adansonia

2025 • 47 • 7

From just a few to the most type-rich herbarium for *Veronica* L. (Plantaginaceae) – The effect of digitization of the Muséum national d'Histoire naturelle herbarium in Paris

Dirk C. ALBACH

art. 47 (7) — Published on 10 April 2025
www.adansonia.com

PUBLICATIONS SCIENTIFIQUES

MUSÉUM NAL HIST NATURELLE

Couverture / *Cover*:
Réalisée à partir des Figures de l'article/*Made from the Figures of the article*.

Adansonia est indexé dans / Adansonia *is indexed in:*
– Science Citation Index Expanded (SciSearch®)
– ISI Alerting Services®
– Current Contents® / Agriculture, Biology, and Environmental Sciences®
– Scopus®

Adansonia est distribué en version électronique par / Adansonia *is distributed electronically by:*
– BioOne® (http://www.bioone.org)

Adansonia est une revue en flux continu publiée par les Publications scientifiques du Muséum, Paris
Adansonia *is a fast track journal published by the Museum Science Press, Paris*

Les Publications scientifiques du Muséum publient aussi / *The Museum Science Press also publish:* ***Geodiversitas***, ***Zoosystema***, ***Anthropozoologica***, ***European Journal of Taxonomy***, ***Naturae***, ***Cryptogamie*** **sous-sections** ***Algologie***, ***Bryologie***, ***Mycologie, Comptes Rendus Palevol***

Diffusion – Publications scientifiques Muséum national d'Histoire naturelle
CP 41 – 57 rue Cuvier F-75231 Paris cedex 05 (France)
Tél.: 33 (0)1 40 79 48 05 / Fax: 33 (0)1 40 79 38 40
diff.pub@mnhn.fr / http://sciencepress.mnhn.fr

ISSN (imprimé / *print*): 1280-8571/ ISSN (électronique / *electronic*): 1639-4798

From just a few to the most type-rich herbarium for *Veronica* L. (Plantaginaceae) – The effect of digitization of the Muséum national d'Histoire naturelle herbarium in Paris

Dirk C. ALBACH
Carl von Ossietzky-Universität Oldenburg,
Carl von Ossietzky-Str. 9-11, 26129 Oldenburg
dirk.albach@uol.de

Submitted on 14 August 2024 | accepted on 18 October 2024 | published on 10 April 2025

Albach D. C. 2025. — From just a few to the most type-rich herbarium for *Veronica* L. (Plantaginaceae) – The effect of digitization of the Muséum national d'Histoire naturelle herbarium in Paris. *Adansonia*, sér. 3, 47 (7): 47-130. https://doi.org/10.5252/adansonia2025v47a7. http://adansonia.com/47/7

ABSTRACT
Digitization of herbaria has revolutionized taxonomy, bringing type specimens dispersed globally to within a mouse-click of the researcher. Still, it requires in-depth taxonomic knowledge to identify the specimens as type and often determination on the species level is difficult or impossible due to the limitations of the resolution of photos online. The digitization of the herbarium Muséum national d'Histoire naturelle in Paris (P) has brought some of the oldest and type-rich collections of plants online. After investigation and redetermination of the about 16 000 specimens of *Veronica* L. in P, I checked the type status of these. Whereas previously only eight type specimens of *Veronica* were known from P, my investigations revealed more than 100 type specimens, among them 34 new lectotypes and 177 new isolectotypes. These include those of names published by Vaillant, Lamarck and Humboldt, Bonpland and Kunth to many duplicates of collections used by Boissier and more recent French botanists. In many instances the taxonomy of the respective name has been clarified, in others they will certainly do so in the future. The respective specimens are from collections worldwide and attest to the importance and intensive collection of the general herbarium, as well as the collectors of its major subherbaria like Cosson and Drake. The study should encourage other taxonomists to pay more attention to the rich collection in P.

KEY WORDS
Digitization,
Farges,
Humboldt,
Lamarck,
Schimper,
Veronica,
new combination,
lectotypification.

RÉSUMÉ
De quelques types à l'herbier le plus riche en types de Veronica *L. (Plantaginaceae) – L'effet de la numérisation de l'herbier du Muséum national d'Histoire naturelle de Paris.*
La numérisation des herbiers a révolutionné la taxonomie, en mettant à la portée du chercheur des spécimens types dispersés dans le monde entier. Cependant, il faut des connaissances taxonomiques approfondies pour identifier les spécimens comme types et souvent la détermination au niveau de l'espèce est très difficile voire impossible en raison des limites de la résolution des photos en ligne. La numérisation de l'herbier du Muséum national d'Histoire naturelle de Paris (P) a mis en ligne certaines des collections de plantes les plus anciennes et les plus riches en types. Après avoir étudié et redéterminé les quelque 16 000 spécimens de *Veronica* L. de P, j'ai vérifié le statut type de ceux-ci. Alors qu'auparavant seuls huit spécimens types de *Veronica* étaient connus de P, mes recherches ont révélé plus de 100 spécimens types, y compris ceux des noms publiés par Vaillant, Lamarck et Humboldt, Bonpland et Kunth ainsi que de nombreux doublons de collections utilisées par Boissier et des botanistes français plus récents. Dans de nombreux cas, la taxonomie du nom respectif a été clarifiée, dans d'autres, elle le sera certainement à l'avenir. Les spécimens respectifs proviennent de collections du monde entier et témoignent de l'importance et de la collecte intensive de l'herbier général, ainsi que des collectionneurs de ses principaux sous-herbiers comme Cosson et Drake. L'étude devrait encourager d'autres taxonomistes à prêter davantage attention à la riche collection de P.

MOTS CLÉS
Numérisation,
Farges,
Humboldt,
Lamarck,
Schimper,
Veronica,
combinaison nouvelle,
lectotypification.

INTRODUCTION

An important use of herbaria is the storage of type material in the widest sense, meaning plants that served to document the diversity of plants and as "element to which the name of a taxon is permanently attached" (Turland *et al.* 2018). Types include specimens, which were labelled by the initial collectors or, later, by scientists, who considered the specimens as deviating from previously known taxa. Some of these names were published shortly after their discovery, others decades after their collection. Even herbarium names, names never used apart from herbarium labels, may, therefore, be interesting for analyzing intraspecific variation or hybridization and be used for future typification of new names. They can hint at morphological intraspecific variation that may be subtle but still characterize phylogroups delimited by phylogeographic analyses only. Still, types of published names are the most important herbarium material facilitating the scientific communication and clarifying the taxonomic identity of the respective taxon. Documentation of such herbarium material is, therefore, an important part of taxonomy and the assessment of biodiversity.

Whereas in former times, such documentation of biodiversity required extensive travelling to herbaria, often restricted to a few major herbaria, digitization of herbaria and open access via internet sites, allows searches simultaneously in several herbaria. Sites like https://plants.jstor.org, https://gbif.org or the multitude of virtual herbaria nowadays allow a more exhaustive search for specimens from the home of the researcher. For rare species, this allows identification of their taxonomic identity by providing more morphological information than the usual short protologue, whereas for common species they allow a more comprehensive analysis of intraspecific variation.

The genus *Veronica* L. is an almost cosmopolitan genus of about 450 species growing from the arctic to semideserts except the lowland tropics. Several species are widespread weeds (e.g., *V. persica*, *V. arvensis*, *V. plebeia*) and others common ornamental species (e.g., *V. longifolia*, *V. spicata, V. teucrium*). The genus has never been comprehensively monographed but commented lists of species were published by Stroh (1942) and by Elenevsky (1977) and important floristic works (e.g., Borissova 1955a; Fischer 1978, 1981) have considerably changed our understanding of the genus. In recent years, phylogenetic analyses (e.g., Albach & Chase 2001; Albach *et al.* 2004a) have led to a new infrageneric taxonomic system (Albach *et al.* 2004b; Garnock-Jones *et al.* 2007). Subsequent, more focused phylogenetic and phylogeographic analyses have further enhanced our understanding of the genus (e.g., Albach *et al.* 2006; Rojas-Andrés *et al.* 2015; Doostmohammadi *et al.* 2022). These studies have led to the necessity of typifying several names to take up the correct name for newly delimited species and infraspecific taxa (e.g., Rojas-Andrés & Martinez-Ortega 2016; Albach *et al.* 2017). Without the many digitization efforts this would not have been possible, although some characters such as hair density, distribution and curvature that are sometimes important to identify species (Albach & Fischer 2003; Rojas-Andrés *et al.* 2016) are difficult to study in digitized herbarium specimens. Nevertheless, digitized specimens allow at least to identify potential original material, reducing the necessity for loan requests, herbarium visits or support by curators.

The herbarium Muséum national d'Histoire naturelle in Paris is considered to be the largest herbarium in the world with about six million specimens (Le Bras *et al.* 2017). The herbarium was founded in 1635. Important collections are those of Joseph Pitton de Tournefort, Sébastien Vaillant, Alexander von Humboldt and Aimé Bonpland, the family de Jussieu, Jean-Baptiste Lamarck, René-Louiche Desfontaines, Michel Adanson and many important for various national and regional floras of France (Le Bras *et al.* 2017; Thiers continuously updated). Given these important collections, it is not surprising that the herbarium houses an enormous number of types, 200 000 (Le Bras *et al.* 2017) to 300 000 (https://www.mnhn.fr) but likely more than 600 000. The type material in Paris consists of partly those of the historic collections (Vaillant, Tournefort, Lamarck, etc.), and partly the large herbaria of Cosson (including the herbarium Bunge) and Drake del Castillo, which include many herbaria of other collectors. However, as typical for large herbaria, the collections also consist of smaller herbaria, exsiccata series and duplicates sent by collectors worldwide.

The herbarium collection has been digitized to 90% in the process of the renovation of the herbarium (Le Bras *et al.* 2017) and is currently at 93% (https://science.mnhn.fr/institution/mnhn/collection/p/item/search). This provides an enormous opportunity to study the collection without physically travelling to Paris and spending days there to inspect the collection of large genera such as *Veronica*. A preliminary inspection showed that more than 16 000 specimens of *Veronica* are found in the herbarium P but studying the literature demonstrated that it contained no known holo- or isotype and only one known lecto- and four isolectotypes plus an additional neo- and two isoneotypes. This encouraged a more detailed analysis of the herbarium collection during the corona lockdown.

MATERIAL AND METHODS

All 16 434 digitized herbarium specimens labeled as belonging to the genus *Veronica* or relatives were inspected online and revised. Specimen labels were compared with type information from an unpublished database prepared for a planned monograph of the genus and protologues. This database also contains information on type material from other herbaria inspected personally in the past 25 years and those seen online (acronyms following Thiers updated continuously). Herbarium specimens seen physically are indicated by "!", those seen online by "*".

Abbreviations

Herbarium acronyms

A, GH Harvard University, Cambridge;
AC Amherst College, Amherst;
AL Université d'Alger, Algiers;
ANG Muséum des sciences naturelles, Angers;
ATHU National and Kapodistrian University of Athens;
B Botanischer Garten und Botanisches Museum, Freie Universität Berlin;
BC Institut Botànic de Barcelona;
BISH Bishop's University, Natural History Museum, Sherbrooke;
BM The Natural History Museum, London;
BP Hungarian Natural History Museum, Budapest;
BR Meise Botanic Garden, Meise;
BRNM Moravian Museum, Brno;
C University of Copenhagen;
CAS, DS California Academy of Sciences, San Francisco;
CL Babes-Bolyai University, Romania;
CN Université de Caen-Normandie, Caen;
COLO University of Colorado Museum of Natural History, Boulder;
E Royal Botanic Garden Edinburgh;
F Field Museum of Natural History, Chicago;
FI Natural History Museum, Firenze;
FR Senckenberg Gesellschaft für Naturforschung: Senckenberg Forschungsinstitut und Naturmuseum, Frankfurt
G Conservatoire et Jardin botaniques de la Ville de Genève;
GB University of Gothenburg;
GOET University of Göttingen;
GZU Karl-Franzens-Universität, Graz;
H University of Helsinki;
HAL Martin-Luther University, Halle;
HBG University of Hamburg;
JE Friedrich Schiller University, Jena;
K Royal Botanic Gardens, Kew;
KFTA S. M. Kirov Forestry Academy, Saint Petersburg;
KW National Herbarium of Ukraine, Kyiv;
KW-Turcz. KW, Turczaninow collection;
L Naturalis Biodiversity Center, Leiden;
LD University Biological Museum, Lund;
LE Komarov Botanical Institute, Saint Petersburg;
LMO Landesmuseum Natur und Mensch, Oldenburg;
LW Ivan Franko National University, Lviv;
LY Université Claude Bernard, Lyon;
M Botanische Staatssammlung, München;
MA Real Jardín Botánico, Madrid;
MAF Facultad de Farmacia, Universidad Complutense, Madrid;
MEL Royal Botanic Gardens, South Yarra, Victoria;
MEXU Herbario Nacional de México;
MIN University of Minnesota, Saint Paul;
MO Missouri Botanical Garden, Saint Louis;
MPU Université de Montpellier;
MW Moscow State University;
NDG University of Notre Dame;
NSW Royal Botanic Gardens & Domain Trust, Mount Annan;
NY New York Botanical Garden;
O Oslo Herbarium;
OXF University of Oxford;
P Herbarium of the Muséum national d'Histoire naturelle, Paris;
PAL Università degli Studi di Palermo;
PH Academy of Natural Sciences, Philadelphia;
PI Museo botanico dell'Università degli Studi di Pisa;
PL Západoceské muzeum, Plzen;
PO Universidade do Porto;
PR National Museum in Prague;
PRC Charles University, Prague;
RAB Institut scientifique, Rabat;
RIG Herbarium, University of Latvia, Riga;
S Swedish Museum of Natural History, Stockholm;
SEV Universidad de Sevilla;
SGO Museo Nacional de Historia Natural, Santiago;
TAK, TASH Academy of Science, Uzbekistan;
TAU Aristotle University of Thessaloniki;
TU University of Tartu Natural History Museum;
TCD Trinity College, Dublin;
TUB University of Tübingen;
UC University of California;
US Smithsonian Institution, Washington;
V Royal British Columbia Museum;
VT University of Vermont;
W Natural History Museum, Vienna;
WAG Naturalis Biodiversity Center, Leiden;
WU University of Vienna, herbarium;
Z Herbarium of the University of Zürich;
ZT Herbarium of the Eidgenössische Technische Hochschule Zürich.

RESULTS

Altogether 16276 specimens were filed under the genus *Veronica*. In addition, species of *Veronica* are filed under the synonyms *Synthyris*, *Besseya*, *Hebe*, *Pseudolysimachion*, *Detzneria* and *Parahebe*. Including these, 16434 specimens were investigated. Of these, 218 were not specimens of *Veronica*. Mostly, this reflected the splitting of segregate genera. 164 specimens are now considered to belong to the genus *Veronicastrum*, and 13 to *Paederota*. Four specimens were orthographic misplacements from the genus *Vernonia*, and six were labeled with the wrong genus name but correct species epithet despite this combination not existing under *Veronica* (e.g., *Euphrasia tricuspidata*). The remaining 29 specimens were misidentifications given a more or less tentative determination of *Veronica* but are in fact plants from other genera or families with 14 not identifiable for me to family.

Initially, 489 specimens were classified as *Veronica* specimens unidentified to species. After inspection of all specimens, all but 96 were identified to species, but 53 were classified as unidentified to species after being classified to species before. Therefore, 149 specimens are currently unidentified to species. The reasons for these specimens being unidentifiable are specimens in envelopes, specimens not showing decisive characters due to incompleteness or stage of development, and decisive characters (such as hairs) not visible at the maximum magnification. Additionally, 17 herbarium sheets bear mixes of two or three species of *Veronica*, partly intended for reasons of comparison. Overall, 248 of 455 species accepted in the genus *Veronica* (54.5%) are represented in the herbarium.

More than 4500 names have been published in the genus *Veronica* including 2000 recombinations, herbarium and manuscript names. Therefore, up to 2500 names would require typifications. Among these, 422 have a holotype (although this may be lost), 378 have a lectotype (including incomplete lectotypifications) and 18 have a neotype.

This means up to 1682 names in *Veronica* still require lecto- or neotypification. Here, I provide lectotypes for 34 and neotypes for four of these names and one epitype, plus 11 previously unpublished isotypes, 179 isolectotypes and six isoneotypes (Appendix 1). The discussion of the names is ordered according to collector to facilitate non-*Veronica* taxonomist to find relevant information for collectors in the herbarium P. Among collectors, I have tried to give a chronological order and based on the origin of the specimens, starting with the founding herbaria of P, those derived from the Jardin de plantes Paris, the French explorers of the 19th century, the herbarium Drake, the herbarium Cosson, the British connections, the herbier Giraudias and Grenier and the other collections. For those interested in the taxonomic order of names discussed, I have provided a list of all names discussed, sorted according to their subgeneric and specific affinity (Appendix 2).

DISCUSSION

The founding herbaria

Sébastien Vaillant (1669-1722)

Vaillant was a physician who turned into botanist and became in 1717 professor for botany at the Jardin du Roi (Royal Botanic Garden). His herbarium was sold to the king and became the basis for the herbarium at the Muséum national d'Histoire naturelle (P). However, being pre-Linnean he did not publish legitimate names, but his work was the basis for others describing new names later.

Family Scrophulariaceae Juss.
Genus *Veronica* L.

Veronica ocymifolia Thuill.

Flore des environs de Paris, ed. 1: 6 (Thuillier 1790).

Type citation. — None designated.

Neotype (**designated here**). — P[P03516941*].

Isoneotype (**designated here**). — M[M0198673*].

Nomenclatural note. Thuillier (1790) published the name *V. ocymifolia* based on Vaillant *et al.* (1727: 202) "16. *Veronica minor* annua, ocymi caryophyllati folio, subtus rubro, flore caeruleo". No specimen labelled *V. ocymifolia* by Vaillant, nor a specimen of *V. praecox*, to which the plants presumably belong of Vaillant, was found in the herbarium in Paris. However, authentic material from Thuillier labeled *V. ocymifolia* is available in Paris and Munich. These plants correspond to *V. praecox*. The character distinguishing these from typical *V. praecox* is the reddish leaves. However, reddish leaves are common in many species of *Veronica* and not sufficient to name a new species. They are designated as neotypes here since it is not clear whether these specimens were collected before 1790.

Veronica squamosa Rchb. var. ***vaillantii*** Rchb.

Flora Germanica excursoria (1830-2): 370 (Reichenbach 1833 [1830-2]). — *V. vaillantii* (Rchb.) Rchb. ex Nyman, *Conspectus Florae Europaeae*: 545 (Nyman 1881). — *V. spicata* var. *vaillantii* (Rchb.) Rouy, *Flore de France* 11: 35 (Rouy 1909).

Type citation. — "Vaill. Par. t. 33. f. 4 opt." = (Vaillant *et al.* 1727) "*Veronica spicata* minor".

Lectotype (**designated here**). — [Icon in] (Vaillant *et al.* 1727).

Epitype (**designated here**). — P[P03517303*].

Nomenclatural note. The second name based on a description of Vaillant is *V. squamosa* var. *vaillantii* Rchb. This name was published by Reichenbach (1833 [1830-2]) and mostly associated with *V. barrelieri*. The specimens encountered in Reichenbach's exsiccata (e.g., *no. 2189 Veronica vaillantii*, coll. Fleischmann from "Krain, vom Jeshza nächst Laibach") certainly belong to *V. barrelieri*. However, this species does not occur in the area of Paris from where it was described by Vaillant. The description by Reichenbach and Vaillant fits also with *V. spicata* under whose synonymy it should be classified. Rouy (1909) provided the combination *V. spicata* var. *vaillantii* for his Flore de France, which caused some confusion whether *V. barrelieri* occurs in France, but this is not the case. Since Reichenbach probably did not see the herbarium of Vaillant, it is best to lectotypify the name with the illustration in Vaillant *et al.* (1727) and epitypify it with the specimen from the Vaillant herbarium from Bois de Boulogne to fix the synonymy of the name correctly.

Joseph Pitton de Tournefort (1656-1708)

Tournefort became professor for botany at the Jardin du Roi (Royal Botanic Garden) in Paris in 1683 and became one of the most influential botanists in the century before Linnaeus and the first European botanical explorers of the Near East when he visited the East Mediterranean in 1700-1702 (Baytop 2010). He left his herbarium to the French state, and it became one of the founding herbaria of the Muséum national d'Histoire naturelle. Being pre-Linnean, he did not describe legitimate names himself, but his herbarium was important for Linnaeus and others, like Linnaeus's student Martin Vahl, who travelled across Europe and Northern Africa between 1783 and 1786, visiting Paris in this time (Friis 2017). It is at this time that Vahl must have acquired parts of Tournefort's collection and brought it to Copenhagen (C).

Veronica gentianoides Vahl

Symbolae botanicae 1: 1 (Vahl 1790).

Type citation. — "In Cappadocia".

Lectotype (**designated here**). — C78/8 [C10019108*].

Possible isolectotype. — P-Tourn 717 [P00651741*].

Veronica telephiifolia Vahl

Enumeratio Plantarum 1: 65 (Vahl 1804).

TYPE CITATION. — "Habitat in Armenia. Ex herbario Tournefortii [= Turkey Kars: Ararat]".

LECTOTYPE (**designated here**). — C79/3 [C10019115*].

POSSIBLE ISOLECTOTYPE. — P-Tourn 720 [P00651744*].

Veronica constantinopolitana Tourn. ex Riek

Repertorium specierum novarum regni vegetabilis, Beih. 79: 18 (Riek 1935), *nom. inval.* (Art. 36.1c; publ. in synonymy of *V. pectinata* L.)

ORIGINAL MATERIAL. — P[P03529917*].

Philibert Commerson (1727-1773)
from the herbarium Antoine Laurent de Jussieu
Commerson was a French Doctor of Medicine with a special interest in natural history and botany (Lignereux 2004). He participated in the world voyage of Bougainville, funded by the king of France, as naturalist surgeon. They travelled from France to South America and through the Magellan Strait to the Pacific (Lignereux 2004). It was somewhere in the Strait of Magellan that Commerson collected *Hebe magellanica*. There is one specimen (P03520139) in the herbarium Poiret (part of herbarium Cosson) that bears the note that it was given by Commerson as "*Hebe* Magellan" but this is just a small sterile branch. Another sheet (*P03520124*) bearing the name "*Hebe Laurentina*" has more explicit notes that it was found in 1767 at the island of Nassau and the port Galant (Isla Carlos III). The island of Nassau (53°49'47"S, 71°4'11"W) has been named after the marine officer Charles Henri, prince de Nassau-Siegen, who joined Commerson sometimes on his trips (Lignereux 2004). Two more specimens of Commerson, both labelled as *Hebe laurentina* are present in P from unclear localities in the Strait of Magellan (P03520127, P00675461 in the herbarium Jussieu). Nevertheless, the notes on the specimen in the Jussieu herbarium connect that specimen most closely to the protologue of the genus.

