoir à faire avec un libraire tellement léger et négligent qu'il n'a pas même publié les livraisons que j'avais préparées et que j'ai été dispensé de remplir un engagement fait, dans mon ardeur, pour obtenir l'herbier et dont l'exécution eut fâcheuse pour moi. Il m'est resté de cette affaire l'herbier et les manuscrits de mon ancien protecteur et Garneri a laissé perdre par négligence une masse énorme de dessins et de gravures prêtes à paraître. Par sa faute, tout le bénéfice a été pour moi et la perte pour lui! [The mass

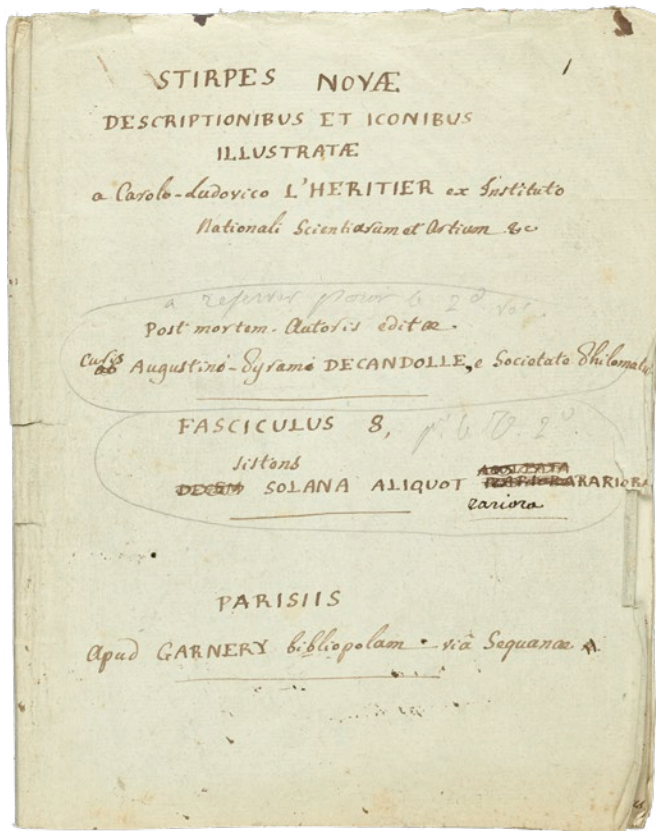


Fig. 8. – Manuscript title page for the eighth installment of L'Heritier's *Stirpes novae* in Candolle's hand, no date. [Archives, Conservatoire et Jardin botaniques de Genève]

of unpublished drawings numbered up to eight hundred from which it would have been easy to find two or three hundred plates still new to science. This significant work would have absorbed several years of my life without great effect. I was lucky to deal with such an easy-minded and negligent book dealer that he did not even publish the installments which I had prepared and I was [thus] exempted from fulfilling a commitment made in my enthusiasm in order to obtain the herbarium and that would be troublesome for me to accomplish. Of this transaction the herbarium and manuscripts of my former protector remained for me, and Garnery by his negligence permitted the loss of an enormous mass of drawings and engravings ready for appearance. Because of his mistake, the win was exclusively mine and the loss was his!]" (CANDOLLE, 2004: 192).

These sentences shed light on the larger context, though admittedly they explain only part of the story. It appears that the plates 84–107, 109–114 in the Staatsbibliothek and a few other libraries (see above) are all that were finished of the seventh and eighth installments of the *Stirpes novae* and subsequently distributed to correspondents (BRITTEN & WOODWARD, 1905) or sold, at the latest after the auction in 1805. The accompanying text prepared by L'Heritier and/or Candolle was never printed and ended up in the archives of

the CJBG (CANDOLLE, s.d.; L'HÉRITIER DE BRUTELLE, s.d.). The plates 115–124 originated in part from the leaflets, the rest, i.e. the engravings documenting e.g. *Broussonetia papyrifera* (L.) L'Hér. ex Vent., *Cissus biternata* L'Hér., *Salvia tiliifolia*, *Teucrium abutiloides*, are probably best interpreted as odd finished engravings which for one reason or other were not included in one of the other publications by L'Heritier.