Hebe magellanica Juss.

Systema naturae 2: 27 (Gmelin 1791). — *Hebe laurentina* Comm., *nom. inval.* (Art. 30.1; herbarium name).

TYPE CITATION. — Not designated.

LECTOTYPE (**designated here**). — Chile: "Strait of Magellan, Commerson, Dec. 1767", P[P00675461*].

ISOLECTOTYPES (**designated here**). — P[P03520124*, P03520127*, P03520139*].

Nomenclatural note. The importance of the specimen is that the genus *Hebe* was described by Jussieu (1789) attributing the name to Commerson without assigning a species to the genus but commenting on the specimens by Commerson. The first species of *Hebe*, *Hebe magellanica*, was described two years later by Gmelin (1791). It is not clear why Gmelin did not pick up the original name *Hebe laurentina* of Commerson. The genus gained acceptance only after 1921 when Pennell (1921) and then Cockayne & Allan (1926) started transferring the shrubby species of *Veronica* from New Zealand to the genus. Nowadays, *Hebe* is considered a section in a wider *Veronica* again (Garnock-Jones *et al.* 2007) but the original species was never lectotypified. It is a synonym of the older *V. elliptica* G.Forst.

Jean Baptiste de Lamarck (1744-1829)
Lamarck is probably the best-known French biologist. He became botanist and naturalist after a military career and authored an important flora for France (Lamarck 1778). In 1788 he became curator at the herbarium of the Jardin des plantes in Paris and five years later professor for zoology at the Muséum national d'Histoire naturelle (Lefèvre 2001). Nevertheless, he continued to contribute to botany, especially through his publication of *Tableau encyclopédique et méthodique* (Lamarck & Poiret 1783; Lamarck *et al.* 1810) and subsequent editions of his Flore Française (Lamarck 1795; Lamarck & De Candolle 1805, 1815). In this work, Lamarck published most of his new names in *Veronica*. His herbarium (P-LAM) is in Paris while some other specimens may be in other herbaria (Stafleu & Cowan 1979). Several of his names have been lectotypified by Sánchez Agudo *et al.* (2012), such as *V. chamaepithyoides*, *V. pinnatifida*, *V. polygonoides* and *V. carnosula*. *Veronica michauxii* is discussed below under André Michaux.

Veronica nudicaulis Lam.

Flore françoise, ed. 1, 2: 437 (Lamarck 1778), *nom. inval.* (Art. 36.1c; *V. aphylla* L. cited in synonymy). — *V. aphylla* var. *nudicaulis* (Lam.) Lam. & DC., *Flore française* ed. 3, 3: 463 (Lamarck & De Candolle 1805).

TYPE CITATION. — "Ex Europae alpibus".

LECTOTYPE (**designated here**). — P-LAM[P00358059*].

Nomenclatural note. *Veronica nudicaulis* was described from the European Alps but with *V. aphylla* mentioned in synonymy (Lamarck 1778). The description differs from *V. aphylla* L. (Linnaeus 1753) in having a terminal inflorescence, but this is sometimes easy to overlook. The specimen in his herbarium (P-LAM[P00358059]) matches *V. aphylla*. So, we need to assume that Lamarck did not find the epithet "aphylla" appropriate. Lamarck continued to use the name *V. nudicaulis* until 1805 (Lamarck & De Candolle 1805), when he mentioned *V. nudicaulis* as variety ß under *V. aphylla*, differing from typical *V. aphylla* by the capsule being obtuse and not notched.

Veronica subacaulis Lam.

Tableau encyclopédique et méthodique des trois règnes de la nature 1: 44 (Lamarck 1791)

Type citation. — "Ex Europae alpibus".

Lectotype (**designated here**). — P-LAM[P00358058*].

Nomenclatural note. *Veronica subacaulis* was also described from the European Alps as having a short stem with a two-flowered inflorescence on a leafless peduncle and obcordate capsules. This description matches that of *V. aphylla* L., which is not mentioned by Lamarck (1791) but rather he continued to use *V. nudicaulis*, which he distinguished from *V. subacaulis* by the shape of the capsule (ovate, not obcordate) and insertion of the peduncle (terminal, not lateral). Also, the specimen of *V. subacaulis* in his herbarium (P-LAM[P00358058]) matches *V. aphylla*. I assume that the difference between the two capsule types is likely to be based either on developmental stage or nutritional status.

Veronica laevis Lam.

Flore françoise, ed. 1, 2: 444 (Lamarck 1778).

Type citation. — "*Veronica minima* clinopodii folia, glabra, romana. Tournef. p. 144".

Lectotype (**designated here**). — [Icon in] Boccone (1697), Museo di piante rare, t. 102.

Nomenclatural note. As the case above suggests, Lamarck seemed to be rather liberal with the priority of names when the name does not fit to him. In the Flore françoise (Lamarck 1778) he published two further names, citing older names in synonymy, *V. sempervirens* Lam. citing *V. ponae* Gouan in synonymy and *V. digitata* Lam. citing *V. triphyllos* L. in synonymy (later both corrected by De Candolle (Lamarck & De Candolle 1815).

A third new name, *V. laevis*, is more difficult. Lamarck refers in his description to "*Veronica minima* clinopodii folia, glabra, romana. Tournef. p. 144". On page 144 of Tournefort (1700) the name is referred to: "Bocc. Mus. Part. 2. 19. Tab. 102". Boccone (1697) gives an incomplete description on p. 19 but states a blue flower. The table clearly shows *V. acinifolia* based on habit, leaf shape, and bract and pedicel length and clearly not *V. peregrina*, to which this species of Lamarck has commonly been referred (e.g., Link *et al.* 1831; Aniotsbéhère 1999). No herbarium specimen was found in the herbarium of Lamarck, so the best solution is to lectotypify the name with the illustration in Boccone.

Veronica arvensis var. ***nana*** DC.

Flore française (DC. & Lamarck), ed. 3, 3: 466 (Lamarck & De Candolle 1805).

Type citation. — "in sylvis circa Paris".

Lectotype (**designated here**). — P-LAM[P00358047*].

Nomenclatural note. Another new name published based on material of Lamarck is *V. arvensis* var. *nana* DC., a dwarf form of *V. arvensis*, published by August-Pyrame de Candolle, a student of Lamarck and co-worker on the Flore française project, who later became founder of the Jardin botanique de Genève.

André Michaux (1746-1802)

Lamarck also described species from other botanists, such as his friend André Michaux. Michaux was a French botanist, who learned botany in Paris, accompanied Lamarck on expeditions to the French provinces and headed his own expedition to the Near East in 1782. Upon his return he left his material in Paris and three months later embarked on his more famous travel to America. Novelties were described by Lamarck (Pluchet 2014).

Veronica michauxii Lam.

Tableau encyclopédique et méthodique des trois règnes de la nature 1: 47 (Lamarck 1791). — *V. anagallis-aquatica* subsp. *michauxii* (Lam.) Elenevsky, *Byulleten' Moskovskogo Obshchestva Ispytatelei Prirody Otdel Biologicheskii* 74 (6): 77 (Elenevsky 1969).

Type citation. — Iran, Hamadan: "Ex oriente, ad aquas montis Elvend", A. Michaux.

Lectotype (**designated here**). — P-Lam[P00358024*].

Nomenclatural note. Material sent by Michaux is said to be grown in the Royal Botanic Gardens in Paris. The specimen of *V. michauxii* in the Lamarck herbarium (P-LAM[P00358024]) is certainly original material, whereas the specimen in the general herbarium P (P04023177) from the herbarium Durand, bearing a label from 1969 that it may be type material, does not show any sign that Lamarck has seen it. Genetic and morphological studies on *V. anagallis-aquatica* and putative relatives in Iran recently demonstrated that *V. michauxii* is a variety, which can occur intermixed with other varieties within the same populations (Hosseinnejad Azad *et al.* 2020, 2021). However, in the light of ongoing phylogenetic analyses, which make it likely to differentiate between a European species (*V. anagallis-aquatica* s.str.) and species of the Near East, for which the earliest available name is *V. michauxii*, I refrain from making nomenclatural changes.

Plants from the Jardin des Plantes

Jean Louis Marie Poiret (1755-1834)

Poiret was a French botanist, who collected in north-central Algeria from 1785-1786 together with Desfontaines (Cosson 1881). Later he became professor at the École centrale in Aisne department. His herbarium is in P and PC, acquired by Moquin-Tandon and given to Cosson (Cosson 1881). Poiret helped Lamarck and continued Lamarck's work on the Encyclopédie Méthodique (Lamarck & Poiret 1783; Poiret 1808, 1817), which contained his contribution to *Veronica* systematics. However, only types of two names are found in P, for two (*V. melissifolia* Poir., *V. novae-hollandiae* Poir.) types are found in FI (Fischer 1977b; Briggs & Ehrendorfer 2006), for one other name no type has been found, yet (*V. caroliniana* Poir.).

Veronica nitida Poir.

Encyclopédie Méthodique, *Supplement* 5: 467 (Poiret 1817), *nom. illeg.* (Art. 53.1; non *V. nitida* (Schrad.) Hoffm.). — *V. lutetiana* Schult., *Mantissa* 1: 109 (Schultes 1822).

TYPE CITATION. — Cultivated: "Hort. Paris".

NEOTYPE (**designated here**). — P[P04219332*].

Nomenclatural note. *Veronica nitida* Poir. is a name of unclear taxonomic identity. Poiret mentioned the origin from the Jardin des Plantes Paris and the long inflorescences, the lanceolate, subdentate, and glabrous leaves. Schultes (1822) was the first to recognize the homonymy with *V. nitida* Ehrh. and renamed Poiret's plant *V. lutetiana*, linking it with *V. teucrium*. Desfontaines (1829) mentioned the name *V. nitida* with a more elaborate description, neither mentioning Poiret nor Schultes. Walpers (1844-45), separating *V. lutetiana* from *V. teucrium* and *V. satureiifolia*, ascribed the name to Desfontaines ("in mss."), likely referring to the catalog of garden plants from Paris, of which Desfontaines was director, or to some unpublished manuscript elaborating on the plants described in the catalog from the Botanical Garden. Given the origin from the Botanical Garden, it is possible that Desfontaines is actually the original source for the name, even though not mentioned by Poiret, and communicated the name and specimens of the plant to his friend Poiret, with whom he travelled in 1783-1785 in North Africa (de Candolle 1834). In the herbarium Poiret in P, there is one specimen labelled "*V. nitida* h.p." with a later addition "Desfont. Catl. Descrip." fitting the description of Poiret (1817) and Desfontaines (1829) perfectly and appearing closer to *V. satureiifolia*. Still, since the specimen does not have a date, we cannot be sure that it is original material and we follow others (e.g., Giacò *et al.* 2021) in calling the specimen a neotype.

Veronica persica Poir.

Encyclopédie Méthodique 8: 542 (Poiret 1808).

TYPE CITATION. — Cultivated: "Croît dans la Perse. On la cultive au Jardin des Plantes de Paris".

NEOTYPE . — Designated by J. Sánchez Agudo *et al.* (2012: 869): P-LAM[P00358041*].

Nomenclatural note. *Veronica persica* is the most widespread species of *Veronica* with an almost cosmopolitan distribution as an urban weed (Lehmann 1906). It is a tetraploid hybrid of *V. polita* and *V. ceratocarpa* that likely originated in northern Iran (Fischer 1987). Its first arrival in Europe is likely in the 16th century but it became widespread only in the 19th century (Lehmann 1906). It grew in the Jardin des Plantes de Paris and the name was published by Poiret (1808). Sánchez Agudo *et al.* (2012) did not find original material and neotypified the name with plants collected in the gardens in 1813 and possibly handwriting of Lamarck. However, specimens P00789664 and P00789667 in the herbarium Poiret appear to be good candidates for original material despite no date mentioned. Following the reasoning above, however, they don't qualify as lectotype due to the lack of a date and it seems unnecessary to override a neotypification with another neotypification, especially since there is no taxonomic difference.

René Desfontaines (1750?-1833)
Desfontaines was born in Brittany and came to Paris in 1773 to study medicine but then turned to botany, becoming friend of Louis Lemonnier, professor of botany at the Jardin des Plantes (de Candolle 1834). Desfontaines became the favorite student of Lemonnier, who opened him the door to many contacts in the scientific world. In 1783, he became a member of the Academy of Sciences and embarked on a two-year trip to Northern Africa. In 1786, Desfontaines succeeded Lemonnier as professor at the Jardin des Plantes (de Candolle 1834). His herbarium was bought by Philip Webb, a wealthy English amateur botanist. Webb lived many years in Paris and Florence and left his herbarium to the Grandduke of Tuscany, who gave it to the herbarium of Florence (FI). However, many plants from the Botanical Garden remained in P. Two names in *Veronica* are based on his work in the Botanical Garden of Paris.

Veronica excelsa Desf.

Catalogus plantarum horti regii Parisiensis, ed. 3: 391 (Desfontaines 1829).

TYPE CITATION. — None designated.

LECTOTYPE (**designated here**). — FI[FI086071*].

ISOLECTOTYPE. — P[P03510125*, P04051211*].

Nomenclatural note. *Veronica excelsa* is a garden variety of *V. longifolia* with narrow, strongly dentate, acute leaves. The affinity of this species is mentioned on the herbarium sheets and exemplified by its position just below that species in the catalogue (Desfontaines 1829). The lectotype is chosen from the herbarium Desfontaines in FI despite the meager information on the label. The two specimens in P are from the herbarium Poiret with the notes "Desf. Catal. Altit. 8-10 ped. Aff. W. marit." and "h.p. Octobre h. Poiret".

Veronica prasifolia Desf.

Catalogus plantarum horti regii Parisiensis, ed. 3: 82 (Desfontaines 1829), *nom. inval.* (Art. 36.1c; publ. in synonymy).

TYPE CITATION. — Cultivated: "Jardin des plantes Paris".

LECTOTYPE (**designated here**). — FI(FI086072*; Fig. 1).

Nomenclatural note. The name *V. prasifolia* was published in the same publication as a synonym of *V. arguta* Schrad. but is worth mentioning here since there is some taxonomic confusion around this name. On the label of the specimen in the herbarium Desfontaines in FI (FI086072), the name

Fig. 1. — Lectotype of *Veronica prasifolia* Desf. (FI086072).

is attributed to Sprengel, but the name was not found in the works of Sprengel. The specimen is stated to resemble *V. arguta*, which is considered to be a hybrid of *V. longifolia* with *V. spicata* (Härle 1932), characterized by shallowly serrate to crenate leaf margins but with *V. longifolia* habit. Thus, the name should be synonymized with *V.* × *media* Schrad. Specimens of *V. prasifolia* from the Botanical Garden in Paris can also be found in P and in other herbaria (e.g., K, KW, MPU, the latter two collected after publication) but the herbarium specimens markedly differ from the specimen in FI. These plants belong to *V. teucrium* based on axillary inflorescences and leaf shape. On the specimen in P (herbarium Spach) from 1827, before the publication in Desfontaines (1829), the name *V. latifolia*, a synonym of *V. teucrium,* has been added later, indicating that the different identity has been observed before.

The French explorers from the 19th century *Alexander von Humboldt (1769-1859) and Aimé Bonpland (1773-1858)*

Alexander von Humboldt and Aimé Bonpland travelled in America from 1799 to 1804 and collected up to 12 000 specimens (Lack 2009). Some of the material collected by them was already used for the description of new species by Willdenow while they were still travelling but most of the material was published by them with the help of Carl Sigismund Kunth (Lack 2009). Most of the herbarium specimens are stored in the herbaria in Paris and Berlin with some scattered specimens also found in other herbaria.

South America is not rich in species of *Veronica* with nowadays 11 species present but at the time of Humboldt and Bonpland there were likely only the five native species present, of which *V. elliptica* grows further south than the two explorers travelled. Three taxa were reported by Kunth (Humboldt *et al.* 1817), *V. serpyllifolia*, *V. xalapensis* and *V. chillensis*, of which the latter two were described as new species.

Despite the differences in description, *V. xalapensis* and *V. chillensis* are considered to belong to *V. peregrina*, a variable annual species widespread across the Americas and introduced widely in temperate regions worldwide. Since both species are described as pubescent, they both belong to *V. peregrina* subsp. *xalapensis*. There is a trend towards this subspecies occurring more in the west of North America and the nominate subspecies more in the east, but transitional specimens occur (Pennell 1919). Given this geographic trend and likely anthropogenic action obscuring the pattern, I accept the taxon at the subspecific level.

Veronica xalapensis H.B.K.

Nova genera et species plantarum 2: 389 (Humboldt *et al.* 1817). — *V. peregrina* var. *xalapensis* (H.B.K.) Pennell, *Torreya* 19: 167 (Pennell 1919). — *V. peregrina* subsp. *xalapensis* (H.B.K.) Pennell, *Monographs of the Academy of Natural Sciences of Philadelphia* 1:342 (Pennell 1935b).

Type citation. — "Crescit in Regno Mexicano prope Xalapa (alt. 630 hex.)".

Lectotype (**designated here**). — P[P00670566*].

Nomenclatural note. *Veronica xalapensis* was described from Mexico "prope Xalapa" as an erect, pubescent plant with oblong leaves with crenulate margin and solitary flowers, axillary, on short peduncle. Paris houses a specimen labelled "*Veronica xalapensis*" without further notes (P00670566), whereas the specimen labelled "*Veronica xalapensis*" in Berlin (B-W 00249-050) is numbered "*2227*", "*V. chillensis*" crossed out and a reference to Kunth (1823). The reference to the page in Kunth suggests a later addition of the label. The specimen in Berlin is not considered type material of *V. xalapensis* since the number "*2227*" refers to the notebook of Bonpland and Humboldt (Bonpland & Humboldt 1799-1804) and a collection from Ecuador. Thus, the Paris specimen is considered the only original material.

Veronica chillensis H.B.K.

Nova genera et species plantarum 2: 390 (Humboldt *et al.* 1817). — *V. peruviana* Willd. *nom. inval.* (Art. 30.1; herbarium name). — *V. peruviana* Willd. ex A. Dietr. Species Plantarum, editio 6. 1: 534 (Dietrich 1831), *nom. inval.* (Art. 36.1c; publ. in synonymy of *V. chillensis*).

Type citation. — "Cresit in cultis Regni Quitensis prope Chillo, alt. 1340 hex.".

Lectotype (**designated here**). — "Habitat in Peruviae cultis frequentissima juxta Quito", P[P04079053*].

Isolectotype. — P[P00670567*], B[B-W 00249-050*, B-W00250-010*].

Nomenclatural note. *Veronica chillensis* was described from "Regni Quitensis prope Chillo" as creeping and pubescent with oblong-spathulate leaves with serrate margin and flowers subsessile. Calyx lobes are supposed to be lanceolate and reflexed in fruit. There is a specimen in Paris (P00670567) sparsely labelled with the name only. Unfortunately, the specimen differs from the protologue in having only a short (3cm) creeping stem with adventitious roots and the main plant being erect. The leaves are not well preserved, although the leaves appear not to be serrate. The calyx lobes are lanceolate but not reflexed. The specimen in Berlin (B-W 00250-010) labelled *V. chillensis* resembles the plant from Paris but also does not bear more information. It was later labelled as *Veronica peruviana* by Willdenow. Further material to be considered are those two specimens labelled "*2227*" (P04079053, B-W 00249-050). The notebook (Bonpland & Humboldt 1799-1804) states under that number a *Veronica* collected from Chillo (near Quito) collected together with plants similar to *V. peregrina* ("cum *Veronica peregrina* aff."). The name "peregrina" was later added to the notebook. It is noteworthy that the description in the notebook and the description on the specimen in Paris (P04079053) state that the plant is creeping. Indeed, the plant seems to have re-rooted due to adventive roots near the bottom part of the inflorescence. Many species of *Veronica* are known to form adventitious roots when the stem comes into secondary contact with wet soil, which frequently happens in disturbed sites. Thus, it appears that all four plants

are from Chillo, near Quito, then considered part of Peru, thus the name *V. peruviana* Willd. The specimen P04079053 appears to have caused the authors to assume they have found a new species with affinities to *V. peregrina,* and this specimen should be the lectotype.

Pierre André Pourret (1754-1818)
Pourret was a French clergyman and botanist who collected extensively in the Pyrénées and made early contact with Picot de Lapeyrouse (Dayrat 2003). He fled after the French Revolution to Spain and continued collecting, aiming to write about his discoveries as a supplement to the flora of Spain, called later by Lapeyrouse "*Chloris hispanica*" (Willkomm 1896). Pourret became director of the Botanical Garden in Barcelona and in Madrid in 1798, but in 1804 was appointed to canon of Orense later forced to flee in the French-Spanish war, leaving behind his herbarium and his manuscript "*Chloris hispanica*", which were burnt together with his house (Dayrat 2003). However, major parts of his herbarium are in Madrid (MAF) and Paris (P) (Stafleu & Cowan 1983). The herbarium specimens collected before 1789 were made for the family Brienne, who gave them to Barbier. The herbarium Barbier was inserted in the herbarium P in 1846 (Stafleu & Cowan 1983). The Spanish specimens were mostly given to the herbarium MAF in 1835.

Veronica herniarioides Pourr. ex Lapeyr.

Supplément à l'histoire abrégée des plantes des Pyrénées 4 (Lapeyrouse 1818).

Type citation. — Spain, Huesca: "Chl. Hispan. *no. 60* […] Sur les hauteurs du Port de Jacca. Pourret".

Neotype (**designated here**). — "Jacca" P[P04933114*].

Nomenclatural note. *Veronica herniarioides* was collected by Pourret in Jacca/Jaca from the province Huesca and added to his manuscript under *no. 60* (Lapeyrouse 1818). As such it is to be expected that the type specimen can be found in MAF. It is described as having a dense terminal raceme with deep blue flowers. The leaves are small, obovate, and glabrous with an entire margin. The stem is described as prostrate and rooting. Lapeyrouse (1818) inserted *V. herniarioides* after *V. serpyllifolia*, suggesting a relationship, which was, however, not followed by subsequent authors who considered it a synonym of *V. alpina* (Dietrich 1831; Römpp 1928). Martinez-Ortega & Rico (2001b) considered it a synonym of *V. serpyllifolia* and mentioned that no authentic material was found in MAF. So, the type specimen likely burnt in Orense in 1808. The specimen in P (P04933114) is clarifying that the name is, however, a synonym of *V. nummularia*, a species endemic to the Pyrénées and the description fits, in fact, better to this species. The specimen does not belong to the herbarium Barbier and bears the location "Jacca", which clarifies that the specimen is from Spain, but it is unclear when it was collected and how it came to the herbarium Timothée Puel, a doctor of medicine in Paris. Therefore, it is safest to consider it a neotype.

Constantine Samuel Rafinesque (1783-1840)
Rafinesque's life is full of mysteries, partly caused by Rafinesque's own poor memory when writing his autobiography, partly based on his conflicts with contemporaries who often neglected his work (Stuckey 1986; Schmid 2004). His life has filled thick books (e.g., Warren 2014) and numerous publications. Rafinesque was born to a French father in Constantinople, moved to France but left the country in 1800 at age 17, never to return to France (Boewe 1987). He returned to Europe (Italy) in 1805 and left again for the United States in 1815 and stayed in Lexington, Kentucky from 1819-1826 as a natural history and botany professor but moved to Philadelphia in 1826 until his death (Stuckey 1986; Boewe 1987). Rafinesque published ten new species and one new variety in *Veronica*. However, none is currently accepted, one even being rejected (Martínez-Ortega & Albach 2003), three later homonyms of other names, two published without description. There is a lot of confusion around these names (Warren 2014) and type material would help a lot in understanding these names. However, no type has so far been published for any of these names. It is also not clear how many types survived since his pre-1815 collections were lost in a shipwreck (Stuckey 1986) and a tenth was later damaged in the transport between Lexington and Philadelphia, but he stated to have still 50 000 specimens in 1836 (Rafinesque 1838). However, most was wrotten before Elias Durand preserved the remains of Rafineque's herbarium, which he called "trash, incomplete, good for nothing", although this is likely an exaggeration (Pennell 1944; Stuckey 1971a). Elias Durand, born in Mayence in 1794, emigrated to the United States after the Napoleonic Wars, where he became a pharmacist in Philadelphia but with special interest in botany (Pennell 1935a). Durand gave his own herbarium of about 80 000-120 000 specimens to the Muséum national d'Histoire naturelle Paris in 1868 despite having worked for a long time in the herbarium of the Academy of Natural Sciences in Philadelphia (Pennell 1935a; Chase 1935). It contained a large number of North American specimens including collections by Nuttall, Gray, Torrey, and Rafinesque. However, some specimens Durand gave to William Darlington, now at DWC, but mostly European species (Pennell 1944). Additionally, specimens sent by Rafinesque to colleagues may be found in NY or GH. It is not clear how the two specimens of *Veronica* from Rafinesque came to Paris.

Veronica sparsiflora Raf.

Atlantic Journal 1: 79 (Rafinesque 1832).

Type citation. — United States: "Arkanzas or Texas, received from Prof. Nuttall".

Neotype (**designated here**). — P[P04079138*].

Isoneotype (**designated here**). — P[P04079137*].

Nomenclatural note. In 1832, Rafinesque published two new species based on plants from Bartram's Botanic Garden, a then

renowned nursery. With regards to *V. sparsiflora*, Rafinesque (1832) claimed that the plant was an "annual native of Arkanzas or Texas, received from Prof. Nuttall". Later, Rafinesque (1838) claimed that it is common in "Arkanzas and Missouri" and that it belongs to his subgenus *Beccabunga*. However, Pennell (1921) stated that he did not know any species of *Veronica* fitting to the description and suggested that it is either a foreign species of the genus or not a *Veronica* at all. Later, Pennell (1935b) stated that he saw the type specimen in P without typification and concluded that "probably Rafinesque erred as to the source, and his material came from the Old World". In fact, there are two specimens of the same species fitting to the description of Rafinesque in P. Both have labels with handwriting of Rafinesque based on comparison with photos of Rafinesque's labels in Stuckey (1971b). Both refer to the Atlantic Journal, one claiming that the plant comes from Texas showing a flowering specimen, the other with a fruiting specimen from "Texas & Arkanzas". No further information is available on the specimens. Based on close inspection of the specimens, it is evident that Pennell (1935b) was correct with his reference to the Old World and the specimens belong to *V. gentianoides*, an ornamental plant from the Caucasus. It is not clear whether the false information on the origin of the plant is the fault of Rafinesque or Bartram's garden. Since there is no indication of the year, one cannot be sure that the specimens in P were in fact collected before the description of the species and, thus, they are designated as neotypes.

Johann Franz Drège (1794-1881)
Drege was born near Hamburg, Germany. He was botanist and traveller, who collected plants in South Africa from 1826-1834 (Doidge 1950). He went as far north as the Garip/Orange River where he collected *V. anagallis-aquatica* at the mouth of the river in October 1826 (Drège 1843: 94). According to Harvard University Herbaria (HUH) and Libraries Index of Botanists (https://kiki.huh.harvard.edu/databases/botanist_search.php) his herbarium specimens are widely dispersed, including W and P.

Veronica capensis Fenzl

Linnaea 17: 332 (Fenzl 1843, *nom. illeg.* (Art. 53.1; non *V. capensis* Burm.).

Type citation. — South Africa, Western/Northern Cape: "Cap. b. spei. (Drège)".

Potential original material. — P[P03429552*].

Nomenclatural note. Fenzl (1843) described *V. capensis* based on a specimen for which he did not mention the exact locality but just generally that it is from the Cape. Sellers (1983) mentioned a type of *V. capensis* in W, but it is not entirely clear whether Sellers really saw the specimen or just expected it there. Despite searching the herbarium W, the specimen has not been found, yet, and Drège (1843) did not mention the species. In fact, the specimen of *V. anagallis-aquatica* from the Garip/Orange River is the only specimen of the genus mentioned by Drège (1843). Additionally, the description of *V. capensis* fits to *V. anagallis-aquatica* and even better to the particular specimen in the general herbarium of P. I, therefore, conclude that *V. capensis* is a synonym of *V. anagallis-aquatica*. Therefore, the specimen in P is important at the moment to verify the identity of the name *V. capensis*. However, despite being labelled *V. capensis*, it is not clear whether Fenzl saw the specimen in P and whether this is indeed the same collection as the one used by Fenzl for the description of *V. capensis*. A typification is, therefore, premature without a closer inspection of the herbarium in W.

Jean Baptiste Bory de Saint-Vincent (1778-1846) and Louis Athanase Chaubard (1781-1854)
Bory de Saint-Vincent was a French officer with interest in natural history. He was born in Agen, where he likely met Louis Chaubard. Bory was part of the French expedition during the Greek war of Independence in 1827 (Strid 2000). Chaubard was a French botanist who is known for his contributions in the local French flora of Agen. Together with Bory de Saint-Vincent he worked on the flora of Greek Peloponnese (Bory & Chaubard 1832, 1838) with Bory mainly responsible for the cryptogams and Chaubard for the phanerogams (Clos 1893).

Veronica chamaedryoides Bory & Chaub.

Expédition scientifique de Morée 3 (2) *Bot.*: 15 (Bory & Chaubard 1832). — *V. chamaedrys* subsp. *chamaedryoides* (Bory & Chaub.) M.A.Fisch.

Type citation. — Greece, Peloponnese: "les lieux montueux au bord des ombrages en allant à Phigalee, et en montant au Taygète".

Lectotype (**designated here**). — "Phygalee", Chaubard P[P03838848*].

Nomenclatural note. *Veronica chamaedrys* is a polymorphic species distributed across Europe from the southernmost Peninsulas to Scandinavia and from the British Isles to the Urals and further to the Altai Mountains. Bardy *et al.* (2010) demonstrated that the populations of Greece and adjacent regions are genetically and morphologically slightly distinct. For these populations, the correct name is *V. chamaedrys* subsp. *chamaedryoides* based on the name by Bory and Chaubard. As expected, based on Bureau (1904) the type specimen is in the herbarium Drake in P. The specimen does not have a date but has notes by Chaubard indicating his change in opinion from *V. chamaedrys* to a new species.

Veronica chaubardii ("*chaubardi*") Boiss. & Reut. *in* Boiss.

Diagnoses Plantarum Orientalum Novarum, ser. 2, 3: 174 (Boissier 1856). — *V. glauca* subsp. *chaubardii* (Boiss. & Reut.) Maire & Petitm., *Matériaux pour servir à l'étude de la flore et de la géographie botanique de l'Orient* 4: 165 (Maire & Petitmegin 1908).

Type citation. — Greece: "Hab. In Peloponnese circa Navarin, Modon, Calamata herb. Fauché".

LECTOTYPE (**designated here**). — "Modon" [= Methoni], G[G00751955*].

SYNTYPES. — "Navarin", G[G00751920*, G00751981*], "Calamata" G[G00751956*], no locality G[G00751957*, G00751958*], P[P03944980*, P03944981*].

Nomenclatural note. In their work, Bory and Chaubard (Bory & Chaubard 1832, 1838) also mentioned *V. peduncularis*, a species from the Caucasus, to occur in Greece. Boissier & Reuter (1856) realized the mistake and published *V. chaubardii* in honor of Chaubard for these Greek plants. Apart from specimens collected by Bory, also those others mentioned by Boissier (1856) are original material. In P, there are two specimens of *V. chaubardii* from Bory and Chaubard, one is labelled *V. amoena* Heldr., a synonym of *V. peduncularis* mentioned by Bory & Chaubard (1832), the other has no name. The name *V. amoena* was added later. Both specimens are from the herbarium of Chaubard in the herbarium of Timothée Puel. However, I chose to lectotypify the name with one from the herbarium Boissier, clearly labelled with the name *V. chaubardii* and exact locality and the label lectotypus from 1969.

Veronica friesii Chaub.

Actes de la Société Linnéenne de Bordeaux 19: 232 (Chaubard 1853).

TYPE CITATION. — "*V. friesii* N., fig. 2".

LECTOTYPE (**designated here**). — [Icon in] Chaubard (1853): t.9.

Nomenclatural note. Chaubard (1853) later also published a new French species, *V. friesii*. Chaubard suggested that it is close to *V. agrestis,* but leaves are ovate-oblong, base cordate, 11 crenations below, 13 or 9 teeth above, calyx lobes oblong-lanceolate, base not widened, nerves drawn to the middle, not almost to the top and the style shorter. There is one specimen found in P labelled with *V. friesii* from the herbarium Puel, which resembles the figure in Chaubard (1853) but still belongs to today's concept of *V. agrestis*. It was collected from "Paris – Montrouge, Versailles" and has a reference to the figure in Chaubard (1853). However, it is not clear who collected it and whether it was collected before publication. Therefore, the figure accompanying the protologue was used as lectotype.

Urbain Faurie (1847-1915)

Faurie was a French missionary and botanical collector. He came to Japan in 1873 and worked in Hokkaido, Hirosaki and Aomori and travelled throughout Japan and Korea, south to Taiwan and north to the Kuriles and Sakhalin collecting several hundred thousand specimens (Hayata 1916). Bureau (1904) mentioned collections of Faurie from Korea in the collection of Drake and Drake Del Castillo (1900) even mentioned that collections of Faurie from Japan came to Paris. However, type collections of Faurie in P are only found in the general herbarium and herbier Léveillé. They are also known from several other herbaria, especially KYO, BM and K (Barnes 2001). Four of his collections were used by three authors to describe new species in *Veronica*.

Veronica hawaiensis H.Lev.

Repertorium specierum novarum regni vegetabilis 10: 123 (Léveillé 1911).

TYPE CITATION. — United States, Hawaii: "Hawaii: In herbidis Maunakea, 2000 m, jul. 1909 U[U. Faurie, 892)".

LECTOTYPE (**designated here**). — "892 *Veronica hawaiensis* Lev. Habitat in herbidis Maunakea alt. 2000 m Insulae Hawai Legit Faurie Julio 1909", P[P04056480*].

ISOLECTOTYPES (**designated here**). — BISH[BISH1014601*], P[P03520238*].

Nomenclatural note. Léveillé (1911) described 25 new species based on collections by Faurie, including *V. hawaiensis*, a synonym of *V. arvensis*. Leveillé probably did not expect a European weed in the collections, which further differs from typical *V. arvensis* in being plants dominated by a long slender inflorescence and long (almost) glabrous internodes. Only one specimen is from his herbarium and, therefore, this is used as lectotype with the species epithet in a different handwriting than the rest of the label. It is not clear whether Leveillé saw the duplicates of his collection, especially since the other specimen in Paris was not labelled by him and more clearly resembles *V. arvensis*.

Veronica rotunda Nakai

Botanical Magazine (Tokyo) 29: 3 (Nakai 1915). — *Pseudolysimachion rotundum* (Nakai) Holub in Holub & Pouzar, *Folia Geobotanica et Phytotaxonomica* 2: 425 (Holub & Pouzar 1967). — *V. longifolia* var. *sessilifolia* Bonati, *nom. inval.* (Art. 30.1; herbarium name).

TYPE CITATION. — South Korea, Jejudo: "Hab. in herbidis Quelpaert. X. 1906. (Faurie n. 786)".

LECTOTYPE. — Designated by Nakai (1943: 163): TI (not seen).

ISOLECTOTYPE (**designated here**). — "Habitat in herbidis Quelpaert. 786 Oct. 1906 Leg. U. Faurie" P[P03555963*; Fig. 2].

Nomenclatural note. Nakai (1915) described three species of *V.* subgen. *Pseudolysimachium* from the island Quelpart (= Jeju), *V. ovata* Nakai, *V. rotunda*, and *V. villosula* Nakai, the first based on a collection by Taquet from 1912, the second based on a collection by Faurie (*no. 786*, Oct. 1906), the last one based on other collections by Faurie (*no. 928*, based on Nakai (1943) from Oct. 1906), by T. Mori (*no. 123*) and T. Ishidoya (*no. 36*, 14. Aug. 1912). Nakai (1943) later stated that the Faurie collection of *V. villosula* is the type and stated that the types of all three are found in TI, which is considered to be an effective lectotypification. No further specimens of the type collections are mentioned.

Fig. 2. — Specimens of Faurie from Jeju Island (Quelpaert), South Korea. Isolectotype of *Veronica rotunda* Nakai (P03555963).

FIG. 3. — Specimens of Faurie from Jeju Island (Quelpaert), South Korea. Dubious isolectotype of *Veronica villosula* Nakai, *Faurie no. 928* (P03555962).

TABLE 1. — Comparison of the descriptions by Nakai (1915) and the specimen *Faurie no. 928* in P (P03555962). **In bold**, characters used in key in Nakai (1943).

***Veronica ovata* Nakai**	***Veronica rotunda* Nakai**	***Veronica villosula* Nakai**	***Faurie 928* in P**
9 cm tall	36 cm tall	–	>120 cm
Adpressed-pubescent at apex	Everywhere adpressed ciliate	Velutinous	Not clear, glabrescent below
Petiole 1-2 cm long	**Sessile**	**Sessile**	**Short petiolate**
Leaf on both sides pubescent	Glabrous, on veins adpressed pilose	**On both sides velutinous**	**Apparently only velutinous below but not clear**
Leaf wide-ovate	**Leaves rotundate or elliptic-rotundate**	**Leaves oblanceolate** above, 30 mm long, 7 mm wide	**Leaves ovate**
Raceme basally branched, spicate	Terminal, spicate	Terminal, spicate	Raceme strongly branched
Bracts 2-4 mm long	Bracts 2-3 mm long, linear	–	Bracts 2-4 mm long
Pedicels as long as calyx		–	Pedicels as long as calyx
Sepals lanceolate	Lanceolate	Lanceolate	Lanceolate
Sepals 1.5 mm long	2 mm long	2 mm long	1.5 mm long
Corolla violet	Corolla violet	Violet	–
Corolla 4 mm long	Corolla 5.5 mm long	5 mm long	–
Corolla lobes widely elliptic	Lobes ovate	Ovate or oblong-ovate	–
Stamens double as long as corolla	Stamens 1.5× longer than corolla	Stamens longer than corolla	Stamens not visible
–	(5-7 mm long based on other specimens)	Capsule 2.5 mm long	1.5 mm long

Veronica villosula Nakai

Botanical Magazine (Tokyo) 29: 4 (Nakai 1915). — *V. longifolia* var. *sessilifolia* Bonati, *nom. inval.* (Art. 30.1; herbarium name).

TYPE CITATION. — South Korea, Jejudo: "Hab. In Quelpaert: in herbidis (Faurie n. 928, T. Mori n. 123) in monte Hallaisan 1500 m. 14.VIII.1912 (T. Ishidoya n. 36)".

LECTOTYPE. — Designated by Nakai (1943: 162): TI (not seen).

DUBIOUS ISOLECTOTYPE. — "Habitat in herbidis Quelpaert. 928 Oct. 1906 Leg. U. Faurie", P[P03555962*; Fig. 3].

Nomenclatural note. Whereas *V. ovata* and *V. rotunda* are currently accepted species (Iwatsuki *et al.* 1993), *V. villosula* was usually considered a synonym of *V. linariifolia* (e.g., https://powo.science.kew.org), which is in line with the description with velutionous indumentum and small oblanceolate leaves. However, based on the specimen in Paris having broad leaves, synonymization with *V. linariifolia* is dubious. Both, *no. 786* and *no. 928*, have sessile, large leaves and long inflorescences (Table 1) and have been labelled in Paris by Bonati as *V. longifolia* var. *sessilifolia*. The syntypes of *V. villosula*, collected by T. Mori and T. Ishidoya, are filed under *V. kiusiana* in TI, considered a subspecies of *V. ovata* by Govaerts *et al.* (2021). It appears that the specimen *Faurie no. 928* in TI used by Nakai (1915) belongs to a different species than the specimen *Faurie no. 928* in P. Also, the variation in *V. ovata*/*V. kiusiana* definitely deserves further study.

Veronica sachalinensis Boriss.

Botaniceskie Materialy Gerbarija Botaniceskogo Instituta Imeni V. L. Komarova Akademii Nauk SSSR 17: 354 (Borissova 1955a), *nom. illeg.* (Art. 53.1; non *V. sachalinensis* Yamazaki). — *Veronicastrum borissovae* (Czerep.) Sojak in Sbornik Narodniho Muzea v Prahe 39: 59 (Sojak 1983a). — *Leptandra borissovae* Czerep., Plantae vasculares URSS 466 (Czerepanov 1981).

TYPE CITATION. — Russia, Sakhalin: "Insula Sachalin, in herbosis prope pag. Vladimirovo, 22 VII 1908, fl., fr. *No. 675, Faurie*".

HOLOTYPE. — LE (not seen).

ISOTYPE. — Not mentioned by Borissova (1955a): P[P03520459*].

Nomenclatural note. Finally, Borissova (1955a) published *V. sachalinensis*, unaware of the slightly older name published by Yamazaki (1952). Whereas the taxonomic affinities of the name of Yamazaki (1952) are considered to be *V.* subgen. *Pseudolysimachium*, the name of Borissova (1955a) belongs to the genus *Veronicastrum*, either under the replacement name *V. borissovae* or as synonym of *V. japonicum* or *V. sibiricum*. The latter hypothesis is preferred here based on Ohashi (2015).

THE HERBIER COSSON

Ernest Saint-Charles Cosson was a French botanist who is known for his Flore des environs de Paris (Cosson & Germain 1845), his collections in Algerie and his famous herbarium (Dayrat 2003). Strangely, no specimen matching his names published in *Veronica* (*V. chamaedrys* var. *petiolata*, *V. teucrium* var. *intermedia*) was found in Paris. However, the herbarium of Cosson at P includes a number of important other collections. As mentioned in Stafleu & Cowan (1976), he bought part of the herbarium of Bunge and also the one of Schultz. In addition, also collections from Debeaux, Heldreich, Heuffel, Montbret, and Moquin-Tandon bear the stamp of his herbarium. Collections from Buhse, Karelin, Ledebour, Meyer and Turczaninow arrived in P via the herbarium Bunge. The herbarium of Cosson was inherited by his grandson Ernest Cosson (Stearn 1938), so herbarium specimens also bear the stamp of Ernest Cosson. Apart from the collectors mentioned below, the herbier Cosson also contains many collections of Kotschy, as well as some single specimens of Poiret, Schimper, Heldreich, Sintenis, Bornmüller, von Mueller and Pringle.

Alexander von Bunge (1803-1890)
Alexander Bunge was an important Russian botanist and explorer, especially early on in the Kazakh steppe and Altai Mountains, where he travelled with Ledebour and Meyer (Sander & Meikar 2011; see also below). Later he moved on through Mongolia to Beijing and explored the Chinese flora from 1830-1832 (Sander & Meikar 2011). On his way back he explored again the Altai Mountains. Later expeditions led him to Khorasan, Afghanistan, and Persia in 1857-1859 (Sander & Meikar 2011). His main herbarium is in LE with some duplicates in HAL, but his personal herbarium was bought by Cosson and is, therefore, in P.

Veronica macrostemon Bunge ex Ledeb.

Flora Altaica 1: 35 (Ledebour 1829).

TYPE CITATION. — "Ic. pl. Fl. ross. alt. illustr. t. 127 […] [Russia, Altai Rep.:] Hab. rarior in lapidosis asperis summarum alpium ad fl. Tschuja (B.)", Bunge.

LECTOTYPE. — Designated by Kosachev (2011): "*Bunge no. 31*, Jun. 1826", LE (not seen).

ISOLECTOTYPE. — Designated by Kosachev (2011): LE (not seen).

ISOLECTOTYPE (**designated here**). — P[P00208393*].

Nomenclatural note. *Veronica macrostemon* is a species endemic to the Altai and adjacent Sayan Mountains. The type collection is from alpine scree near the river Tschuja. Kosachev (2011) lectotypified the species with material from LE but failed to check for other original material outside LE. I, therefore, add to the lectotypification here. A number of specimens of Bunge exist that are not explicitly mentioned to be collected near river Tschuja NY[NY00130766, JE00003110, M0188520) and are, thus, not considered isolectotypes. The specimen in B that was mentioned by Stroh (1942) is likely destroyed. Interestingly, no original material by Bunge for the related *V. densiflora*, also lectotypified by Kosachev (2011), was found in P.

Veronica sessiliflora Bunge ex Ledeb.

Flora Altaica 1: 32 (Ledebour 1829). — *Pseudolysimachion sessiliflorum* (Bunge) Holub, *Folia Geobotanica et Phytotaxonomica* 2: 425 (Holub & Pouzar 1967).

TYPE CITATION. — "Ic. pl. Fl. ross. alt. illustr. t. 126 […] [Russia, Altai Rep.:] Hab. in locis sterilibus deserti ad fluvios Kurai et Tschuja (B.)[= Bunge]".

LECTOTYPE. — Designated by Kosachev (2011): 136, LE (not seen).

ISOLECTOTYPE. — Designated by Kosachev (2011), LE (not seen).

ISOLECTOTYPES (**designated here**). — P[P04077595*], KW!

Nomenclatural note. Another species collected by Bunge in the summer of 1826 from the river Tschuja is *Veronica sessiliflora*. The species status was doubted first by Elenevsky (1978) who suggested it to be a hybrid between *V. porphyriana* and *V. pinnata*, a hypothesis later confirmed by Kosachev *et al.* (2019) and Khan *et al.* (2024). The species was as the previous one lectotypified by Kosachev (2011) but again without mentioning other herbarium specimens.

Veronica siaretensis E.B.J.Lehm.

Bulletin de l'herbier Boissier 8: 348 (Lehmann 1908).