Enigmas remain. Was the engraving process (including the additions of the names of the plant depicted, of the illustrator, engraver and plate number) finished at the moment of L'Heritier's unexpected death, or was it subsequently commissioned by Garnery, which would imply that he had also bought the printing forms? Was the printing process of the c. 8 sets of pulls finished before L'Heritier's death or was it subsequently commissioned by Garnery? Was Pierre-Joseph Redouté involved in this process, as recently hypothesized (BUCHHEIM, 1965: 45)? Why did Garnery lose interest in the project after having asked Candolle to finish the texts and apparently after having published two part titles (for details see BUCHHEIM, 1965: 36)? When and how did the short list of correspondents or libraries receive the finished engravings tab. 85–107, 109–124, albeit without text? Why were the finished engravings not included in the auction? What happened to the eight hundred drawings not used? Why did Candolle not care to acquire a set of the finished engravings, i.e. tab. 85–107, 109–124, which he did not list in his amazingly complete "Bibliotheca botanica" (CANDOLLE, 1817: 69)? All this we do not yet know.

Taxonomical notes on the *Tabulae ineditae*

It is beyond the scope of this contribution to elucidate the identity of all taxa illustrated in *L'Heritier's Reliquiae* and the *Tabulae ineditae*. However, the fact that at least eight public libraries are known to possess a copy of the "Tab. ined." has a nomenclatural consequence. As previously stated (BUCHHEIM, 1965: 43), tab. 121 (Fig. 9) has to be regarded as the place of validation of the name *Cissus biternata* L'Hér., since it includes an analysis (TURLAND et al. 2018; Art. 38.8–9); unfortunately the present authors are unable to give a precise publication date. As a consequence, the combination *C. biternata* (Baker) Planch. [1887] (= *Cyphostemma microdipterum* (Baker) Desc.) is an illegitimate later homonym of *C. biternata*.

In contrast and for good reason, the name *Podocarpus elongatus*, which appears on an engraving in *L'Heritier's Reliquiae* for a conifer native to South Africa, Malawi, Zambia and Zimbabwe (FARJON, 2010), is a unicate item in Geneva and consequently does not qualify as published or distributed in the sense of ICN. This name was validated by Christiaan Hendrik Persoon (1755–1837) when he transferred *Taxus elongata* Ait. to his new genus *Podocarpus* L'Hér. ex Pers. as *P. elongatus*, significantly citing L'Heritier as the author of



Fig. 9. – *Cissus biternata* L'Hér. Copper engraving based on P.-J. Redouté, no date. [Tabulae ineditae: tab. 121] [© Staatsbibliothek zu Berlin]

both the generic name and the specific epithet (PERSOON, 1807: 580). As a matter of fact, L'Héritier is reported to have presented a *Mémoire sur le Taxus elongata* to the Académie royale des sciences in Paris (DELAMÉTHÉRIE, 1791), which had elected him an associate member on 17 May 1790 (STAFLEU, 1963b). This treatise remained unpublished, though apparently its content was known by the cognoscenti in Paris, among them Persoon who had lived in the French capital since 1802 (STAFLEU & COWAN, 1983).

Taxonomy and nomenclature of the names validated in L'Héritier's leaflets

The taxonomic and nomenclatural clarifications presented below are restricted to the five genera and their respective type species published by L'Héritier in his leaflets in 1788 (STAFLEU & COWAN, 1981).

Buchozia L'Hér., *Buchozia* [unpaginated]. VII–XII.1788.

Typus: *B. coprosmoides* L'Hér. [nom. illeg.] = *B. japonica* (Thunb.) Callm.