TYPE CITATION. — Iran, Golestan: "Hab. Siaret [Ziarat]", Bunge.

TYPE MATERIAL. — P[P03529365*, P03529366*, P03529367*, P03529368*].

Nomenclatural note. On his expedition to northern Iran, Bunge made also important collections of *Veronica*, for example that of *V. siaretensis*. This species belongs to a group of species with close relationship to the cosmopolitan weeds *V. persica* and *V. polita* (Fischer 1987). The morphological diversity in the northeastern part of Iran is remarkable and species limits are difficult to draw. Therefore, identification of type material is important but unfortunately the herbarium LE could not be investigated in detail for these species. Therefore, I abstain from lectotypification so far. For *V. siaretensis*, Lehmann (1908) mentioned specimens from "Siaret" in G and LE. No material was, however, found in G.

Veronica bungei Boiss.

Flora Orientalis 4: 463 (Boissier 1879).

TYPE CITATION. — Iran, Golestan: "In alpe Ssiachaneh [=? Siah Khaneh] inter Siharet [Ziarat] et Schahrud", Bunge.

LECTOTYPE (**designated here**). — G[G00330228!].

Nomenclatural note. Another species of that species group with type material collected by Bunge is *V. bungei*, collected close-by "in alpe Ssiachaneh" between "Siaret et Schahrud". Surprisingly, no material of that species is found in P but only in G.

Veronica maritima var. ***condensata*** Rchb.

Flora Germanica excursoria 1830-2: 372 (Reichenbach 1833 [1830-2]).

TYPE CITATION. — none designated.

NEOTYPE (**designated here**). — Slovenia: "Krain, Lipa, am Laibacher Moraste. H. Freyer, Custos Mus. Lab.", P[P04051195*].

ISONEOTYPES (**designated here**). — LMO!, MPU!, OXF!

Nomenclatural note. Bunge also received specimens from other collectors, for example, the widely distributed exsiccata series of Reichenbach. Therefore, type specimens of Reichenbach

can also be found in the herbarium of Bunge in P. *Veronica maritima* var. *condensata* is a variety of a *V. longifolia*, which is completely glabrous, with four leaves per node, which have a cuneate base, are linear-lanceolate, with sharply serrate margin and very dense inflorescence. The name has been published by Reichenbach in his *Flora Germanica Excursoria* (Reichenbach 1833 [1830-2]) and type material has been sent by Reichenbach in his exsiccatae series. Therefore, for many names there exist a large number of herbarium specimens, among them Bunge, but the original herbarium of Reichenbach has been destroyed. Since it is not clear whether Reichenbach saw these specimens before publication of the name, the exsiccate series can only serve as neotypes for names (e.g., Verloove 2017). Since the specimen in Paris is well preserved and is the only one known to me to be digitized, it is here chosen as neotype.

Carl Friedrich von Ledebour (1785-1851)
Ledebour was a German botanist and became professor in Dorpat (Tartu), Estonia, in 1811 (until 1836). He organized large expeditions to Crimea (1818) and in the light of research on *Veronica* to the Altai Mountains in 1826-1827, joined by Bunge and Carl Meyer (Sander & Meikar 2011). They published the results of their trip in *Flora Altaica* (Ledebour 1829).

Veronica teucrium subsp. ***altaica*** Watzl

Abhandlungen der zoologisch-botanischen Gesellschaft Wien 5: 49 (Watzl 1910). — *V. krylovii* Schischk., *Flora Zapadnoi Sibiri* 10: 2457 (Krylov 1939).

TYPE CITATION. — "Altai (Ledebour MPV, J, Ke, Fischer, Meyer J, Gebler UW, Endlicher MPV; dieses Exemplar zeigt Annäherung an ssp. pseudochamaedrys); Irkutsk (Karo Ke, B; Alfarus? J); Baikal (KusnezowJ); Songarei, Tarbagatai (Karelin et Kiriloff UW, MPV, NVR)".

LECTOTYPE. — Designated by Rojas-Andrés *et al.* (2016: 621), *Karelin & Kiriloff s.n.*, W[W0020501!].

ISOLECTOTYPE. — Designated by Rojas-Andrés *et al.* (2016: 621), WU[WU043369!], RIG [Watzl 1910].

SYNTYPES. — Ledebour: W (not seen), TU (not seen), WU[WU043367!*], P[P03520364*]; Fischer, Meyer: TU (not seen); Gebler: WU[WU043366!*]; Endlicher: W (not seen); Karo: BRNM (not seen), WU[WU043368!*]; Alfarus: TU (not seen); Kusnezow: TU (not seen).

Nomenclatural note. As mentioned above under Bunge, material of the Altai trip came to Paris via the Bunge herbarium bought by Cosson. However, there is no evidence that the specimen of *V. teucrium* from the Altai belonged to the Bunge herbarium, but it seemed to have come from Ledebour to the general herbarium.

Grigorij Karelin (1801-1872)
Karelin is another important Russian botanist and explorer. Bunge received specimens from Karelin and so this material found his way into the herbarium Cosson in P, but collections also came via different other routes to P. The collections were intensively discussed and names lectotypified by Gubanov *et al.* (1998), but he ignored collections outside MW and LE. This is added here. The first, *V. spicata* var. *viscosissima* Kar. & Kir. was later separated as a distinct species, *V. porphyriana* Pavl.

Veronica spicata var. ***viscosissima*** Kar. & Kir.

Bulletin de la Société impériale des naturalistes de Moscou 14: 721 (Karelin & Kirilow 1841), *nom. nud.* (art. 39.1; no description).

TYPE CITATION. — Kazakhstan, East Kazakhstan: "In pratensibus ad rivulum Serschenka prope munimentum Feklistovskoi (Feklistofskoi) nec non in rupestribus ad fl. Buchtorma [Bukhtarma?]".

LECTOTYPE. — Designated by Gubanov *et al.* (1998: 46), *Karelin & Kiriloff no. 951*, 1840 MW[MW0594707*].

ISOLECTOTYPES (**designated here**). — P[P03517262*, P04077792*], W!

Veronica nudicaulis Kar. & Kir.

Bulletin de la Société impériale des naturalistes de Moscou 15: 415 (Karelin & Kirilow 1842), *nom. illeg.* (Art. 53.1; non *V. nudicaulis* Lam.).

TYPE CITATION. — Kazakhstan, East Kazakhstan: "Songoria [Dzungaria], in montosis herbidis ad rivulum Batrak/Batpak prope munimentum Ajagus [Ajaguz]".

LECTOTYPE. — Designated by Gubanov *et al.* (1998: 46), "*Karelin & Kiriloff no. 1786*, 1841", LE (not seen).

ISOLECTOTYPES (**designated here**). — KFTA[KFTA0001368*], NY[NY00130762!*], OXF!, P[P03555826*, P03555828*], W!

Nomenclatural note. The name *V. nudicaulis* is, based on description in the protologue, associated with *V. hispidula* rather than *V. pusilla* as in Borissova (1955b). Further, a second-step lectotypification is necessary in the future, because there are two specimens in LE (Kosachev, pers. comm.).

Veronica laeta Kar. & Kir.

Bulletin de la Société impériale des naturalistes de Moscou 15: 414 (Karelin & Kirilow 1842). — *Pseudolysimachion laetum* (Karelin & Kirilow) Holub, *Folia Geobotanica et Phytotaxonomica* 2: 424 (Holub & Pouzar 1967).

TYPE CITATION. — Kazakhstan, Almaty: "in rupestribus montium Alatau ad fl. Sarchan".

LECTOTYPE. — Designated by Gubanov *et al.* (1998: 46), "*Karelin & Kiriloff no. 1788*, 1841", LE[five specimens present; Kosachev, pers. comm.).

ISOLECTOTYPES. — Designated by Gubanov *et al.* (1998: 46), MW[MW0594695*, MW0594696*, MW0594697*].

ISOLECTOTYPE. — Designated by Gureyeva & Balashova (2004: 29), TK (not seen).

ISOLECTOTYPES (**designated here**). — H[H1140322!], M[M0188526*], NY[NY00130765!*], OXF!, P[P03529297*, P03529301*], WU[WU030829-WU030831!].

Diplophyllum cardiocarpum Kar. & Kir.

Bulletin de la Société impériale des naturalistes de Moscou 15: 417 (Karelin & Kirilow 1842). — *Veronica cardiocarpa* (Kar. & Kir.) Walp., *Repertorium botanices systematicae* 3: 335 (Walpers 1844-45).

Type citation. — Kazakhstan, Almaty: "In sylvaticis umbrosissimis montium Alatau ad fl. Lepsa in Soongaria [Junggarian] orientali".

Lectotype. — Designated by Elenevsky (1978: 217), "*Karelin & Kiriloff no. 610/no. 1789*, 1841", LE (not seen).

Isolectotypes. — Designated by Elenevsky (1978: 217), LE (eight sheets; Kosachev, pers. comm.).

Isolectotype. — Designated by Gubanov *et al.* (1998: 45): MW[MW0594680*].

Isolectotypes (**designated here**). — BR[BR000005422346!*], KW!, M[M0188535!*], OXF!, P[P04048937*, P04048961*], W[W0054419!*].

Carl Anton von Meyer (1795-1855)
Meyer was another Russian botanist and explorer who studied with Bunge and Ledebour the flora of the Altai and became director of the Botanical Garden in St. Petersburg. Whereas his herbarium is in LE (Stafleu & Cowan 1981), duplicates were given to Bunge and arrived in P via this way. Since the herbarium in LE has not been investigated intensively to find the type of *V. ceratocarpa*, no lectotypification of this species is possible, yet. For *V. minuta*, an isolectotype is designated.

Veronica ceratocarpa C.A.Mey.

Verzeichniss der Pflanzen: 106 (Meyer 1831).

Type citation. — Azerbaijan, Lankaran: "920 […] In pratis circa pagos inter Sallian et Lenkoran".

Type material. — P[P04051545*].

Veronica minuta C.A.Mey.

Verzeichniss der Pflanzen: 105 (Meyer 1831), *nom. cons.* (Albach & Kosachev 2018; Applequist *et al.* 2022: 227).

Type citation. — Russia, Kabardino-Balkarien: "911 […] In regione alpina Caucasi occidentalis, locis lapidosis (alt. 1500-1600 hexap.)", "In summis alpibus Elborus, alt. 9000-10000p".

Lectotype. — Designated by Fischer (1986), LE[LE01042987*].

Isolectotype (**designated here**). — P[P03555932*].

Veronica tubiflora Turcz. ex Fisch. & C.A.Mey.

Index Seminum, quae Hortus Botanicus Imperialis Petropolitanus pro Mutua Commutatione Offert 2: 28 (Fischer & Meyer 1835). — *V. tubiflora* Turcz. *Bulletin de la Société impériale des naturalistes de Moscou* 11: 98 (Turczaninow 1838), *nom. nud.* (Art. 39.1; no description). — *V. tubiflora* Turcz. *Bulletin de la Société impériale des naturalistes de Moscou* 24: 310 (Turczaninow 1851). — *Veronicastrum tubiflorum* (Turcz. ex Fisch. & C.A.Mey.) Sojak, *Sbornik Narodniho Muzea v Praze* 39: 59 (Sojak 1983b).

Type citation. — Russia, Burjatia: "Hab. in pratis humidis Dahuriae".

Type material. — "In paludosos prope Barguziu, atque in Dahuria", *Flora Baicalensi-Dahurico*, see also (Turczaninow 1851), GOET[GOET011135!], K[K001070327*, K001070328*, K001070330*], P[P03520522*, P03520523*, P03520527*].

Nomenclatural note. A third species published by Meyer has a more complicated taxonomic history. *Veronica tubiflora* was published by Friedrich Ernst Ludwig Fischer & Meyer (1835) in the seed catalogue of the botanical garden St. Petersburg in 1835 based on plants from "pratis humidis Dahuriae", however, without collector. None of the authors collected in that area. Turczaninow later (Turczaninow 1851) published the name based on his collections in Dahuria. The inspection of specimens of Fischer in the herbarium Cosson (P03520522), in which Fischer labelled the specimen with "*Veronica tubiflora* Turcz." demonstrates that the original material came indeed from Turczaninow. As in previous names lectotypification requires extensive checking of the herbarium LE but specimens in P and other herbaria from Fischer collected by Turczaninow in Dahuria are certainly type material.

Janos Heuffel (1800-1857)
Janos Heuffel was a Hungarian botanist in today's Romania, who was in contact with many other scientists in Romania and likely sent also material to Cosson in Paris.

Veronica crassifolia Wierzb.ex Heuff.

Flora 18: 251 (Heuffel 1835), *nom. illeg.* (Art. 53.1; non *V. crassifolia* Kit. ex Roem. & Schult.). — *V. barrelieri* subsp. *prodanii* (Degen) Albach, *Taxon* 57: 3 (Albach 2008a).

Type citation. — Romania, Caras-Severin: "Hab. in lapidosis rupestribusque calcareis (an Kalkfelsen) montis Szimcon (Simion) ad Csiklovan [Ciclova Montana] in Banatu. Aestate".

Lectotype. — Designated by Albach *et al.* (2017), BP[BP149668!].

Syntypes. — Collected at the type locality in 1834: M[M0188509!*], P[P03516860*].

Nomenclatural note. I have discussed the taxonomic problems of *V. crassifolia* previously (Albach *et al.* 2017). The name was published in 1835 with most specimens in European herbaria dating from 1835 or without date, which excludes them from consideration as lectotype. The lectotype in BP is dated from 1833, so specimens from 1834 can be considered syntypes since they are not the same collection even if they are from the same locality.

Pierre-Edmond Boissier (1810-1885)
Boissier is considered one of the three most prolific authors of new species in the 19th century (Stafleu 1970). Especially, his Diagnoses and his Flora orientalis are important milestones for the systematics of *Veronica* (Albach 2023). With regards to his own collections, his first travels to Spain did not leave a mark on *Veronica* systematics but his trips to Southwest Asia (1842, 1845-1846), especially the first one, did. In 1842, he travelled to Western Anatolia (Baytop 2010), where he collected

type specimens of *V. cariensis* and *V. caespitosa*. However, the more important aspect of his travels was that they acquainted him with many species personally and put him into contact with many contemporary explorers, whose collections formed essential bases for his publications. Among these are Georges-Francois Reuter, Aucher-Éloy, and others (see below).

Veronica cariensis Boiss.

Diagnoses Plantarum Orientalum Novarum, ser. 1, 4: 75 (Boissier 1844).

TYPE CITATION. — Turkey, Denizli: "Hab. in arenosis regionis montanae alpium anatoliae, Cadmus supra Gheyra [Geyre], in via inter Gheyra et Denisleh, Tmolo ad Bozdagh [prov. Manisa]".

LECTOTYPE (**designated here**). — "Tmolus ad Bozdagh", G[G00768538*].

ISOLECTOTYPES (**designated here**). — GOET[GOET011125!], (K-Benth001070229!], K[K001070231*], KW!, LY[LY0467569*], MW[MW0594684*], P[P03962553*, P03882983*, P03882985*, P03882987*, P03882992*].

Nomenclatural note. With regard to *V. cariensis*, Boissier mentions three collection localities, 1. "Cadmus supra Gheyra", 2. "in via inter Gheyra et Denisleh" and 3. "Tmolo ad Bozdagh" in southwestern Turkey. However, among the twelve original specimens located nine have the same label combining the two localities "Tmolus, Cadmus supra Gheyra", which are 120 km apart from each other. Only the specimen in Boissier's herbarium has clearly the locality "Tmolus ad Bozdagh" and the specimen in Bentham's herbarium only has "Cadmus". The latter specimen seems to have been sent to Bentham in anticipation of his revision of Scrophulariaceae (Bentham 1846) before preparing the other specimens, which were sent to other colleagues based on combining collections from two collection sites. In the light of this, the specimen in G is considered the lectotype and all other isolectotypes. They demonstrate that *V. cariensis* is a synonym of *V. cuneifolia* subsp. *cuneifolia* Don.

Veronica caespitosa Boiss.

Diagnoses Plantarum Orientalum Novarum, ser. 1, 4: 79 (Boissier 1844).

TYPE CITATION. — Turkey, Denizli: "Hab. in regione nivali Cadmi occidentalis [= Ak Da.] supra Gheyra [= Geyre], Olympique Bithyni *Boiss. Aucher no. 1970*".

LECTOTYPE (**designated here**). — "Cadmus supra Gheyra et Olimpia", G[G00768425!*].

ISOLECTOTYPES (**designated here**). — G[G00343618!*], GOET[GOET 11121!*], K[K001070299!*, K001070303!*], KW!, MW[MW0594683*], P[P03883069*, P03883070*, P03883072*, P04051550*], W!

SYNTYPE. — "In cacumine Olympi Byth. *Aucher-Éloy-Herbier d'Orient no. 1970*", G[G00343619!*, G00343620!*, G00768415!*], MO[MO-176188!*], MPU[MPU013999!*], P[P03883071*, P03883073*], TCD[TCD0018089*].

Nomenclatural note. The type collection of *V. caespitosa* is similarly complex. Boissier (1844) mentioned two collections, his own collection from Mt. Cadmus (Madran Mountain) and the one from Aucher-Éloy from Mt. Olympus in Bithynia (Uludağ), likely collected in 1833 (Baytop 2005). Both collections are present in several herbaria. Overall, I found 12 specimens of Boissier and eight of Aucher-Éloy. Since Boissier is more likely to have relied on his own collections, the lectotype is chosen from his collection and the Aucher-Éloy collection is considered to be the syntypes. Most of the specimens of Boissier's collection have the same yellow label "Boissier 1842 – Cadmus supra Gheyra et Olympia" and are the ones distributed by Boissier to other collectors and herbaria. An exception is the one in the herbarium Bentham (K001070299), which states only "Cadmus" and was likely, similar to the specimen of *V. cariensis*, sent to Bentham before shipping of the other specimens. The best specimen is found in his own herbarium with the label "Pic de Gheyra pais superior, Cadmus occid. Junio 1842" but not explicitly stating *V. caespitosa*. Nevertheless, it is clear that this is the species described by Boissier.

Benedict Balansa (1825-1891)

Balansa was a French collector who botanized extensively through Anatolia between 1854 and 1866 (Baytop 2010). His first trip to Southern Anatolia was in 1855 to the Mersin region and further north and the adjacent southern Taurus (Baytop 2010), where he collected type specimens of *V. surculosa* and *V. glaberrima* from Bolkar Dagh, *V. ixodes* from 40 km south of Kayseri and *V. divaricata* from Ala Dagh. In 1856, he returned to Kayseri (Baytop 2010) and collected *V. cinerea* near Karamas Dagh. He afterwards travelled to Western Anatolia (Baytop 2010) and collected *V. microtheca* near Usak. In 1867, he left for Southeast Asia (Baytop 2010) and collected in Vietnam type material of *V. anagallis-aquatica* var. *balansae*. His main collections are in G (but only up to 1856) and P but his duplicates are widely distributed (Baytop 2010).

Veronica divaricata Boiss. & Balansa in Boiss.

Diagnoses Plantarum Orientalum Novarum, ser. 2, 3: 173 (Boissier 1856), *nom. illeg.* (Art. 53.1; non *V. divaricata* Tausch).

TYPE CITATION. — Turkey, Mersin: "Hab. circa pagum Ala Dagh sex leucis ad septentrionem portus Mersina in Cilicia sito cl. Balansa. Floret Maio".

LECTOTYPE (**designated here**). — "B. Balansa, Pl. d'Orient, 1855. 688. *Veronica divaricata*, sp. nov. (Boiss.) Village d'Alla-Dagh, à 7 lieues au NNO. de Mersina (Cilicie). 16. Mai", G[G00343615*].

ISOLECTOTYPES (**designated here**). — BP[BP348578!], FI[FI009713*], G[G00343614!, G00343617!], GH[GH00091939!], GOET[GOET011120!], JE[JE00000133!*], K[K001070256*], KW!, MPU!, P[P03529343*, P03529344*, P03529345*], US[US00324050], W!, WAG[WAG0004900*].

Nomenclatural note. Boissier and Balansa (Boissier 1856) were the first to recognize the distinctiveness of these plants but chose an illegitimate name, *V. divaricata*, a fact later corrected by Stroh (1942) who chose to recognize Balansa in the name of this species. *Veronica balansae* (Stroh) belongs to *V.* sect. *Acinifolia* and to the large-flowered group but differs from *V. syriaca* and others in capsules broader than 5 mm and with divergent lobes.

Veronica ixodes Boiss. & Balansa in Boiss.

Diagnoses Plantarum Orientalum Novarum, ser. 2, 3: 172 (Boissier 1856). — *V. hispidula* subsp. *ixodes* (Boiss. & Balansa) M.A.Fisch. *Flora of Turkey and the Aegean Islands* 6: 709 (Fischer 1978).

TYPE CITATION. — Turkey, Kayseri: "Hab. in regione alpina montis Masmeneu Dagh in via a Cilicia ad Caesaream siti cl. Balansa".

LECTOTYPE (**designated here**). — "B. Balansa, Pl. d'Orient, 1855. *Veronica ixodes*, sp. nov. (Boiss.) Masmeneu-Dagh, à 2 lieues au sud de Césaréi. 8 août!", G[G00343632!].

ISOLECTOTYPES (**designated here**). — G[G00343631!], GH[GH00091942!], K[K001070264*], P[P03529507*, P03529516*], Z!

POSSIBLE ISOLECTOTYPE. — US[US00324055*].

Nomenclatural note. *Veronica ixodes* is considered to differ from *V. hispidula* by having longer styles and pedicels, the latter longer than the bracts, a white corolla rather than a blue one, and a slightly different capsule shape (Fischer 1978). The distribution ranges of both differ with *V. ixodes* occurring further south in southern Anatolia and Cyprus, although ranges overlap, and mixed populations occur (Mouterde & Fischer 1984). Therefore, *V. ixodes* is nowadays considered a subspecies of *V. hispidula*.

Veronica surculosa Boiss. & Balansa

Diagnoses Plantarum Orientalum Novarum, ser. 2, 3: 170 (Boissier 1856).

TYPE CITATION. — Turkey, Nigde: "Hab. in regione alpina Tauro Orientalis supra Bulgarmaden [Bolkar Dagh] cl. Balansa".

LECTOTYPE (**designated here**). — "B. Balansa, Pl. d'Orient, 1855. *Veronica surculosa*, sp. nov. (Boiss.) Région alpine du Taurus, au-dessus de Boulgarmaden. 16 Septembre", G[G00343591!].

ISOLECTOTYPES (**designated here**). — G[G00768526*], P[P03520326*, P03520327*].

Nomenclatural note. *Veronica surculosa* is an accepted, alpine species restricted to the Taurus Mountains (Fischer 1978). It is similar to *V. dichrus* and *V. cuneifolia*, which are not closely related according to DNA sequence analysis (Doostmohammadi *et al.* 2022). Therefore, typification and further analysis of this species is important.