= *Serissa* Comm. ex Juss., Gen. Pl.: 209. 1789, **syn. nov.**

Buchozia japonica (Thunb.) Callm., **comb. nov.**

= *Lycium japonicum* Thunb. in Nova Acta Regiae Soc. Sci. Upsal. 3: 207. 1780. = *Serissa japonica* (Thunb.) Thunb., Nov. Gen. Pl. 9: 132. 17.XII.1798, **syn. nov.**

– *Buchozia coprosmoides* L'Hér., *Buchozia* [unpaginated]. VII–XII. 1788 [nom. illeg.].

Lectotypus (designated here by Callmänder & Lack): **JAPAN:** “prope Nagasaki et alibi vulgare”, s.d., *Thunberg s.n.* (UPS-THUNB n° 5316 image!; isolecto-: MPU [MPU014200] image!, UPS-THUNB n° 5317 image!, UPS-THUNB n° 5318 image!).

Notes. – The genus *Buchozia* (*Rubiaceae*) was published a year before Antoine Laurent de Jussieu (1748–1836) validated the name *Serissa* Comm. ex Juss. on 4 August 1789 (STAFLEU, 1963a) based on a cultivated plant in Mauritius collected by Philibert Commerson (1727–1773). Jussieu in CUVIER (1817: 409) wrote regarding *Buchozia* “L'Héritier avait donné ce nom à un genre de plantes plus connu sous celui de *Serissa* [L'Héritier had given this name to a genus of plants better known as *Serissa*]”.

Buchozia coprosmoides L'Hér. is a superfluous and illegitimate name and typified by the type of *Lycium japonicum* Thunb. because that species, whose epithet should have been adopted, was cited as synonym (TURLAND et al., 2018: Art. 7.5).

The genus *Buchozia* predates *Serissa* and a new combination is necessary and made here. Original material deposited in UPS consists of three sheets (UPS-THUNB n° 5316,

UPS-THUNB n° 5317, UPS-THUNB n° 5318) with a fragment in MPU [MPU014200]. The best-preserved sheet is designated here as the lectotype. *Buchozia japonica* is native from southeast Asia (China to Japan) and is a commonly cultivated shrub.

The dedication of L'Héritier to Buchoz speaks for itself: “To the memory of Pierre-Joseph Buc'hoz, Doctor of Medicine, who was among the passing jumble of parasitic authors and of almost no botanical importance, but was more often very much known as injurious to science.” (translated from Latin by R. Gereau).

CANDOLLE (1830: 575) quoted the engraving included in *L'Heritier's Reliquiae* which he had in his library when writing his account of the genus *Serissa*, the name he used for *Buchozia*.

Hymenopappus L'Hér., *Hymenopappus* [unpaginated]. I.1788.

Typus: *H. scabiosaeus* L'Hér.

Hymenopappus scabiosaeus L'Hér., *Hymenopappus* [unpaginated]. I.1788.

Lectotypus (designated here by Callmänder & Lack): **UNITED STATES. South Carolina:** “Caroline”, s.d., *Fraser s.n.* (G-DC [G00456651]!; isolecto-: G [G00341937]!).

Notes. – *Hymenopappus scabiosaeus* (*Asteraceae*) was based on plants collected by Michaux and, separately, by John Fraser (1750–1811) in Carolina. The best preserved material in G-DC, collected by Fraser and probably originating from the L'Héritier herbarium, is designated here as lectotype. A duplicate originating from the Guillaume Antoine Lemonnier (1723–1797) herbarium in G is considered here as a duplicate.

Hymenopappus is a North American (10 spp.) and Mexican (1 sp.) genus of *Asteraceae* (TURNER, 1956).

CANDOLLE (1836: 658) quoted the engraving included in *L'Heritier's Reliquiae* when writing his account of the genus *Hymenopappus*.

Louichea L'Hér., *Louichea* [unpaginated]. I.1788.

Typus: *L. cervina* L'Hér.

= *Pteranthus* Forssk., Fl. Aegypt.-Arab.: 36. 1775.

Louichea cervina L'Hér., *Louichea* [unpaginated]. I.1788.

Lectotypus (designated here by Callmänder & Lack): **ALGERIA or TUNISIA:** “Prope Cafsam et Mascar in arvis argillosis et arenosis”, s.d., *Desfontaines s.n.* (P-Desf [P00667259] image!; isolecto-: FI-W [FI018933] image!, G [G00341949]!).

= *Pteranthus dichotomus* Forssk., Fl. Aegypt.-Arab.: LXII, 36. 1775.

Notes. – *Louichea* (*Caryophyllaceae*) was published in January 1788 (STAFLEU, 1963a) ahead of its inclusion in *Stirpes*

novae (L'HÉRITIER DE BRUTELLE, 1785–1791: 135). In 1791, L'Héritier recognised that his new genus represented the same genus as *Pteranthus* Forssk. validated posthumously by Pehr Forsskål (1732–1763) in 1775 and published the new combination *Louichea pteranthus* (L.) L'Hér. (see IAMONICO et al., 2015), a later synonym of *Pteranthus dichotomus* Forssk.

Louichea cervina is based on a Desfontaines collection that the latter botanist redescribed in his *Flora Atlantica* with the superfluous and illegitimate name *Pteranthus echinatus* Desf. (DESFONTAINES, 1798: 145). Original material has been located in P-Desf., FI-W and G. The P-Desf collections is designated here as the lectotype because it is a more complete specimen and it is complemented by two separate little notes in Desfontaines's handwriting.

An interesting sheet in P-JU [P00663078] includes (1) a specimen cultivated in the garden of Jacques-Martin Cels (1740–1806) in Montrouge given to Jussieu by Étienne-Pierre Ventenat (1757–1808) in 1792 (see CALLMANDER et al., 2017) and (2) a packet with seeds sent by Forsskål to Bernard de Jussieu (1699–1777).

Louichea cervina is not cited in the *Prodromus*.

Michauxia L'Hér., *Michauxia* [unpaginated]. IV.1788 [nom. cons.]

Typus: *M. campanuloides* L'Hér.

Michauxia campanuloides L'Hér., *Michauxia* [unpaginated]. IV.1788.

Lectotypus (designated by LACK & CALLMANDER, in press): **LEBANON:** “Mt. Liban”, s.d., *Labillardière s.n.* (G [G00341946]!; isolecto-: FI-W [FI018925] image!).

Notes. – The genus *Michauxia* (*Campanulaceae*) and its type species *M. campanuloides* have recently been the subject of a comprehensive treatment (see LACK & CALLMANDER, in press).

Alphonse Candolle followed the example of his father and quoted the two engravings included in *L'Heritier's Reliquiae* when studying the genus *Michauxia* (CANDOLLE, 1830: 211, 1839: 457).

Virgilia L'Hér., *Virgilia* [unpaginated]. I–V.1788 [nom. rejic.]

Typus: *V. helioides* L'Hér.

= *Gaillardia* Foug., *Observ. Phys.* 29: 55. 1786.

Virgilia helioides L'Hér. [unpaginated]. I–V.1788.

Lectotypus (designated here by Callmander & Lack): **UNITED STATES:** “Habitat in Louisiana”, s.d., *Anon. s.n.* (G-DC [G00456995]!).

= *Gaillardia pulchella* Foug. in *Hist. Acad. Roy. Sci. Mém. Math. Phys.* (Paris, 4to) 1786: 5, tab. 1: 1788.

Notes. – *Virgilia* L'Hér. (*Asteraceae*) was rejected against *Virgilia* Poir. by the VI IBC held in Amsterdam (GREEN, 1940: 105) based on a proposal by REHDER et al. (1935).

A specimen in G-DC originating from the L'Héritier herbarium is designated here as the lectotype of *Virgilia helioides*.

CANDOLLE (1836: 651–652) quoted the engraving included in *L'Heritier's Reliquiae* when writing his account of the genus *Gaillardia* Foug., the name he accepted for *Virgilia* L'Hér.