Veronica glaberrima Boiss. & Balansa in Boiss.

Diagnoses Plantarum Orientalum Novarum, ser. 2, 3: 172 (Boissier 1856).

TYPE CITATION. — Turkey, Nigde: "Hab. In regione alpina Tauri Cilicici supra Bulgarmaden in pratis humidus cl. Balansa qui legit fructiferam fine Augusti".

LECTOTYPE (**designated here**). — "B. Balansa, Pl. d'Orient, 1855. *Veronica glaberrima*, sp. nov. (Boiss.) Prairies humides de la région alpine du Taurus, au-dessus de Boulgarmaden. 28 août.", G[G00343590*].

ISOLECTOTYPES (**designated here**). — BM[BM000997934!*], BP[BP348742!], CAS[CAS5126*], DS[DS485518?], E[E00326066!*], FI[FI009740*], G[G00343588*, G00343589*, G00751940*], GH[GH00091940!], GOET[GOET011126!], JE[JE00000159*], K[K001070259*], KW!, MPU!, P[P03529409*, P03529411*, P03529413*, P03529414*, P03529415*], US[US00324048*], W[no barcode!, W1889-0080568!], WAG[WAG0004901*].

Nomenclatural note. *Veronica glaberrima* belongs to the short-styled members of *V.* sect. *Acinifolia* (Fischer 1972) and is nowadays considered conspecific with *V. pusilla* (Fischer 1978). It is a high-alpine dwarf and completely glabrous form.

Veronica cinerea Boiss. & Balansa in Boiss.

Diagnoses Plantarum Orientalum Novarum, ser. 2, 6: 131 (Boissier 1859), *nom. cons.* (Martínez-Ortega & Albach 2003; Brummitt 2005; Barrie 2006).

TYPE CITATION. — Turkey, Kayseri: "Hab. in regione subalpina montis Karamas [= Kuramaz] dagh Cappadociae prope Caesaream [= Kayseri]. Floret fine Junii c. Balansa.

LECTOTYPE (**designated here**). — "B. Balansa, Pl. d'Orient, 1856 1025. *Veronica cinerea*, sp. nov. (Boiss.) Région sous-alpine du Karamas-Dagh, à 5 lieues à l'Est de Césarée (Cappadoce). 3. Juillet", G[G00343627!].

ISOLECTOTYPES (**designated here**). — BP[BP348459!], GOET[GOET011124!], P[P03882919*], W[W1889-96677!].

Nomenclatural note. *Veronica cinerea* is an accepted species from Inner Anatolia (Fischer 1978).

Veronica microtheca Boiss. & Balansa *in* Boiss.

Diagnoses Plantarum Orientalum Novarum, ser. 2, 6: 131 (Boissier 1859). — *V. campylopoda* var. *microtheca* (Boiss. & Balansa) Boiss, *Flora Orientalis* 4: 464 (Boissier 1879).

TYPE CITATION. — Turkey, Usak: "Hab. in arvis otiosis prope Ouchak [=Usak] Phrygiae alt 910 metr. cl. Balansa. Fl. Maio".

LECTOTYPE (**designated here**). — "B. Balansa, Pl. d'Orient, 1857. 1163. *Veronica microtheca* sp. nov. (Boiss.), Ouchak (Phrygie), à 910 m. d'alt., champs en friche. 26 mai.", G[G00768037*].

ISOLECTOTYPES (**designated here**). — BP[BP349127!], CAS[CAS5111!*], DS[DS444131], G[G00768038*], GOET[GOET011123!], JE[JE00000097!*], OXF!, P[P03555936*, P03555937*, P03555938*, P03555939*, P03803269*, P03882894*, P03882903*, P04048981*].

Nomenclatural note. *Veronica microtheca* is today considered a variety of *V. campylopoda* differing in smaller capsules and seeds and slightly different shape of the capsule lobes. Further, the collection by Balansa represents the westernmost locality for the species, which is significant given the variation in ploidy (Albach *et al.* 2008) and its range from Western Turkey to Eastern China. It is likely that different, cryptic species are combined under the name *V. campylopoda*. The specimen in Geneva is chosen as lectotype since it contains a handwritten note by Balansa with the differentiating characters. There are an exceptional eight isolectotypes in P, four from the general herbarium, two from herbarium Drake, and two from Cosson (one via the herbarium Parceval-Grandmaison/Moquin-Tandon).

Veronica anagallis-aquatica L. var. *balansae* Bonati

Flore générale de l'Indo-Chine 4, 4: 441 (Bonati 1927).

TYPE CITATION. — Vietnam: "Tonkin, Tu Phap (Balansa)".

LECTOTYPE (**designated here**). — "Tonkin, Tu Phap, laisses de la Rivière Noire", *B. Balansa no. 3577*, III.1888, P[P00587537*].

ISOLECTOTYPE (desginated here). — K[K005096296!].

Nomenclatural note. *Veronica anagallis-aquatica* is an almost cosmopolitan species occurring in all kinds of aquatic habitats. It is one of the most phenotypically plastic species (Ellmouni *et al.* 2017) and it has been difficult to delimit related species clearly from *V. anagallis-aquatica* (Hosseinnejad Azad *et al.* 2020). *Veronica undulata* has been consistently recognized in recent years based on hexaploidy (the only known hexaploids in the subsection *Anagallides*), straight pedicels (rather than ascending), sparsely glandular (rather than glabrous) indumentum (Hong & Fischer 1998) and small, white flowers. It is distributed widely in southern and eastern Asia but largely sympatric with *V. anagallis-aquatica*. *Veronica anagallis-aquatica* var. *balansae* was described by Bonati (1927) as having narrower, more toothed leaves, more elongated inflorescences, and hair-thin pedicels, twice as long as bracts and calyx. These characters can be easily recognized in the two specimens of Balansa in P, although not all pedicels are as long as indicated. Nevertheless, the patent pedicels, the smaller, narrower, and more toothed leaves, as well as the relative (to the rest of the plant) long inflorescence characterize the plants as belonging to *V. undulata*. The two specimens belong to the Drake and the general herbarium, with the former not labeled with the name (P00587536), and the latter labeled with the new name and with "deter. Bonati". Therefore, the latter is chosen as lectotype. Another specimen of this collection has been found in Kew with the same label but no note by Bonati.

Rémi Aucher-Éloy (1793-1838)

Aucher-Éloy was one of the most extensive travellers of the Near East in the 19th century. His diary allows approximate dating of his collections (Aucher-Éloy 1843; Baytop 2005). He travelled in 1832 to western Anatolia, in 1833 in northwestern Anatolia, and in 1834 across Anatolia probably collecting on the latter trip *Veronica* specimens on Uludag (*V. caespitosa*) and the Taurus (*V. polifolia*). In 1835, he made his first trip to Armenia and Iran and probably collected the type specimens of *V. benthamii*, although it is labelled "1836". However, in 1836 he is known to have turned westwards and collecting *V. thessalica* in northern Greece. His most important travel for *Veronica* systematics was his last one to northern Iran and south to Isfahan, where he died of exhaustion. His herbarium is mainly in Paris, with the second almost complete set, the one bought by Boissier (Baytop 2005), found in G. Other specimens from Turkey may be found in up to 10 other herbaria (Baytop 2010). Those from Iran and the Caucasus seem to be further distributed. Specimens of Aucher-Éloy are type specimens of 11 taxa in *Veronica*, 9 still accepted as good species. Of these, six were described by Boissier (1844), four by Bentham (1846), and one by Koch (1843). *Veronica caespitosa* and *V. campylopoda* are mentioned under Boissier and Schimper, respectively, because the material of Aucher-Éloy are syntypes and the lectotypes were collected by others.

Veronica polifolia Benth.

Prodromus systematis naturalis regni vegetabilis 10: 473 (Bentham 1846).

TYPE CITATION. — "in Olympo Bithynico, monte Tauro et Armenia (Aucher! N. 1958, 1964, 2594), Mesopotamia (Kotschy! N. 290) in Syria (Labillardière!)".

LECTOTYPE (**designated here**). — "In Mte Tauro *Aucher-Éloy-Herbier d'Orient no. 1964*" (likely collected 1834), G[G00768509*].

ISOLECTOTYPE (**designated here**). — K[K001070221*, K001070222*], P[P03529805*, P03529806*, P03529810*], FI(not seen).

SYNTYPES. — "2594 in Armena M. Aucher-Éloy 1838" (likely collected 1835), G[G00674162*]; "No. 290 Pl. Mesopot., Kurdistan & Mossul Kotschy 1841" (likely collected 1835), K[K001070221*, K001070222*]; "Syria Labill.", G[G00674161*, G00768507*].

Nomenclatural note. *Veronica polifolia* in its current sense (Fischer 1978, 1980) is a caespitose, suffruticose plant distributed in the Lebanon and Anti-Lebanon Mountains and north into Central Anatolia. Bentham (1846) named three collections of Aucher-Éloy, one of Kotschy, and one of Labillardière as syntypes of *Veronica polifolia*. *Aucher-Éloy no. 1958* is from "Olympo Bithynico", *no. 1964* from "monte Tauro" and *no. 2594* from "Armenia". *Kotschy no. 290* is from "Mesopotamia" and Labillardière from "Syria". Bentham further stated that he saw specimens in "herb. Hook." (K) and "DC." (G). Specimens from all collections except *Aucher-Éloy no. 2594* can be found in either herbarium or both. I assume that *Aucher-Éloy no. 2594*, which also cannot be found in Paris, is actually a different species and has been stored under a different name unnoticed. Also, *Aucher-Éloy no. 1958* (K001070226) is not *V. polifolia* in the strict sense but according to M.A. Fischer (on the label) *V. multifida* and *V. cinerea*. Of the remaining three collections, only *Aucher-Éloy no. 1964* are complete plants, showing fruits and flowers. Although the locality "mt. Tauro" is not precise, it is clear from his travel itinerary (Aucher-Éloy

1843) that he travelled extensively in the Eastern Taurus where *V. polifolia* is relatively common. Of the two specimens, the specimen in G is in better condition and alone on the sheet.

Veronica kurdica Benth.

Prodromus systematis naturalis regni vegetabilis 10: 473 (Bentham 1846).

Type citation. — Iran, Zanjan: "in alpibus Elamont".

Lectotype (**designated here**. — Superseding the lectotypification by Fischer (1981: 128): "Alp. Elamont Aucher-Éloy-Herbier d'Orient No. 5089"(likely collected 30.VIII.1837), K[K001070215*].

Isolectotype. — BM[BM(997939!*], G[G00768521*], P[P03529307*, P03529309*], W[W0053058!].

Nomenclatural note. *Veronica kurdica* is a prostrate, suffruticose plant from the Alborz and Zagros Mountains in Iran, easily confused with alpine forms of *V. orientalis*. Bentham (1846) gave two collections as original material, J. Brandt from "montibus Kurdistan" and *Aucher-Éloy no. 5089* "in alpibus Elamont", which is nowadays Mt. Alamut near Teheran. The herbarium of Brandt is unknown with later material probably at LE (https://kiki.huh.harvard.edu/databases/botanist_index.html), where Bentham is unlikely to have seen it. Therefore, Fischer (1981) chose the Aucher-Éloy collection as lectotype. However, Bentham is unlikely to have seen the specimen in Vienna. In the description, Bentham (1846) did not mention an herbarium specifically but "v.s.", which likely refers to the same herbaria as in the preceding species (K, G) with the one in Kew being the more complete specimen. A phylogenetic analysis supported the monophyly of the species including *V. kurdica* subsp. *filicaulis* (Doostmohammadi *et al.* 2022).

Veronica anagallis-aquatica L. var. *pubescens* Benth.

Prodromus systematis naturalis regni vegetabilis 10: 468 (Bentham 1846).

Type citation. — Iran, Gilan, "in prov. Ghilan Persiae (Aucher! n. 5100)".

Lectotype (**designated here**). — "Ghilan. *Aucher-Éloy-Herbier d'Orient no. 5100*"(likely collected 1837), G[G00768623*].

Isolectotype. — P[P03529680*, P04049206*].

Nomenclatural note. *Veronica anagallis-aquatica* var. *pubescens* is described as being short pubescent from all sides. As type, Bentham stated the Iranian collection *Aucher-Éloy no. 5100*. The type material has the pyramidal capsule and long style characteristic of *V. michauxii*. So, it is best considered to be a synonym of that taxon rather than *V. anagallis-aquatica* s.str. Since Bentham again seems to have seen only the material of Boissier in Geneva ("v.s.") and no specimen is available in Kew, that material is chosen as lectotype, although it is not labelled with the name. Morphological and molecular analyses did not suggest a deeper significance for pubescence in the taxonomy of the species (Hosseinnejad Azad *et al.* 2020, 2021).

Veronica thessalica Benth.

Prodromus systematis naturalis regni vegetabilis 10: 480 (Bentham 1846).

Type citation. — Greece, Thessaly/Macedonia: "In Olympo Thessalico (Aucher! n. 1969)".

Lectotype (**designated here**). — "Olympus Thessalus Auch. 1969" (likely collected 1836), G[G00768401*].

Isolectotypes (desginated here). — P[P04219261*, P04219262*].

Nomenclatural note. *Veronica thessalica* is an alpine plant on limestone screes and rocky slopes of Mt. Olympos in Greece and adjacent mountains in the Republic of Northern Macedonia and Albania at elevations of 2100-2900 m (Albach *et al.* 2009). The phylogenetic relationships and morphological differences to related species have been analyzed by Albach *et al.* (2009). Aucher-Éloy seems to have collected it on Mt. Olympos in 1836 (Baytop 2005) and considered it to be *V. capitata* based on his label. Bentham (1846) stated to have seen the collection in Kew ("v. in herb. Hook."). However, no relevant specimen of *V. thessalica* of Aucher-Éloy, not least *no. 1969*, has been found in Kew. Therefore, the specimen in G is chosen as lectotype.

Veronica macropoda Boiss.

Diagnoses Plantarum Orientalum Novarum, ser. 1, 4: 79 (Boissier 1844).

Type citation. — Iran, Isfahan: "Hab. In Persia; *Aucher ad Ispahan no. 5094*".

Lectotype (designated here). — "Isphahan *Aucher-Éloy-Herbier d'Orient no. 5094*" (collected either 1835 or 1838), G[G00768043*].

Isolectotypes (**designated here**). — MO[MO-176192!*], P[P04048025*, P04048028*], K[K001070289*].

Nomenclatural note. *Veronica macropoda* is a rare annual species occurring from western Iran to Pakistan. Boissier (1844) described the species from a collection of *Aucher-Éloy (no. 5094*) from Isfahan. Several duplicates of this collection still exist but I assume that Boissier had only access to the one of his own collections, now in G. The species has not been investigated in more detail.

Veronica microcarpa Boiss.

Diagnoses Plantarum Orientalum Novarum, ser. 1, 4: 76 (Boissier 1844).

Type citation. — "Hab. Prope Bayazid *Aucher no. 5097* et in provi. Aderbidjan [=Azerbaijan] *no. 5096*".

Lectotype. — Designated by Riek (1935: 45, second-step lectotype **designated here**): "Aderbidjan *Aucher-Éloy-Hebier d'Orient no. 5096*"(likely collected 1837), G[G00343634!].

Isolectotypes (**designated here**). — G[G00343582!], MO[MO-176194!*], BM[BM000997941!], KW-Turcz.!, OXF!, P[P03555941*, P03555943*].

Syntypes. — "Bayazid *Aucher-Éloy-Herbier d'Orient no. 5097*" BM[BM000997942!*], G[G00343633*], OXF!, P[P03555940*, P03555943*].

Nomenclatural note. *Veronica microcarpa* is an ascending to decumbent perennial herb occurring between Eastern Turkey and Western Iran. In phylogenetic analyses including samples from throughout its range, it is rather isolated despite morphologically rather similar to other species of the region, such as *V. orientalis*. It is noteworthy that there is a disrepancy between ploidy of plants measured flowcytometrically (2×, Eastern Turkey; Sonibare *et al.* (2014)) and those from chromosome numbers (4×, Armenia, Meskova *et al.*, in Rice *et al.* [2015]). Boissier (1844) cited two collections of Aucher-Éloy (*no. 5097* from "prope Bayazit", Eastern Turkey, *no. 5096* from "Aberbidjan"). Riek (1935) typified the name with the latter. There are two specimens of this collection in G, of which one was donated to the herbarium after Boissier's death but before Riek published his typification. Therefore, a second-step lectotypification seems advantageous.

Veronica aucheri Boiss.

Diagnoses Plantarum Orientalum Novarum, ser. 1, 4: 80 (Boissier 1844).

Type citation. — Iran, Mazandaran: "Hab. in alpibus Demawend Persiae borealis Aucher pl. *Exs. No 5093*".

Lectotype (**designated here**). — "Alp. Demawend *Aucher-Éloy-Herbier d'Orient No. 5093*" (likely collected 3.Sep. 1837) G[G00768190*].

Isolectotypes (**designated here**). — K[K001070207*], KW-Turcz.[no barcode !], OXF!, P[P04049044*, P04049048*, P04049051*, P04049052*], W[W0053054!], WU[WU070357!].

Nomenclatural note. *Veronica aucheri* is a procumbent alpine scree plant from the Alborz Mountain range in Iran. It was classified under *V.* sect. *Alsinoides* by Boissier (1844) based on indumentum and growth habit and unclear life history. Later, he (Boissier 1879) moved it to sect. *Veronica* based on its perenniality, although annual forms may still occur at lower elevations (Doostmohamadi pers. comm.). A position among perennial, alpine Iranian species was recently confirmed (Doostmohammadi *et al.* 2022). The type collection (*Aucher-Éloy no. 5093*) is quite widespread, but it is likely that Boissier has seen only his own collection in Geneva since he stated that he has seen only fragments. The Geneva specimen is indeed a collection presented with all branches separated, which is unusual for this species, which often has herbarium specimens with intermingled branches.

Veronica paederotae Boiss.

Diagnoses Plantarum Orientalum Novarum, ser. 1, 4: 78 (Boissier 1844).

Type citation. — Iran, Zanjan: "Hab. in montibus Elamout [Alamout] *Persiae borealis Aucher No 5088*"(collected 30.VIII.1837).

Lectotype (**designated here**). — "Elamoud *Aucher-Éloy-Herbier d'Orient No. 5088*", G[G00768428*].

Isolectotypes. — K[K001070252*], KW-Turcz.[no barcode !], MO[MO-1617682!], W[W0053059!].

Nomenclatural note. *Veronica paederotae* is likewise a perennial herb, scrambling along alpine pebbles in the Alborz range of northern Iran. It is characterized by an unusually long corolla tube. Its position in *V.* subg. *Pentasepalae*, along with other perennial, alpine species from Southwest Asia was confirmed by Albach *et al.* (2004a) but it occupies a seemingly isolated position (Doostmohammadi *et al.* 2022). The type collection (*Aucher-Éloy no. 5088*) is again fairly widespread but again it is likely that Boissier only saw the Geneva material. It is surprising that this collection is missing in Paris, but it is likely that it is misfiled somewhere given that Aucher-Éloy did not initially label this collection as *Veronica*.

Veronica anisophylla K.Koch

Linnaea 17: 287 (Koch 1843).

Type citation. — Armenia, Schirak: "in Armenia occidentali".

Neotype (**designated here**). — [Illustration in] Riek, *Repertorium specierum novarum regni vegetabilis* 79: fig. 19 (Riek 1935).

Nomenclatural note. The final collection by Aucher-Éloy used as type, is *no. 2531* from Armenia. Koch (1843) described *Veronica anisophylla* from western Armenia, which was subsequently taken up by Bentham (1846) citing not just the collection by Koch but also by Aucher-Éloy (*no. 2531*). Later, Koch (1849) rejected the idea that these two collections are conspecific and described *V. benthamii* based on the Aucher-Éloy collection. Karl Koch was based in Jena when he travelled the orient and wrote the description of the species, getting a permanent position as botanist at the Berlin Botanical Garden only four years later (Stafleu & Cowan 1979). Boissier (1879) synonymized *V. benthamii* with *V. peduncularis*. Römpp (1928) and Riek (1935) later confirmed that *V. anisophylla* is conspecific with *V. orientalis* based on original material in Berlin. Since it was not found in the herbarium, it is likely that the collections of *V. anisophylla* in Berlin were destroyed in World War II. This specimen was, however, illustrated by Riek (1935: abb. 19) and fits to the description by Koch (1843). Therefore, the photo is chosen as neotype. The plant differs from typical *V. orientalis* in being glabrous (usually eglandular pubescent, rarely subglabrous in *V. orientalis*), leaves of the vegetative apex not markedly different and a reddish flower (blue to lilac in *V. orientalis*). Nevertheless, confusion with another species is not possible and it is, therefore, regarded here as an extreme variety of that polymorphic and polyphyletic species (Sonibare *et al.* 2014).

Veronica benthamii K.Koch

Linnaea 22: 691 (Koch 1849), *nom. illeg.* (Art. 53.1; non *V. benthamii* Hook.f.).

Type citation. — Armenia, Aragazotn: "Auf der Ostseite des Alagäs [= Aragaz] auf basaltischem Boden, c. 3500' hoch"(likely collected 1835).

Lectotype (designated here). — "2531 Vero. w Armenia M. Aucher (Éloy) 1836", G[G00673571*].

Nomenclatural note. With regards to *V. benthamii*, surprisingly, the Aucher-Éloy collection was not found in P nor in B nor in any other herbarium except in Geneva. Therefore, the specimen in G has been chosen as lectotype and supports the synonymization with *V. peduncularis* M.Bieb. It remains unknown where Koch (1849) has the precise locality from since Bentham (1846) provided the number of the collection by Aucher-Éloy and that he has seen it in G but not the precise locality, which is also not present on the specimen label. Maybe, a collection by Aucher-Éloy was in B but was also destroyed in WWII.

Alfred Huet du Pavillon (1829-1907)
Huet du Pavillon was a French botanist, who studied at Alphonse de Candolle in Geneva, where he became afterwards curator of the herbarium of Boissier (Charpin & Aymonin 2003). In that time, he travelled, among other places, to Armenia, including places now in Turkey. He collected material quite extensively and distributed it widely (Charpin & Aymonin 2003). Among the specimens Huet du Pavillon collected are type specimens of two species of *Veronica* described by himself and still recognized at the species level, the small annual *V. hispidula* and the steppic perennial *V. armena*.

Veronica hispidula Boiss. & A.Huet in Boiss.

Diagnoses Plantarum Orientalum Novarum, ser. 2, 3: 173 (Boissier 1856).

Type citation. — Turkey, Erzurum: "Hab. in arenosis prope Erzeroum cl. Huet du Pavillon. Fl. Maio".

Lectotype (**designated here**). — "Erzeroum in arenosis Jun 1853 A. Huet du Pavillon", G[G00751975*].

Isolectotypes (**designated here**). — B[B100278580!], BP[BP348660!], FI[FI009741*], G[G00343629!, G00343630!], GH[GH00091941!*], GOET[GOET011128!], JE[JE00000158!*], KW!, P[P03529501*, P03529502*, P04437985*], S[S10-22096*, S10-22097*], W[W1889-0017686!], WAG[WAG0003314*], Z[Z10344!*].

Nomenclatural note. Three specimens of the type collection of *V. hispidula* are in Paris, one apparently directly sent to the general herbarium, the other through the herbier Cosson and the herbier Lenormand (Caen). The lectotype should be the one that Boissier studied most intensively. There are three specimens in G, one labelled as belonging to the personal herbarium of Huet du Pavillon (G00343629), one belonging to the herbarium Candolle (G00343630) and the third one from the herbier Boissier (G00751975). It is the latter one that is also the sheet with the small plants spread across the sheet as if best to study them and, therefore, chosen as lectotype.

Veronica armena Boiss. & Huet in Boiss.

Diagnoses Plantarum Orientalum Novarum, ser. 2, 3: 166 (Boissier 1856).

Type citation. — Turkey, Erzurum: "Hab. in Armeniae monte Techdagh prope Erezeroum alt. 7-8000' cl. Huet du Pavillon".

Lectotype (**designated here**). — "Techdagh Huet […] Jun. 1853", G[G00768200*].

Isolectotypes (**designated here**). — BM[BM000997943!*], BP[BP348006!], FI[FI009711*, FI015710*], GOET[GOET011118!], JE[JE00000135!*], KW!, P[P03962550*, P04049084*, P04049085*, P04049086*], S[S10-21953*, S10-21954*], W!, WAG[WAG0003313*].

Nomenclatural note. *Veronica armena* is characterized by highly pinnatisect leaves but differs from *V. multifida* with similar leaves by the long, patent flower stalks and usually more branched habit. There is only one specimen in G, which is chosen as lectotype. However, 14 other specimens from the collection can be found across ten herbaria, including four from P.

Theodor von Heldreich (1822-1902)
and Theodorus Orphanides (1817-1886)
Heldreich was one of the main explorers of the Greek and Anatolian flora with more than 200 types collected by him from Anatolia alone (Greuter 1998; Baytop & Tan 2008). He started plant collecting in Italy in 1841 and became curator of the herbarium in Geneva where he acquainted Boissier (Baytop & Tan 2008). He started travelling through Greece and Anatolia from 1843 onwards and became the director of the Botanical Garden and Natural History Museum in Athens in 1851 (Baytop & Tan 2008). He continued to exchange intensively with Boissier (Vlahakis & Economou-Amilli 2012). In Greece, Heldreich met Theodorus Orphanides, born in Turkey and botanically educated in Paris, he became professor of botany in Athens in 1848 (Vlahakis & Economou-Amilli 2012). While the main herbarium of Heldreich is at B with larger sets of specimens (Herbarium Graecum Normale) in other herbaria, the main herbarium of Orphanides is in ATHU (with larger sets in ACA, HUTH, TAU and WU; (Stafleu & Cowan 1981). The specimens in Vienna arrived there through the friendship of Heldreich with Eugen von Halacsy and the interest of the latter in the Greek flora (Reich *et al.* 2021). Altogether six names in *Veronica* are based on collections of Heldreich and two based on collections of Orphanides with the types expected in G for those published together with Boissier and in WU for those published by Halacsy or Lehmann based on the herbarium Halacsy. Heldreich is known to have been friend with Cosson, de Jussieu and Puel (Halacsy 1902) and Bureau (1904) mentioned collections of both Heldreich and Orphanides in the herbarium of Drake.

Veronica teucrioides Boiss. & Heldr.

Diagnoses Plantarum Orientalum Novarum, ser. 2, 3: 169. (Boissier 1856).

TYPE CITATION. — Greece, Thessaly/Macedonia: "In pratis alpinis Olympi Thessali ad nives. Cl. Heldreich".

LECTOTYPE. — Designated by Martinez-Ortega & Rico (2001a: 548), WU[WU072633!].

ISOLECTOTYPE. — Designated by Martinez-Ortega & Rico (2001a: 548), W!

ISOLECTOTYPES (**designated here**). — "*Th. de Heldreich no. 2505*, 24 Jul.1851", FI[FI009718*], P[P04219253*].

Nomenclatural note. The first species discussed is *V. teucrioides*, a Greek subendemic and relative of *V. prostrata*. Martinez-Ortega & Rico (2001a) discovered specimens fitting the protologue in the two herbaria in Vienna and further collections, here designated isolectotypes, can be found in FI and P. The latter does not bear a stamp of the Drake herbarium, so it seems to have been sent to P directly. However, so far, no specimen has been found in G.

Veronica sartoriana Boiss. & Heldr.

Diagnoses Plantarum Orientalum Novarum, ser. 2, 3: 171. (Boissier 1856).

TYPE CITATION. — Greece, Central Greece: "Hab. in Graecia Sartori, in monte Parnes Atticae versus cacumen in consortio *V. arvensis* Heldr.".

NEOTYPE (**designated here**). — "De Heldreich Herbarium Graecum normale = 2908 No. 748 *Veronica sartoriana* […] In pascuis saxosis m. Parnethis Atticae in reg. abietina versus cacumen, alt. 3500'-4000, in consortio Ver. Arvensis Lin. Rara. D. 5 Jun. 1857", G[G00768679*].

ISONEOTYPES (**designated here**). — FI[FI015730*], P[P03517197*, P03517198*, P04077655*], S[S10-25551*], UPS!, WU[WU044017!].

Nomenclatural note. *Veronica sartoriana* was published in Nov./Dec. 1856 (Stafleu 1970) but all specimens outside G found so far were collected in June 1857 from the type locality and bear the publication information from 1856. It appears that the species was described from a small collection and Heldreich collected on June 5th, 1857 under *no. 748*/*no. 2908* a larger sample to send it to colleagues and herbaria. The specimen G00768677 appears to have been collected in July 1857 from a different collection. Another specimen (G00768680) is interesting because it is only a single plant with the notes "Greecia […] (?) non notato Sartori", while G00768681 is from June 8th, but the year is difficult to read but likely 1857. In such a case, none of the other specimens in G is clearly type material and the collection from June 5th, 1857, should be the neotype. This is also the specimen used as lectotype by Strid (2024).

Veronica amoena Heldr.ex Nyman

Conspectus Florae Europaeae 3: 548 (Nyman 1881), *nom. inval.* (Art. 36.1c; publ. in synonymy).

TYPE CITATION. — "hb. norm. 400. Attic.".

ORIGINAL MATERIAL. — BP[BP348757!, BP500715!, BP589320!], MPU!, P[P03517451*, P03517455*].

Nomenclatural note. Heldreich attributed the name *V. amoena* clearly to Steven on his herbarium material and gave *V. glauca* as synonym. However, *V. amoena* Stev. is a species from the Caspian region, which resembles the specimens here a bit, but belongs to a different subgenus. Thus, the name *V. amoena* Heldr. ex Nyman can be safely put into synonymy of *V. glauca*.

Veronica peloponnesiaca Boiss. & Orph.

Flora Orientalis 4: 462 (Boissier 1879). — *V. glauca* subsp. *peloponnesiaca* (Boiss.et Orph.) Maire & Petitm., *Matériaux pour servir à l'étude de la flore et de la géographie botanique de l'orient* 4: 165 (Maire & Petitmengin 1908).

TYPE CITATION. — Greece, Peloponnese: "habit in Argolide (Sprun!) habit in monte Malevo Laconiae supra Hagios Joannis 3000'-4000'(Orph!), in regione superiori montis in Helicon Baeotiae (Orph!), in monte Aenos Cephaloniae 4000'-5000'(Heldr.), insula Tinos (Wiedem!)".

LECTOTYPE. — Designated by Strid (2024): "Orphanides Flora Graeca Exsiccata *no. 716*. In monte Malevo Laconiae supra Hajos-Joannis 20 Apr./2 Maji 1857 Th. G. Orphanides", G[G00751921*].

ISOLECTOTYPES. — Designated by Strid (2024), without barcodes: JE[JE00003109*], K, LE[LE00017167*], S[S10-24874*], WU[WU040140*].

ISOLECTOTYPES (**designated here**). — G[G00751967*], K[K000806834!, K000806835!], P[P03516822*, P03516823*], UPS!

SYNTYPES. — Spruner (year unclear) "Argolide", G[G00751968*]; *Heldreich no. 3564* (9.V.1861), "Mt. Aenos", G[G00751969*].

Nomenclatural note. *V. peloponnesiaca* is a common taxon, nowadays considered a subspecies of *V. glauca*. Of the five collections mentioned by Boissier and Orphanides (Boissier 1879), three were found in the herbarium G. The name was lectotypified by Strid (2024) but without barcodes, omitting the specimens in Paris and Uppsala and not stating that Geneva and Kew have two types.

Theophilus Sampson (1831-1897)
Sampson was a British naturalist and civil servant in Canton (1858-1889) (https://plants.jstor.org). His main herbarium is in BM with other specimens in CN, E, FI, K, MO, NY, P, PH.

Veronica galactites Hance

Annales des sciences naturelles, Botanique, ser. 5, 5: 232 (Hance 1866). — *Pseudolysimachion galactites* (Hance) Holub in Holub & Pouzar in *Folia Geobotanica et Phytotaxa* 2: 424 (Holub & Pouzar 1967).

TYPE CITATION. — China, Guangdong: "In devexis graminosis collium calcareorum in districtu Yingtak, secus amnem North River [Bei River], 150 m. p. boream versus ab urbe Cantone, copiose crescentem, d. 20 julii 1864 invenit T. Sampson (Herb. Propr., n. 11320)".

TYPE MATERIAL. — K[K001070344*], P[P04077706*, P04077810*].

Nomenclatural note. Three specimens of *V. galactites* have been found, all with the same label of the Herbarium Hance, the collaborator of Sampson and author of the name. Two specimens are in P, one in K. All conform to the description, although the specimen in Kew seems damaged. In the absence of a thorough search of the herbaria BM (and CN, E, FI, MO, NY, PH) we abstain from designation of a lectotype. The specimens in K and P confirm the synonymization with *V. linariifolia*, although one should bear in mind that the species was not monophyletic in the DNA-based analysis of Kosachev *et al.* (2016) and a revision of the species across its range is necessary, including the southernmost occurrences, from which *V. galactites* has been described.

Philipp Johann Ferdinand Schur (1799-1878)

Schur is one of the most illustrious botanists, disputed for erecting many new species and taxa. His life was summarized in detail by Speta (1994). He was born in Kaliningrad in German East Prussia (today Russia) and became pharmacist with intense interest in the local flora and later studied botany in Berlin (Speta 1994). After that he worked in different chemical factories until in 1845 he came to Hermannstadt/Sibiu in Transylvania, then Hungary, now Romania. Based on the richness of the flora in the region and lack of thorough study by earlier botanists, Schur discovered many new species and intraspecific taxa, many of which are only known as herbarium names. In 1853 he moved to Kronstadt/Brasov as teacher for chemistry and natural history but left for Vienna a year later until settling in Brno in 1869 (Speta 1994). In Vienna, Schur published most of his discoveries from Transylvania (Schur 1866). Schur had to sell many of his 50 000 herbarium specimens to finance this publication, among them the nowadays most significant in 1861 to Lviv (now in LW) with most of his types (Speta 1994). Another main part of the herbarium was bought in 1877 by Karl Keck, but apparently on behalf of Ernest Cosson, by which the herbarium is now in P (Speta 1994). Smaller collections are in other herbaria (W, B) that are partly destroyed (Speta 1994). Analyzing all of his 48 names in *Veronica* published (Schur 1866) would be worth a separate publication. It is noteworthy that only five of these names have original material in P with many more in LW but some in neither. Thus, the collection in P does not appear to have major significance for typifications of names in Schur (1866). However, there are 16 herbarium names in P, which suggests that Schur sold earlier types of names published in 1866, which he considered finished, but kept specimens of plants he considered important for future publications.

Veronica arvensis L. var. *acinoides* Schur

Enumeratio plantarum transsilvaniae: 501 (Schur 1866).

TYPE CITATION. — Romania, Sibiu: "Auf Aeckern und Wiesen bei Hermannstadt und Kronstadt".

LECTOTYPE (**designated here**). — P[P04051467!].

Nomenclatural note. *Veronica arvensis* var. *acinoides* is an unbranched type of *V. arvensis* with elongated internodes. The specimen in P is labelled with the name and perfectly fits the description. The specimen in LW, labelled *V. pseudo-acinos*, later corrected to *V. arvensis* var. *pseudo-acinos*, has two plants on the sheet (LW00210289) that are basally branched. Therefore, the specimen in P is the better match for the name.

Veronica anagallis-aquatica L. var. *glandulosa* Schur

Enumeratio plantarum transsilvaniae: 492 (Schur 1866).

TYPE CITATION. — Romania, Sibiu: "Auf lockeren Torfboden bei dem Dorfe Arpás [Arpásu]", VII.1847.

ORIGINAL MATERIAL. — "No. 9223 *Veronica anagallis* var. *glandulosopilosa* Schur Enum p. 492 e! Siebenbürgen 1853", P[P04051042*].

Nomenclatural note. As mentioned elsewhere in this article, the group of *V. anagallis-aquatica* is polymorphic. So, it is not surprising that Schur (1866) added names to this group. The name *V. anagallis-aquatica* var. *glandulosa* is significant since it precedes *V. anagallis-aquatica* var. *glandulosa* Farw. and is considered distinct by Schur from *V. anagalloides*, which is usually distinguished from *V. anagallis-aquatica* by glandular indumentum used here to separate the var. *glandulosa* from the nomitate variety. According to Junge (1912) this plant of Schur indeed belongs to *V. anagallis-aquatica,* but it will require further inspection to confirm this. No original material was found in LW and the specimen in P are from another locality and date but direct reference to the publication. So, these plants may qualify as epitype material if no type material can be found.

Veronica spicata L. var. *subcanescens* Schur

Enumeratio plantarum transsilvaniae: 496 (Schur 1866).

TYPE CITATION. — Romania, Sibiu: "Auf grasigen Hügeln bei Hammersdorf [=Guşteriţa], Salzburg, Klein-Scheuern".

ORIGINAL MATERIAL. — "No. 12242" P[P03517230*].

Nomenclatural note. *Veronica spicata* var. *subcanescens* is a type of *V. spicata* with dense, white indumentum of short hairs differing in the latter aspect from *V. spicata* subsp. *fischeri*. No specimen in LW bears that name but one in P. This, however, does not originate from the type localities. Until there is a chance to find a better matching type in another herbarium, I will not typify the name.

Fig. 4. — Lectotype of *Veronica cuneifolia* subsp. *atlantica* Ball (P03413429).

Veronica bachofenii Heuff. var. *angustifolia* Schur

Enumeratio plantarum transsilvaniae: 497 (Schur 1866).

Type citation. — Romania, Brasov/Arges (?):"Auf Gerölle im Arpasthale. Juli 1846".

Original material. — "No 13901 […] 1830", P[P04051197*].

Nomenclatural note. *Veronica bachofenii* is a species endemic to Transylvania. So, Schur must have encountered it more than most other botanists. His *V. bachofenii* var. *angustifolia* differs by having leaves about 8 cm long and 2,5 cm wide with attenuate to subcordate base and had been found in "Arpasthale" in 1846. No specimen in LW assignable to that taxon was found. The specimen in P has the wrong year and no exact locality. So, it is a potential epitype.

Veronica austriaca L. var. *glandulifera* Schur

Enumeratio plantarum transsilvaniae: 493 (Schur 1866), *nom. inval.* (Art. 36.1c; publ. in synonymy of *V. orientalis* sensu Schur).

Type citation. — Romania: "Auf grasigen Hügeln, Thobnoden, bei dem Dorfe Borband unweit Carlsburg".

Original material. — "No. 2948 […] collibus graminosis solo argillaceis prope pagum Borband Prope Carlsburg Transsilv 1845", LW[LW00210343!], P[P03529887*].

Nomenclatural note. In his study, Schur (1866) provided the name *V. austriaca* var. *glandulifera* Schur as a synonym of *V. orientalis* Mill. Since it is given in synonymy, it is not valid. The specimens deserve further investigation since *V. austriaca* does not have glandular hairs but *V. orientalis*. However, the latter does not occur in Transsylvania. The plant is tentatively based on locality and the deeply dentate leaves identified as *V. austriaca* subsp. *austriaca*.

John Ball (1818-1889)
Ball was an Irish politician, naturalist, and traveller. He studied in Cambridge mathematics and had a profound interest in all kinds of natural history but became government official and parliamentarian (Hooker 1890). After being defeated in an election in 1858, he turned to science, especially botany and geology of European mountains (Hooker 1890). In 1871, Ball travelled to Morocco, which resulted in the publication of several new species and a publication on the flora of Morocco in general (Ball 1878). Later travels brought him to South America from Panama to southern Chile (Hooker 1890). His herbarium was left to Kew (Hooker 1890), but an extensive set is also in E (Stafleu & Mennega 1992).

Veronica cuneifolia D.Don. subsp. *atlantica* Ball

Journal of Botany 13: 174 (Ball 1875). — *V. rosea* Desf. var. *atlantica* (Ball) Murb., *Acta Universitatis Lundensis*, ser. 2, 19 (1): 46 (Murbeck 1923).

Type citation. — Morocco, Souss-Massa-Draa: "Habitat in regione subalpina et alpina Atlantis Majoris - in jugo Tagherot 2200 m-3000 m [Morocco, Marrakesch-Tensift-El Haouz:] "in Monte Djebel Tezah 2200 m-2800 m".

Lectotype (**designated here**). — "in jugo Tagherot 2530-3630 m […] Ball 15. Majo 1871", P[P03413429*; Fig. 4].

Syntypes. — "in Monte Djebel-Tezah 1700-3506 m […] Ball 21. Majo 1871", P[P03413429*].

Nomenclatural note. Ball (1875) published the name *V. cuneifolia* subsp. *atlantica* based on one of his collections in Morocco. He related his new taxon to the Anatolian species *V. cuneifolia*, disregarding for unknown reasons the sympatric *V. rosea* published by Desfontaines (1798) much earlier from the Atlas Mountains. The description by Ball (1875) does not differ significantly from that of Desfontaines (1798). So, Ball's taxon is considered a synonym of *V. rosea* (Rojas-Andrés *et al.* 2016). Notably, Persoon (1805) published *V. atlantica*, a superfluous name since Persoon cited *V. rosea* in synonymy. Ball (1875) did not refer to Persoon's name, so they are considered different names. The specimen in P, from the herbarium Cosson, is remarkable since it contains both type collections mentioned by Ball plus one collection by Ibrahim and has no indication that it was distributed by Kew. However, in his account of the flora or Morocco, Ball (1878) frequently mentioned communication with Cosson and exchange of specimens. No type specimens have been found in Kew and Edinburgh. A specimen in BM has a slightly different locality name and is not considered original material. The specimen from Tagherot (Fig. 4) is chosen as lectotype since it is better preserved than the one from Monte Djebel-Tezah.

Elisée Reverchon (1834-1914)
Elisée Reverchon was French plant collector in the Western Mediterranean who sent around his specimens extensively (Stafleu & Cowan 1983). In the latter part of the 19th and early 20th century he focused on southwestern Spain (Stafleu & Cowan 1983). His collections between 1899 and 1903 alone led to more than 40 new taxa (Hervier 1905). One of these is *Veronica sibthorpioides*, described by Jean Odon Debeaux, Arpad von Degen and Gabriel Hervier (Hervier 1905). The authorship is not entirely clear. It is given as "Deb., Deg. et Herv." above the protologue but Degen is cited after the description and in the overview list (Hervier 1905): 22) the name is cited as "Deg., Deb.". Thus, it appears that Debeaux recognized it as a new taxon, but Degen wrote the description. Debeaux had earlier worked with Reverchon on the publication of his collections and novelties but due to deteriorating health asked Hervier to edit the latest collections from 1899-1903 and Hervier, in turn, asked Degen for help with several plants (Hervier 1905). The herbarium of Reverchon is widely dispersed with important sets in B, G and P (Stafleu & Cowan 1983).

Veronica sibthorpioides Debeaux, Degen & Hervier

Bulletin de l'Académie internationale de géographie botanique 15: 116 (Hervier 1905).

TYPE CITATION. — "Habitat in Hispania meridionali. In saxosis umbrosis calcareis Montis Sierra de Cazorla, alt. ca. 1600 m. s. m. PR[PRov. Jaen] ; rarissimam mense junio 1901 detexit cel. E. Reverchon (*exsicc. a. 1901*, *no 129 sub nom, erron. Sibthorpiae Europaea*) ; dein in Monte Sierra del Cuarto regni granatensis relegit anno 1902. (*Exsicc. No. 1302*)".

LECTOTYPE. — Designated by Sánchez Agudo *et al.* (2012): Spain, Jaën: "Sierra de Cazorla, saxosis umbrosis calcareis, alt. ca. 1600 m. […] junio 1901", E. Reverchon (*exsicc. no. 129*, *sub nom. erron. Sibthorpiæ europæa*), CL[CL20428, not seen].

ISOLECTOTYPES (**designated here**). — H[C.338576*], JE[JE00007187*], LY[LY0467457*], P[P00208394*].

SYNTYPES. — "Dein in Monte Sierra del Cuarto regni granatensis relegit anno 1902. (*Exsicc. Nº 1302*)": BP[BP638783!, BP465482!, BP465483!, BP465476-BP465481!, BP349837!], GZU[GZU000101512*], P[P00208397*, P03838569*, P03975616*, P05196692*], UPS!, W[W1927-0008597!, W1974-15913!].

Nomenclatural note. The name *Veronica sibthorpioides* was earlier lectotypified by Sánchez Agudo *et al.* (2012) with a specimen from CL without further explanation and no further isolectotypes. In the protologue two collections are cited, one from 1901 ("Montis Sierra de Cazorla, alt. ca. 1600 m. s. m. […] *no. 129* sub nom. erron. Sibthorpiae europaea) and one from 1902 (Monte Sierra del Cuarto […] Exsicc. *no. 1302*) (Hervier 1905) with the former used as lectotype by Sánchez Agudo *et al.* (2012). The specimen from Paris (P00208394) is labelled by J. A. Sánchez Agudo as lectotype but not mentioned in the typification, probably because it was still filed under *Sibthorpia europaea*. Two more isolectotypes (JE00007187, H[C.338576]) bear the identification *Sibthorpia europaea* with the new determination written above it. Interestingly, LY0467457 is also collected in 1901 from Sierra de Cazorla but bears already the name *Veronica sibthorpioides* with authors "Debeaux et Reverch.". However, further original material exists, collected in May 1903 "Sierra de Castril, rochers calcaires ombragés, 1 700 mètres" with the name given as "*Veronica sibthorpioides* Debeaux Reverch." GZU000101528, H[C.338575], JE00007182-JE00007186, LY0467449, LY0467455, LY0736308, O-V2246039, P00208395, S10-25572, ZT10342 indicating the original idea of the two collectors to publish the name without Degen and Hervier. Collections of Reverchon from 1904 ("Barrancon de Valentina") then bear the designation "Debeaux et Degen" (L.2807862, LY0467458, LY0467454, P00208396).