Epilogue

When Gérard Van Spaendonck (1746–1822), miniature painter at the Jardin du Roi in Paris and later one of the professors at the Muséum d'Histoire naturelle died, a major figure in the natural sciences wrote the obituary, i.e. Georges Cuvier (1769–1832), the father of vertebrate paleontology. He stated: “Aujourd'hui des ouvrages nombreux et magnifiques ont multiplié à l'infini des images aussi reconnaissables que les originaux eux-mêmes. Les Redoutés [...] ont multiplié le Muséum d'histoire naturelle; ils ont fourni en quelque sorte au monde entier des cabinets complets et portatifs [Today, numerous and magnificent works have endlessly multiplied images as recognizable as the originals themselves. The Redoutés [...] have multiplied the Muséum d'histoire naturelle [in Paris]; in a certain sense they have provided the whole world with complete and portable cabinets]” (CUVIER, 1827: 439). At an early stage in his life Candolle had acquired with the *L'Heritier's Reliquiae* a tiny fraction of such a portable natural history cabinet: texts and images on paper, well known as a most durable carrier of information.

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Unpublished sources

- CJBG: Bibliothèque, Conservatoire et Jardin botaniques de Genève, *L'Heritier's Reliquiae*. Shelf mark Off Lhe.
- SBB: Staatsbibliothek zu Berlin, *Tabulae ineditae*. Shelf mark 2° Ma 11635-Tab. ined.
- CANDOLLE, A.-P. DE (s.d.). *Stirpes novae manuscrites. Fascicule 8, 9*. Archives, Conservatoire et Jardin botaniques de Genève.
- L'HÉRITIER DE BRUTELLE, C.-L. (s.d.). *Manuscrites*. Archives, Conservatoire et Jardin botaniques de Genève.