Bronislaw Błocki (1854-1919)

Herbarium specimens of Błocki are widespread in European herbaria (Stafleu & Mennega 1993). How they came into the possession of P is not clear. At least one has come via the Schultz herbarium, which was bought by Cosson. Błocki was especially interested in plants of *V.* subg. *Pseudolysimachium* and their hybrids, introducing a number of names, not all validly published. For example, *V. spicata* f. *serratifolia* is an herbarium name (P03517276).

Pseudolysimachion* × *sapiehae Holub *in* Holub & Pouzar

Folia Geobotanica et Phytotaxonomica 2: 426 (Holub & Pouzar 1967). — *V.* × *sapiehae* (Holub) Albach, *Taxon* 57: 5 (Albach 2008a).

TYPE CITATION. — Ukraine, Ternopil: "Schultz herb. norm. n. ser. Cent. 21, *no. 2052* – *Veronica incana* x *spuria* Blocki, *V. sapiehae* Bl. – Julio 1884 – In pascuis gypsaceis ad ripam fluvii Seret prope Olexince [= Oleksyntsi], inter parentes. Galicia. Austria. Leg. Dr. A. Błocki".

HOLOTYPE. — PR[PR222519!].

ISOTYPES (not mentioned by Holub & Pouzar 1967). — BP[BP159398!, BP159399!, BP349966!], M[M0188531!*], MPU![2 pls], OXF!, P[P04051000*, P05425258*].

Nomenclatural note. Błocki used three different names (*V. sapiehae*, *V. kerneria*, *V. polonica*) for plants collected in Oleksyntsi (Western Ukraine) and identified as hybrids between *V. incana* and *V. spuria*. Since all three names by Błocki are herbarium names, it is not clear, whether he distinguished those by morphological characters or whether he considered them to be synonymous. No obvious morphological difference exists. However, the fact that Błocki used terms "superspurio" and "subspurio" on the labels indicates that he saw more or less influence of *V. spuria*. The name "sapiehae" seems to be used only in Schultz' Herbarium Normale for plants collected by Błocki in july 1884 whereas *V. kerneri* and *V. polonica* is on handwritten labels by Błocki with the former used on specimens between 1882 to 1894. However, Holub & Pouzar (1967) only referred to *V. sapiehae* Błocki when introducing the name *Pseudolysimachion x sapiehae* Holub. The hybrids cannot be found at the *locus classicus* anymore. Therefore, the type material is important to verify the hybrid status.

Pseudolysimachion* × *blockianum Trávníček

Preslia 70: 201 (Trávníček 1998) (Basionym). — *V.* × *blockiana* (Travn.) Albach, **comb. nov.**

TYPE CITATION. — Ukraine, Lviv: "Bilcze [Bilcze Zlote] (Podole Galic.), na sciankach [on the walls] Seretu, ut *Veronica canescens* Schrad., leg. B. Błocki 1884".

HOLOTYPE. — BRNM[BRNM01774/37).

ISOTYPES (not mentioned by Trávníček 1998). — GOET!, P[P03517539*].

Nomenclatural note. The hybrid combination *V. incana* x *V. spicata* was called *V. canescens* Schrad. by Błocki and only later the epithet "blockianum" was introduced for this combination when it became more apparent that *V. canescens* Schrad. is true *V. incana* (Trávníček 1998). A combination under *Veronica* was so far lacking.

THE DRAKE HERBARIUM

Emmanuel Drake del Castillo was born in Paris in 1855 and studied botany in Paris under Louis Bureau. He is best known as a botanist for his work on the flora of Polynesia and Madagascar, but he was also an ambitious collector of herbaria

(Bureau 1904). The Drake herbarium is the most type-rich part of the herbarium in Paris. The origin and composition of the herbarium was described by Bureau (1904). It contains a large number of specimens from France and beyond. Given Drake's enthusiastic collection efforts it is not surprising that his herbarium contains duplicates of specimens originally in the herbarium of Paris, later reunited again. Apart from the collectors below, the Drake herbarium also contains type specimens of Balansa (several), Bornmüller, Bory, Heldreich (several), Karelin, von Mueller, Orphanides, Sintenis and Wirtgen, discussed in other parts of this study.

Friedrich Ernst Ludwig von Fischer (1782-1854)
Fischer was a German born botanist, who became director of the private botanical garden in Gorenki near Moscow in 1804 and then in 1823 director of the Imperial botanical garden in St. Petersburg (Steetz 1855). Fischer had a special interest in Siberian plants and cultivated plants of his predecessor Redovsky and other plant collectors in Gorenki (Elina 2008). However, he never travelled far from St. Petersburg himself (von Trautvetter 1865). So, with many plants described by Fischer it is clear that he cultivated and studied them in Gorenki, but their origin and collectors are unclear. Through his vast network of colleagues, his specimens are also widespread with the main set in LE. Through this network many of his names were published by colleagues, among them five names in *Veronica* compared to one by himself.

Veronica grandis Fisch.ex Spreng.

Neue Entdeckungen im ganzen Umfang der Pflanzenkunde 2: 122 (Sprengel 1821).

Type citation. — Russia: "Habitat in Sibiria".

Possible original material. — P[P03529395*, P03529400*, P03529406*].

Nomenclatural note. *Veronica grandis* Fisch. ex Spreng. is relevant here, since no specimen of *V. grandis* of Fischer has been found in LE (Kosachev, pers. Comm.). Furthermore, the origin and history of *V. grandis* is complex. The taxonomic history of the taxon was summarized by Knapp (1877a). The name was published by Sprengel (1821) with reference to Fischer and habitat in Siberia. Roemer and Schultes (1822) provide the same information with slightly different description. The herbarium of Sprengel is widely dispersed and partly destroyed (Stafleu & Cowan 1985). No material of *V. grandis* from the herbarium Sprengel has been found. Bentham (1846) claimed to have seen original specimens by Fischer and specimens of Turczaninow in Kew and Geneva, although it is not clear which refers to specimens by Fischer and which by Turczaninow. Three specimens are found in Paris signed by Fischer, two from the general herbarium without date stated to come from "Dahuria", and the third from herbarium Richard from "Daouria" from 1821 but in a different handwriting. All clearly belong to *Veronica daurica*. Since there are also other specimens of Fischer known in other herbaria, which have been collected later (e.g., G00673115, BR000035777397), none of these specimens in Paris can be considered original material and it is also not clear whether Fischer signed these herbaria personally. Nevertheless, material in Paris would serve well as neotypes if no other material becomes available.

Achille Richard (1794-1852)
Richard was a botanist and an aid at the Muséum d'Histoire naturelle in Paris. He worked on the plants brought back by Dumont-d'Urville from his exploration of Africa and New Zealand (1824/1827). Later, Richard became professor in Paris (Brongniart 1854). His herbarium was bought after his death by Franqueville, whose herbarium was then sold to Drake (Bureau 1904). Despite Le Bras *et al.* (2017) stating that material from d'Urville is in the herbarium of the University Caen, no type material of *Veronica* from D'Urville was found in the herbarium Caen. Richard seems to have taken part of the collections for his own herbarium and part stayed in the general herbarium. The latter are also marked with "(Astrolabe)" and reference to the publication of the names.

Veronica angustifolia A.Rich.

Essai d'une flore de la Nouvelle-Zélande 187 (Richard 1832), *nom. illeg.* (Art. 53.1; non *V. angustifolia* (Vahl) Bernh.). — *Hebe angustifolia* (A. Rich.) Cockayne & Allan, *Transactions of the New Zealand Institute of Technology* 57: 23 (Cockayne & Allan 1926). — *V. stenophylla* Steud., *Nomenclator botanicus*, ed. 2, 2: 760 (Steudel 1841).

Type citation. — New Zealand, Marlborough: "Crescit in Novae-Zeelandiae littoribus, locis dictis: bassin de Courans [= Current Basin], passe des Francais [= French Pass], etc.".

Lectotype. — Designated by Bayly *et al.* (2000), P[P00587542*].

Isolectotypes (**designated here**). — P[P00587540*, P00587543*].

Nomenclatural note. With specific regards to *V. angustifolia*, there are two other specimens in Paris (P00641570, P00641571) apart from those mentioned above, which may be type material, but this cannot be clarified in the current context. Bayly *et al.* (2000) did not provide a barcode number for their lectotype but specified the specific specimen by providing a photograph.

Theodor Kotschy (1813-1866)
Kotschy grew up in Austrian Silesia (now Poland) and was early on fascinated by plants but studied theology. Nevertheless, he conducted in that time botanical trips to Romania and the Balkan Peninsula (Fenzl 1867). Following this experience, he joined in 1836 an Austrian mountaineer expedition to the Cilician Taurus in Turkey (Fenzl 1867), where he collected the original material of *V. kotschyana*. After leaving Turkey, he joined an expedition to southern Egypt and Sudan and continued trips financed by selling his collections from central Africa, Cyprus (1840), Syria (1841), where he collected syntypes of *V. campylopoda* (see under Schimper) and *V. syriaca* var. *pusilla*, and further east to southern Iran (1842), locus

classicus of *V. oxycarpa, V. montioides*, *V. cordata*, *V. pusilla*, and *V. perpusilla*, and north to the Elbrus (1843), where he found type material of *V. rubrifolia*. Kotschy provided, for example, specimens to Esslinger Reiseverein, which was later taken over by Hohenacker (Wörz 2017). In October 1843, Kotschy returned to Vienna with probably more than 500 000 specimens, all with detailed information on their locality, and with an average of more than 90 specimens per collection number (Lack 2020). These were given for the most part to Hohenacker, determined by Boissier and then sold by Hohenacker (Lack 2020). Therefore, all specimens of the Kotschy collection used by Boissier as type for new names are considered type material. Based on these merits Kotschy got employed at the Natural History Museum in Vienna and continued collecting in Europe (Fenzl 1867). In 1853, he returned to Turkey. In 1855, he began his next trip starting in Egypt, travelling through Palestine to Lebanon, where he found type material of *V. bombycina*. In 1859, he conducted his next collection trip to Cyprus and through Turkey to the Van Lake (Fenzl 1867), where he found the type material of *V. gorumsensis* in the province Adana.

Veronica kotschyana Benth. in DC.

Prodromus systematis naturalis regni vegetabilis 10: 480. (Bentham 1846).

TYPE CITATION. — Turkey: "in monte Tauro, *Kotschy no. 390*, sub nom. *V. billardieri*", "aestate [summer] 1836".

LECTOTYPE (**designated here**). — "No. 390 *Veronica billarderi* Vahl in monte Tauro Aestate 1836 legit Th. Kotschy" G-DC[G00674292*].

ISOLECTOTYPES (**designated here**). — B (Stroh 1942), BM!, K[K001070250*], KW-Turcz.[no barcode !], LE[not seen], M[M0188529!*], MO[MO-277006!*], MW[MW0594692*], P[P03529284*, P04219254*], PRC[PRC453967!*], S[S10-22121*], UPS!, W![2 sheets].

Nomenclatural note. *Veronica kotschyana* is a distinct species from southern Turkey, which belongs to *V.* subg. *Stenocarpon*. The Paris specimens from the general herbarium P (P03529284) and from herbarium Steudel in herbarium Drake (P04219254) are unique since they have labels, on which the plant is determined as *V. thymifolia* Sm., not *V. billardieri* as stated in the protologue P(P03529284) contains two labels with different initial determinations).

Veronica syriaca Roem. & Schult. var. *pusilla* Benth. in DC.

Prodromus systematis naturalis regni vegetabilis 10: 484 (Bentham 1846).

TYPE CITATION. — Iraq/Syria: "Ad Euphratem (Chesney! n. 24) pr. Aleppo (Kotschy! n. 31)".

SYNTYPES. — Turkey, Sanliurfa: "Colonel Chesney's Expedition to the Euphrates. No. 24. Port William [= Birecik], March 1836. Barren stony sandy fields.", G[G00675106*, G00675107*], P[P03520330*, P03520331*, P03520354*], W![2 sheets]. — Syria, Aleppo: "in agris lapidosis pr. Aleppum. D. 23. Mart. 1841. Th. Kotschy. Pl. alepp. Kurd. Moss. 31 Ed.Hohenacker.1843", BP[BP349976!], BREM!, G[G00675104*], OXF!, P[P03520330*, P03520344*, P03520346*, P03520354*].

Nomenclatural note. Described by Bentham (1846), *V. syriaca* var. *pusilla* is supposed to differ from *V. syriaca* by smaller, narrower, and mostly entire leaves. This taxon is now considered to be a synonym of *V. debilis* (Fischer 1972), but the group needs further revision with thorough studies of the indumentum not visible online. Therefore, no typification is done at the moment. Paris holds seven type specimens. Both, the general and the Cosson herbarium have two sheets on which both collections are combined.

Veronica oxycarpa Boiss.

Plantarum Persiae Australis, Febr. 1845: 639 (Kotschy 1845). — *V. anagallis-aquatica* subsp. *oxycarpa* (Boiss.) Elenevsky *Byulleten' Moskovskogo Obshchestva Ispytatelei Prirody Otdel Biologicheskii* 74 (6): 76 (Elenevsky 1969).

TYPE CITATION. — Iran, Kuhgiluyeh: "Th. Kotschy. Pl. Pers. austr. Ed. R. F. Hohenacker. 1845. 639 *Veronica oxycarpa* Boiss. N. sp. […] Circa fontes alpis Kuh-Daena. D. 13. Jul. 1842".

LECTOTYPE. — Designated by Elenevsky 1978: 123, second-step lectotype **designated here**), G[G00343585!].

ISOLECTOTYPE. — Designated by Elenevsky (1978), LE (not seen).

ISOLECTOTYPES (**designated here**). — FI[FI009709*], G[G00343599*], GOET[GOET!], MO[MO-176197!*, MO-176198!*], OXF!, P[P03962568*, P03529677*, P03529682*, P03529709*, P03529716*, P04049204*], PRC[PRC453978!], TUB[TUB011190!], UPS!, WAG[WAG0004898!*].

Nomenclatural note. As described by Hosseinnejad Azad *et al.* (2021), *V. oxycarpa* is likely just an ecotype of *V. anagallis-aquatica* but it is possible that *V. anagallis-aquatica* includes several taxa, of which one may include the type of *V. oxycarpa*. Therefore, the type of *V. oxycarpa* will likely have importance in the future. Elenevsky (1978) lectotypified the name with a specimen from G but did not mention that there are two specimens in that herbarium. Therefore, a second-step lectotypification is necessary. Since the specimen G00343599 belongs to the herbarium Moricand, I chose the specimen from the general herbarium as lectotype.

Veronica montioides Boiss.

Diagnoses Plantarum Orientalum Novarum, ser. 1, 7: 43 (Boissier 1846).

TYPE CITATION. — Iran, Kuhgiluyeh: "Hab. circa fontes jugi Kuh-Doschek alpis Kuh-Daena Persiae australis *Kotschy no. 663*".

LECTOTYPE (**designated here**). — "Th. Kotschy. Plantarum Persiae Australis Ed. R.F. Hohenacker. 1845. 663. *Veronica* (*Veronicastrum*) *montioides* Boiss. N. sp. Circa fontes in jugo Kuh-Doschek alpis Kuh-Daena. D. 16. Jul. 1842", G[G00343612*].

Isolectotypes (**designated here**). — BM[BM000629058*], CAS[CAS5112*], FI[FI009710*], G[G00343613*], GOET[GOET011129*!], H[H1140314!*], K[K001070320!*, K001070321!*], KW!, M[M0188519*], MO[MO-176195*, MO-176196*], OXF!, P[P04049209*, P03528715*], PRC[PRC453968*], S[S10-22149*], W[W1889-0017675!], WU[WU040381!*].

Nomenclatural note. *Veronica montioides* is another morphotype of the *V. anagallis-aquatica* agg., collected in the vicinity of the locus classicus of *V. oxycarpa*. It is the typical small morphotype characteristic of ephemeral aquatic habitats. Similar to *V. oxycarpa*, there are two specimens in the herbarium G, and we chose the one from the general herbarium, rather than the one from the herbarium Moricand, as lectotype.

Veronica cordata Celak.

Sitzungsberichte der koeniglich-Boehmischen Gesellschaft der Wissenschaften in Prag 1877: 118 (Čelakovsky 1877), *nom. nud.* (Art. 37.1; rank unclear, "n. sp. vel subsp.").

Type citation. — Iran, Kuhgiluyeh: "legit cl. Th. Kotschy in planitie edita Kaken montis Kuh-Daena, d. 17. Julii 1842 (Pl. Persae australis, Ed. R. F. Hohenacker 1845. N. 679".

Lectotype (**designated here**). — "Th. Kotschy. Pl. Pers. austr. Ed. R. F. Hohenacker. 1845. 679. *Veronica Anagallis* L. var. In m. Kuh-Daena. Jul. m. 1842.", PRC[PRC453977!].

Isolectotypes (**designated here**). — G[G00768646*], H[H1140272!], HAL[HAL0145238*], K[K001070316*], M!, OXF!, P[P03529647*, P03529652*, P03529715*, P04049122*, P04049200*], PRC[PRC453977!*], TUB[TUB011179*].

Nomenclatural note. Čelakovský published yet another species of the *V. anagallis-aquatica* agg. based on Kotschy's collection of the Kuh-Daena mountains in southern Iran, *V. cordata*. However, the name is not validly published because Čelakovský did not decide between the rank of species or subspecies for the name. Nevertheless, it is a frequently cited name with a peculiar combination of morphological characters of small, cordate leaves with long internodes, likely belonging to *V. anagalloides* Guss. subsp. *heureka* M.A.Fisch. Čelakovský has mostly worked in Prague. So, it is most likely that he studied specimens from PR or PRC, but he may have seen other specimens as well.

Veronica pusilla Kotschy

Plantarum Persiae Australis (Editio Hohenacker): 717 (Kotschy 1845).

Type citation. — Iran, Kuhgiluyeh: "Th. Kotschy. Pl. Pers. Austr. Ed. R. F. Hohenacker. 1845 717. *Veronica* (*Veronicastrum*) *pusilla* Kotschy ms. n. sp. […] In l. humidis m. Kuh-Daena [=Kuh-e-Dana]. D. 21. Jul. 1842.".

Lectotype (**designated here**). — W[W1889-0017662!*].

Isolectotypes (**designated here**). — BP[BP349650!, BP349651!], FI[FI009716!*], G[G00673716*], GOET[GOET011132!], HAL[HAL0101774!], JE[JE00000183!*], K[K001070325*], KW[KW-herb. Turcz.!], L[L.2804852*], M[M0188516!*], MO[MO-176629!*, MO-176630!*], O[O2246078*], P[P03555823*, P03555825*, P03555827*], PR[PR377330!], PRC!, S[S10-24939*], TUB!, UPS!, US[US00324228*], W[W0053060!*, W1889-0155030!*], WAG[WAG0003315*], WU[WU070322!, WU070322*].

Nomenclatural note. *Veronica pusilla* Kotschy is a small, annual species belonging to *V.* sect. *Acinifolia*. Since there is a description included on the label, the name is validly published and precedes *V. pusilla* Benth. Bentham (1846) apparently learned about *V. pusilla* Kotschy after having decided on his own *V. pusilla* and tried to give the name by Kotschy a nomen novum, *V. perpusilla* Boiss. ex Benth. The input of Boissier is not clear. Bentham (1846) cites two collections for *V. perpusilla*, which are nowadays considered to belong to two species, *Kotschy no. 717*, the type of *V. pusilla* Kotschy, and *no. 531*, which is considered to be *V. hispidula* (Fischer 1981). If the name *V. perpusilla* Boiss. ex Benth. is lectotypified by the collection *Kotschy no. 531*, this name would have priority over the established name *V. hispidula* Boiss. & A.Huet. Since it apparently was the intention of Boissier and Bentham that *V. perpusilla* Boiss. ex Benth. is identical with *V. pusilla* Kotschy, the name is lectotypified with *Kotschy no. 717*. Manfred Fischer labelled one specimen of *Kotschy no. 717* in Vienna as holotype, also cited as such in Fischer (1981) but this is considered here as the intention to use it as lectotype.

Veronica perpusilla Boiss.ex Benth.in DC.

Prodromus systematis naturalis regni vegetabilis 10: 490 (Bentham 1846), *nom. superfl.* (Art. 52.2e; *V. pusilla* Kotschy cited in synonymy).

Type citation. — Iran, Kuhgiluyah: "In humidis montis Kuh-Daena Persiae austr. (Kotschy pl. *Exs. 531* et *717*! Coll. Ab Hohen.".

Lectotype (**designated here**). — W[W1889-0017662!*].

Isolectotype (**designated here**). — See *V. pusilla* Kotschy.

Syntypes. — "Th. Kotschy. Pl. Pers. austr. Ed. R. F. Hohenacker. 1845. 531. *Veronica* (*Veronicastrum*) *pusilla* Kotschy var. *capsulis* pubescentibus. In alpe Kuh-Delu. D. 16. Jun. 1842", K[K001070324*], KW[KW-herb. Turcz.], P[P03555829*].

Veronica rubrifolia Boiss.

Diagnoses Plantarum Orientalum Novarum, ser. 1, 12: 46 (Boissier 1853).

Type citation. — Iran, Teheran: "Hab. circa Schah-Neschin in monte Elburs prope Derwent Alt. 7000'-8000'. In monte Kuh Daena Persiae australis Kotschy pl. Pers. austr. No 717a.".

Lectotype. — Designated by Fischer (1981): 71): "Th. Kotschy. Pl. Pers. bor. Ed. R. F. Hohenacker. 1846. 224. *Veronica* (*Omphalospora*) *rubrifolia* Boiss. N. sp. Circa Schah-Neschin in m. Elbrus pr. Derbend. Alt. 7000-8000'. D. 2. Jun. 1843.", W[W0053061].

Isolectotype. — Designated by Fischer (1981: 71): WU[WU070321!].

Isolectotypes (**designated here**). — FI[FI009717*], G[G00366401!, G00768041!], GOET[GOET011133!], H[H1140290!*],

JE[JE00000162!*], KW-Turcz.[no barcode !], LE (not seen), M[M0188539!*], MO[MO-176187!*], TUB![2 sheets], UPS!, US[US00324229*].

SYNTYPES. — *Kotschy 717a* (G[G00343594!, G00768003!], P[P04077656*, P04077658*]).

Nomenclatural note. *Veronica rubrifolia* is another small, annual species of *Veronica* but from *V.* subg. *Pocilla*. The species was lectotypified by Fischer (1981) but additional isolectotypes are reported here.