References

- AITON, W.T. (1789). *Hortus kewensis*. London.
- ANON. (1805). *Catalogue des livres de la bibliothèque de feu C. L. L'Heritier de Brutelle, membre de l'institut national*. Paris. [New edition of DEBURE (1802)].
- APD [AFRICAN PLANT DATABASE] (2021). Conservatoire et Jardin botaniques de Genève et South African National Biodiversity Institute, Pretoria. [http://africanplantdatabase.ch]
- BALDI, R. (2020). L'achat de l'herbier de L'Heritier de Brutelle: un malentendu historiographique. *Arch. Sci.* 71: 23–36.
- BRITTEN, J. & B.B. WOODWARD (1905). Bibliographical notes. XXXV. L'Heritier's botanical works. *J. Bot.* 43: 266–273, 325–329.
- BRUNET, J.-C. (1842–1844). *Manuel de libraire et de l'amateur de livres*. Paris.
- BUCHHEIM, G. (1965). A bibliographical account of L'Heritier's "Stirpes novae". *Huntia* 2: 29–58.
- CALLMANDER, M.W., O.D. DURBIN, H.-W. LACK, P. BUNGENER, P. MARTIN & L. GAUTIER (2017). Etienne-Pierre Ventenat (1757–1808) and the gardens of Cels and Empress Joséphine. *Candollea* 72: 87–132.
- CANDOLLE, A. DE (1830). *Monographie des Campanulacées*. Paris.
- CANDOLLE, A. DE (1839). Campanulaceae. *Prodr.* 7: 414–496, 786–792.
- CANDOLLE, A.-P. DE (1799–1805). *Plantarum historia succulentarum*. Paris.
- CANDOLLE, A.-P. DE (1817). *Regni vegetabilis systema naturale* 1. Paris.
- CANDOLLE, A.-P. DE (1830). Rubiaceae. *Prodr.* 4: 341–622, 672–673.
- CANDOLLE, A.-P. DE (1836). Compositae. *Prodr.* 5.
- CANDOLLE, A.-P. DE (1862). *Mémoires et souvenirs de Augustin-Pyramus de Candolle écrits par lui-même et publiés par son fils*. Genève.
- CANDOLLE, A.-P. DE (2004). *Mémoires et souvenirs (1778–1841)*. CANDAUX, J.D. et al. (ed.). Georg, Genève.
- CARTER, H.B. (1988). *Sir Joseph Banks 1743–1820*. London.
- CHOISY, J.-D. (1849). Nyctaginaceae. *Prodr.* 13(2): 425–458.
- CONSEIL ADMINISTRATIF [DE LA VILLE DE GENÈVE] (1922). *Compte rendu de l'Administration municipale pendant l'année 1921*. A. Kundig, Genève. [http://www.ville-ge.ch/archivesenligne/assets/archives/cra/1921/pdf/cra_1921.pdf]
- CUVIER, G. (ed.) (1817). *Dictionnaire des sciences naturelles*. Vol. 5. Ed. 2. Paris.
- CUVIER, G. (1827). Discours prononcé aux funérailles de M. Van-Spaendonck. In: *Recueil des éloges historiques lus dans les séances publiques de l'Institut de France* 3: 435–440.
- DEBURE, G. (1802). *Catalogue des livres de la bibliothèque de feu C. L. L'Heritier de Brutelle, membre de l'Institut national*. Paris.
- DELAMÉTHÉRIE, J.C. (1791). Discours préliminaire. *Observ. Phys. Hist. Nat.* 38: 3–51.
- DESFONTAINES, R.-L. (1798). *Flora Atlantica*. Vol. 1. Paris.
- FARJON, A. (2010). *A handbook of the world's conifers*. Vol. 2. Leiden.
- GREEN, M.L. (1940). Additional Nomina Generica Conservanda (Pteridophyta and Phanerogamae). *Bull. Misc. Inform. Kew* 1940: 81–134.
- HAMY, E.T. (1905). *Joseph Dombey, médecin, naturaliste, archéologue, explorateur du Pérou, du Chili et du Brésil*. Paris.
- HENDERSON, P. (2015). *James Sowerby. The enlightenment's natural historian*. Kew.
- IAMONICO, D., I. FRIIS, C.E. JARVIS & H. FREITAG (2015). Nomenclatural notes on the genus *Pteranthus* (Caryophyllaceae) with lectotypifications of the names *Camphorosma pteranthus* and *Pteranthus trigynus*, and comments on Forsskål's seeds sent from Egypt. *Taxon* 64: 816–821.
- LACK, H.W. & M.W. CALLMANDER (in press). The discovery, naming and typification of *Michauxia campanuloides* (Campanulaceae) with notes on its introduction into cultivation. *Willdenowia* 51.
- LAISSUS, Y. (1986). Le Jardin du Roi. In: TATON, R. (ed.), *Enseignement et diffusion des sciences en France au XVIIIe siècle*: 287–341. Ed. 2. Paris.
- LAMY, D. (2017). Le botaniste et le dessinateur. In: *Le pouvoir des fleurs. Pierre-Joseph Redouté (1759–1840)*: 22–27. Paris.
- LAZARUS, M.H. & H.S. PARDOE (ed.) (2003). *Catalogue of botanical prints and drawings at the National Museums & Galleries of Wales*. Cardiff.
- L'HÉRITIER DE BRUTELLE, C.-L. (1785–1791). *Stirpes novae*. Paris.
- MABBERLEY, D.J. (2019). *Botanical revelation. European encounters with Australian plants before Darwin. The Peter Crossing collection*. NewSouth Publishing, Sydney.
- PERSOON, C.H. (1807). *Synopsis Plantarum* 2. Paris.
- PLUCHET, R. (2014). *L'extraordinaire voyage d'un botaniste en Perse*. Toulouse.

- POWO [PLANTS OF THE WORLD ONLINE] (2021). Board of Trustees of the Royal Botanic Gardens, Kew. [http://powo.science.kew.org]
- PRITZEL, G.A. (1847–1852). *Thesaurus literaturae botanicae*. Leipzig.
- PRITZEL, G.A. (1855). *Iconum botanicarum index. Die Abbildungen sichtbar blühender Pflanzen und Farnkräuter*. Berlin.
- PRITZEL, G.A. (1866). *Iconum botanicarum index locupletissimus. Verzeichniss der Abbildungen sichtbar blühender Pflanzen und Farnkräuter*. Ed. 2. Berlin.
- PRITZEL, G.A. (1871–1882). *Thesaurus literaturae botanicae*. Ed. 2. Leipzig.
- REHDER, A., C.A. WEATHERBY, R. MANSFELD & M.L. GREEN (1935). Conservation of later generic homonyms. *Bull. Misc. Inform. Kew* 1935: 341–544.
- STAFLEU, F.A. (1963a). Dates of botanical publications. *Taxon* 12: 43–87.
- STAFLEU, F.A. (1963b). L'Heritier de Brutelle: the man and the work. In: *L'Heritier de Brutelle, C.-L., Sertum anglicum (1788). Fascimile with critical studies and a translation: xiii–xliii*. Pittsburgh.
- STAFLEU, F.A. (1967). The great Prodrömus. In: *Adanson, Labillardiere, De Candolle. Introductions to four of their books reprinted in the series Historiae naturalis classica: 64–100*. Lehre.
- STAFLEU, F.A. & R.S. COWAN (1981). *Taxonomic literature. Regnum Veg.* 105.
- STAFLEU, F.A. & R.S. COWAN (1983). *Taxonomic literature. Regnum Veg.* 110.
- STAPF, O. (ed.) (1929–1931). *Index Londinensis*. Vol. 1–6. Oxford.
- TURLAND, N.J., J.H. WIERSEMA, F.R. BARRIE, W. GREUTER, D.L. HAWKSWORTH, P.S. HERENDEEN, S. KNAPP, W.-H. KUSBER, D.-Z. LI, K. MARHOLD, T.W. MAY, J. MCNEILL, A.M. MONRO, J. PRADO, M.J. PRICE & G.F. SMITH (2018). International Code of Nomenclature for algae, fungi, and plants (Shenzhen Code) adopted by the Nineteenth International Botanical Congress Shenzhen, China, July 2017. *Regnum Veg.* 159.
- TURNER, B.L. (1956). A cytotoxic study of the genus *Hymenopappus* (Compositae). *Rhodora* 58: 163–186, 208–242, 259–269, 295–308.
- WAGENITZ, G. & H.W. LACK (2015). Carl Ludwig Willdenow (1765–1812). Ein Botanikerleben in Briefen. *Ann. Hist. Phil. Biol.* 17: 1–289.
- WILLDENOW, C.L. (1797). *Species plantarum* 1(1). Ed. 4. Berlin.
- WILLDENOW, C.L. (1798). *Species plantarum* 1(2). Ed. 4. Berlin.
- WILLDENOW, C.L. (1799). *Species plantarum* 2(1). Ed. 4. Berlin.
- WILLDENOW, C.L. (1803). *Species plantarum* 3(3). Ed. 4. Berlin.

Appendix

Table of contents of L'Heritier Reliquiae

Manuscript in the hand of Augustin-Pyramus de Candolle.

nempe

1° Dissertationes ab illo (paucissimis exemplaribus) editae

Virgilia – cum icon.

Buchozia – cum icon.

Louichea – cum icon.

Hymenopappus – cum icon.

Michauxia . . . icon/icones deest/desunt icones 2

Oxybaphus et Tricratus – icones tantum

2° Dissertatio inedita

Cakile.

Podocarpus icon

3° Icones fascic. VII et VIII Stirpium rariorum ineditae

English translation

Namely

1° Dissertations published (in very few copies) from that work

Virgilia – with illustration

Buchozia – with illustration

Louichea – with illustration

Hymenopappus – with illustration

Michauxia . . . illustration(s) lacking illustrations 2

Oxybaphus and Tricratus – illustrations only

2° Unpublished dissertation

Cakile.

Podocarpus illustration

3° Unpublished illustrations of rarer plants fascicles VII and VIII