Veronica bombycina Boiss. & Kotschy

Diagnoses Plantarum Orientalum Novarum, ser. 2, 3: 171 (Boissier 1856).

TYPE CITATION. — Lebanon: "Hab. in rupestribus Aquiloni expositis montis Makmel Antilibani cl. Kotschy".

LECTOTYPE (**designated here**). — "Th. Kotschy, Iter Syriacum 1855. – In Libano ad Bscherre et circa Cedretum. 301. *Veronica bombycina* Boiss. et Kotschy n. sp. In fissuri rupium summi Makmel alt. 8500 ped. Die 23. Jul.", G[G00768427*].

ISOLECTOTYPES (**designated here**). — B (Stroh 1942), BM[BM000997937!*], BP[BP348295!], GH[GH00091937!], KW!, P[P03882909*, P03882910*, P03882914*, P03962557*], PR[PR377336!], S[S10-22000!*], W[W0054417!*, W1889-0301086!*].

Nomenclatural note. *Veronica bombycina* is an alpine species with dense white, interwoven indumentum from Lebanon. The specimen from the Geneva herbarium is chosen as lectotype.

Veronica gorumsensis Boiss. & Kotschy ex M.A.Fisch.

Österreichische Botanische Zeitschrift 121: 430. (Fischer 1972).

TYPE CITATION. — Turkey, Adana: "In montibus Kassan Oghlu ad pagum Gorumse = Prov. Adana, Bakir dag, Gürümse, 25km W Saimbeyli), in agris alpinis olim cultis loco Yayle dictis, alt. 4600 ped. (= ca. 1500 m), leg. Th. Kotschy, iter cilicico-kurdicum, nro. 59, die 13. mai 1859".

LECTOTYPE (**designated here**). — W[W0276235!*].

ISOLECTOTYPES (**designated here**). — P[P03529582*], UPS!, W[W0276236!*].

Nomenclatural note. *Veronica gorumsensis* is a species mentioned by Boissier (1879) as synonym of *V. acinifolia* and only published much later by Fischer (1972) but later considered a synonym of *V. balansae* (Fischer 1978). Fischer (1972) called the type collection the lectotype but since Boissier did not validly publish the name and did not mention the collection of Kotschy explicitly, the lectotype is the holotype. However, as discussed by Fischer (1972) there are two specimens in W, and none is explicitly called the type. Therefore, lectotypification is necessary. I, here, follow the indication of Fischer on the type specimens and lectotypify the name with the specimens indicated by Fischer to be the holotype. Additionally, the type collection is heterogeneous consisting of typical *V. gorumsensis* and *V. bozakmanii* according to Fischer (1972) and a note by Manfred A. Fischer in PR (PR0377337). The two species differ in the capsule halves of *V. gorumsensis* spreading at the sinus at an angle of 90° (not 60°), pedicels in fruit being 2-2.5× longer than bract (not 1.5-2×) and leaves being entire to subcrenulate (not always subcrenulate). Fischer (1972) mentioned only the two specimens in W for the collection of *Kotschy no. 59* but there are at least eight specimens of the collection in herbaria worldwide. Of these, the specimens in G (G00768699), JE (JE00003997), P (P03529570, P03529581) and S (S10-22075) are *V. bozakmanii*.

Georg Wilhelm Schimper (1804-1878)
Schimper was a German botanist who studied in Munich and then travelled for the Reiseverein (traveller's club) Esslingen and the dukes of Baden and Württemberg. The Reiseverein Esslingen sold his material to finance Schimper's travels and Schimper thanked it by collecting one of the most important, type-rich collection of African plants during his travels to Egypt (incl. Sinai) and Abyssinia (Ethiopia) between 1834-1837 and then decided to stay in Abyssinia (Wörz 2017). The Reiseverein distributed approximately 200 000-400 000 specimens, which explains why they can be found in many herbaria with the most complete set in the herbarium Hochstetter, director of the Reiseverein, in TUB. After 1841, Rudolf Hohenacker took over the sale of specimens (Wörz 2017), thus some specimens bear the label "Editio Hohenacker".

Veronica campylopoda Boiss.

Diagnoses Plantarum Orientalum Novarum, ser. 1, 4: 80. (Boissier 1844).

TYPE CITATION. — Egypt, South Sinai: "Hab. in Arabia petrea Schimper, Syria ad Aleppum Kotschy, Assyria ad Mossul *Aucher no. 145* et *Persia boreali no. 5090*".

LECTOTYPE. — Designated by Fischer (1981): 85, second-step lectotype **designated here**): "Arabia petraea, ad radices montis Sinai locis planis in glareosis graniticis, W. Schimper (*Plantae Arabicae Petreae* Ed. II Hohenacker 1843) *no. 118*, 19. Apr. 1835", G[G00343626*].

ISOLECTOTYPES (**designated here**). — BREM!, FI*, G[G00343625*], HBG[HBG0512114, HBG0512115, HBG0512116*], KW-Turcz.[no barcode !], KW-Besser[no barcode !], M[M0188536!*, M0188537!*], WU[WU070352!], S[S-G-6332*], MPU[MPU008056!*, MPU014002!*], OXF!, P[P03882893*, P03883117*, P03883118*, P04048927*, P04048976*, P04048965*], PRC![2 sheets].

SYNTYPES. — "in agris pinguioribus pr. Aleppum. 24. Apr. 1841, Th. Kotschy. Pl. alepp. kurd. moss. 145. Ed. Hohenacker 1843)", BP[BP350300!], G[G00343623!, G00343624!, G00768040!], GOET[GOET011122!], H[C.345222*], HAL[HAL0101780!], JE[JE00009349!*, JE00009350!*], K[K001070286*], KW!, M[2 sheets!], MPU[MPU014004!], OXF!, P[P03882892*, P03882893*, P03883106*, P03883120*, P03883121*], S[S10-21948*], STU!, WAG[WAG0004899*], WU[WU079595!]; "Assyria ad Mossul", *Aucher-Éloy-Herbier d'Orient no. 1945*"(likely collected 1835), MO[MO-176190!*], MPU[MPU014003!*], P[P03882889*, P03883112*]; "Pers. boreali *Aucher-Éloy-Herbier d'Orient no. 5090*"(likely collected 1837), G[G00343621!, G00343622!], JE, KW!, MO[MO-176189!*], OXF!, P[P03882898*, P03883115*].

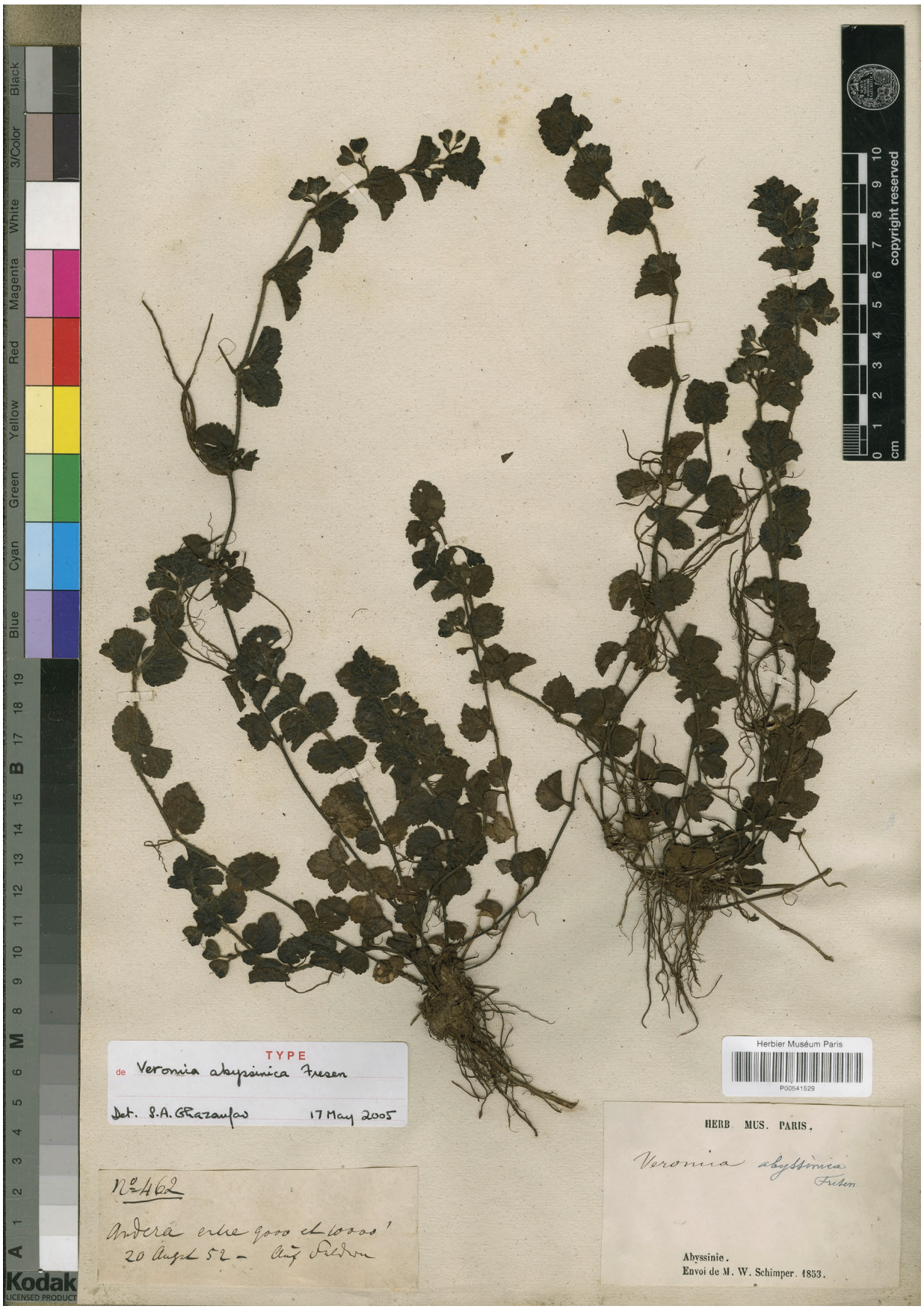

Fig. 5. — Epitype of *Veronica abyssinica* Fresen. (P00541529).

Nomenclatural note. Before travelling to Abyssinia, Schimper collected on the Sinai Peninsula in 1835. There he collected, a small annual *Veronica*, which Boissier later used as syntype for the description of *V. campylopoda*. The other syntypes were collected by Kotschy near Aleppo (Syria), from Aucher-Éloy near Mossul (northern Iraq) and later in northern Iran (Boissier 1844). *Veronica campylopoda* is a widespread species found from Egypt to northwestern China. It is a very polymorphic species with three ploidy levels known (Albach *et al.* 2008). It is, therefore, probable that in the future the species may be split into multiple species. For that reason, it is essential to have a precise type locality, which excludes the second Aucher-Éloy specimen from becoming the lectotype of the species. Fischer (1981) lectotypified the species with the collection by Schimper but mentioned three herbaria. Therefore, a second-step lectotypification is necessary. Since Boissier surely saw the material from the Geneva herbarium and only one of the Schimper collections there was surely in possession of Boissier, this is here chosen as lectotype. Overall, 15 specimens of the type collections have been found in Paris with a complete set of four from the general herbarium and the herbarium Cosson.

Veronica abyssinica Fresen.

Botanische Zeitung 2: 356 (Fresenius 1844).

TYPE CITATION. — Ethiopia: "in Simen gesammelt; GD Simien", "Rüppell".

EPITYPE. — Designated by Lobin (1999); second-step epitype **designated here**, Ethiopia, "Andera entre 9000' et 10000', *Schimper no. 462*, 20. Aug. 1852", P[P00541529*; Fig. 5].

ISOEPITYPES (**designated here**). — P[P00541530*], BR[BR0000008249425!*, BR0000006287504!*], K[K000405246!*].

Nomenclatural note. *Veronica abyssinica* is a polymorphic widespread species (sub)endemic to Africa occurring from Yemen to Malawi and vicariant in Cameroon and Sao Tome. The type specimen collected by Rüppell in Amhara (Ethiopia) was not located in his herbarium in FR (Fischer 2006). Therefore, the Schimper collection (Fig. 5) was designated as epitype (Lobin 1999). That collection is from Andera, a locality not mentioned by Gillett (1972) list of collecting localities. There is a town Andera west of Lake Tana but according to Gillett (1972) Schimper collected in August 1852 in the southern Semien Massif (and sent the material to Paris). The altitude given by Schimper on the type specimen suggests that he indeed collected the specimens in the mountains and that the town Andera is not the one near Lake Tana. Both specimens in Paris seem to come from the general collection.

Veronica glandulosa Hochst. ex Benth.

Prodromus systematis naturalis regni vegetabilis 10: 482 (Bentham 1846).

TYPE CITATION. — Ethiopia, Amhara: "(Hochst. ! pl. abyss. Herb. Un. Itin. N. 1149) [...] ad Demerki in Abyssinia (Schimper!)".

LECTOTYPE. — Designated by Fischer (2006); second-step lectotype (**designated here**), "Schimperi iter Abyssinicum. Sectio secunda. 1149. *Veronica glandulosa* Hochst. Var. cordata U. i. 1842 Demerki d. 14. Aug. 1838", K-Benth[K000405243!*].

ISOLECTOTYPES (**designated here**). — BR[BR0000008249470!*, BR000000824942!*], G[G00674801*], K[K000405242!*, K000405244!*], KW-Turcz.!, L[L.2802889*], P[P00541534*, P00541535*], S[S-G-6334*], TUB[TUB011184!], W!

SYNTYPE. — "Schimperi iter Abyssinicum. Sectio secunda. 568. *Veronica glandulosa* Hochst. […] U. i. 1842. Demerki d. 9. Aug. 1838", BR[BR0000008249463*, BR0000008249470*], K[K000405245!*].

Nomenclatural note. *Veronica glandulosa* is the second widespread species of the genus endemic to Africa. There has been some dispute around the species limits based mainly on different mountains having more or less different types, which are nevertheless currently considered to belong all to this species (except *V. gunae*; Albach 2008b). Bentham (1846) provided the valid description of the species and explicitly mentioned *Schimper no. 1149* as type, although Hochstetter in his herbarium labels called this collection *V. glandulosa* var. *cordata* and *Schimper no. 568* only *Veronica glandulosa*. The name as given by Hochstetter, as most names by him, is invalid lacking a description (Friis 1993). Bentham mentioned specimens in the herbaria of Hooker (now K) and DC. (now G). Fischer (2006) lectotypified the name with material from K. Since there are several specimens in Kew a second-step lectotypification is necessary. No specimen bears a signature by Bentham but the one from his own herbarium seems a safe choice.

Veronica violifolia ("*violaefolia*") Hochst.ex Benth.

Prodromus systematis naturalis regni vegetabilis 10: 488 (Bentham 1846).

TYPE CITATION. — Ethiopia, Amhara: " in fissuris rupium montis Bachit [= Bwahit] Abyssiniae (Schimper! N. 984)".

LECTOTYPE (**designated here**). — "Schimperi Iter Abyssinicum. Sectio secunda. 984. *Veronica violifolia* Hochst. In regione superiori montis Bachit fissuras rupium glarea. U. i. 1842 repletas incolens d. 25. Jun. 1838", G[G00673730*].

ISOLECTOTYPES (**designated here**). — BR[BR0000006287535!*, BR0000008249517!*], HAL[HAL0101777!], K[K000405239!*, K000405240!*, K000405241!*], L[L.2809146*, L.2809147*], M[M0106089!*], MPU[MPU007080!*], P[P00208347*, P03558622*], TUB!, W[W0209275!*, W0209276!*].

Nomenclatural note. Only a few days earlier near the same place, Schimper collected the type specimen of *V. violifolia*, a little-known annual species, which may be related to *Veronica* subsect. *Agrestes* based on its prostrate habit, leaf-like, ovate bracts with crenate margin. This was again distributed by Hochstetter with the new name but without description. Bentham (1846) mentions again specimens in herbaria Hooker (K) and DC. (G). The specimen in the herbarium of Bentham

is crumbled, one other specimen is from herbarium J. Gay and may not have been seen by Bentham. The specimen in the herbarium Hooker is not well spread and leaves difficult to see. Therefore, the specimen in G is chosen as lectotype. There is also a specimen in KW (herbarium Turczaninow) with the label of Schimper, but this shows only an inflorescence belonging to a different species.

Veronica wogerensis (non *vogerensis*, *wogorensis*) Hochst. ex A.Rich.

Tentamen florae Abyssinicae 2: 126 (Richard 1851).

Type citation. — Ethiopia, Amhara: "in pl. Schimp. Abyss., sect. II, *no. 730* […] Crescit ad rivulos in vallibus profundis regionis montanae Wogera ubi fructiferam, mense Martio collegit clar. W. Schimper.".

Lectotype (**designated here**). — "Schimperi iter Abyssinicum. Sectio secunda. 730. *Veronica wogerensis* Hochst. Ad rivos in vallibus profundis regionis montanae Wogera U. i. 1842 d. 17. Mart. 1840", P[P00208346*].

Isolectotypes (**designated here**). — K[K000405249!*], P[P03558619*], S[S10-22116*], TUB[TUB004179*].

Nomenclatural note. Two years later, Schimper again collected in the area and collected the type specimen of *V. wogerensis*, considered to be a synonym of *V. javanica* (Römpp 1928), a pantropical weedy species. He sent it like all of his specimens to Hochstetter (Wörz 2017) who again realized that it is a new species and gave it the new name when sending the specimens out to subscribers. Richard is most likely to have seen specimens in Paris and the specimen in the general herbarium matches the protologue perfectly. It is, therefore, likely the basis for the description and chosen as lectotype.

Veronica beccabunga L. f. ***minima*** Engl.

Über die Hochgebirgsflora des tropischen Afrikas 379 (Engler 1892).

Type citation. — Ethiopia, Amhara: "auf den Bergen Dedschen [=Ras Dashen] und Bachit [= Bwahit] von 4300-4500 m (Schi. II 1271)".

Lectotype (**designated here**). — "Schimperi iter Abyssinicum. Sectio secunda. 1271. *Veronica beccabunga* L. var. minima. In montibus simensibus Deggen et Bachit 1300-14000 pedes U. i. 1842 supra mare Mart. 1840", P[P03558737*].

Isolectotypes (**designated here**). — OXF!, TUB!

Nomenclatural note. Engler described a smaller form of the widespread Northern Hemisphere species *V. beccabunga* from the Simen Mountains, collected by Schimper at the same time as the species above. The label calls it a variety, but we follow here the ranking by Engler (1892). Engler likely saw material in Berlin (B) but since there are no *Veronica* specimens of Schimper in Berlin today, they likely got burned in the second World War. Engler (1892) did not provide a description of the taxon. However, Engler explicitly referred to the description of *V. beccabunga* by Richard (1851: 125). Therefore, I consider the taxon validly published. In the description by Richard, the obovate-lanceolate leaves are mentioned, which distinguishes this taxon from typical *V. beccabunga,* and which can be studied well in the Paris specimens. None of the two specimens bear designation to a special herbarium and one even does not bear the typical Schimper labels but a handwritten label and differing slightly in the description of the locality by Richard (1851). Therefore, the specimen with the original printed label of the Schimper collection is considered the lectotype and the other specimens just original collections.

Antoine Petit (?-1843)
Petit collected with Théophile Lefevbre and Richard Quartin-Dillon in Ethiopia from 1838 until his death. Petit was originally the zoologist on the expedition but continued collecting plant specimens after the death of Quartin-Dillon in 1840 (Richard 1847). The botanical part of their expedition was published by Richard (1847, 1851) who named a *Veronica* species after its collector. This species is now mostly considered a synonym of *V. abyssinica* but there are some doubts, which require careful study of the original material and a wider collection of the species. All three specimens in Paris belonged to the herbarium of Richard and came to the herbarium via the herbarium Drake.

Veronica petitiana A.Rich.

Tentamen florae Abyssinicae 2: 127 (Richard 1851).

Type citation. — Ethiopia, Tigre: "Crescit in locis humidis et ad ripas rivulorum in regione montana Ouodgerate, ubi florentem nec fructiferam mense Junio detexit et collegit clar. Ant. Petit".

Lectotype (**designated here**). — P[P00541531*].

Isolectotypes (**designated here**). — K[no barcode!*], P[P00541532*, P00541533*].

Edouard Fiacre Louis Raoul (1815-1852)
Raoul was surgeon on a French ship exploring New Zealand between 1840 and 1842 and collected plants intensively in the Bay of Islands (Simpson 1976). He published his notes on New Zealand plants in 1846 (Raoul 1846) including one new species of *Veronica*, *Veronica lavaudiana*.

Veronica lavaudiana Raoul

Choix de Plantes de la Nouvelle-Zélande 16, t. 10 (Raoul 1846). — *Hebe lavaudiana* (Raoul) Cockayne & Allan, *Transactions of the New Zealand Institute of Technology* 57: 44 (Cockayne & Allan 1926). — *Heliohebe lavaudiana* (Raoul) Garn.-Jones, *New Zealand Journal of Botany* 31: 331 (Garnock-Jones 1993).

Type citation. — New Zealand, Canterbury: "Hab. Akaroa in montosis ad alt. 4-500 metr. circiter".

Lectotype. — Designated by Garnock-Jones (1993): "close to Banks Isl. [= Banks Peninsula]", P[P00587539*, "top left-hand piece").

ISOLECTOTYPES. — Designated by Garnock-Jones (1993): K, MEL[MEL1595921].

ISOLECTOTYPE (**designated here**). — P[P03889135*].

Nomenclatural note. Garnock-Jones (1993) lectotypified the name *Veronica lavaudiana* Raoul with a specimen from P but did not realize that there are two specimens of Raoul in P. However, based on the label on the sheet it is clear, which specimen Garnock-Jones chose as lectotype. The lectotypification is, therefore, only amended.

Francisco Fonk (1830-1912)
and Rudolph Amandus Philippi (1808-1904)
Fonk was a Chilean doctor and archeologist, who is known to have collected for Philippi in Chile. Philippi was a German botanist who emigrated to Chile in 1851 and became professor for botany and later director of the Museo nacional de Chile at Santiago (Stafleu & Cowan 1983). The Chilean herbarium specimens are mainly in SGO but also in B, BAF, G, LE, P, SI, and W (Stafleu & Cowan 1983), as well as MA (Blanco & Puig-Samper Mulero 1995). Herbarium specimens were distributed in Europe mainly by Rudolf Hohenacker (Ossenbach 2023), which is also the way through which the specimens came to Paris, once directly and once via the Drake herbarium.

Veronica fonkii ("*fonki*") Phil.

Linnaea 29: 110 (Philippi 1857).

TYPE CITATION. — Chile, Aysen: "En las playas y barrancas de Chonos, in litor et calleculis, Dr. Fr. Fonk".

LECTOTYPE (**designated here**). — SGO[SGO4787*].

ISOLECTOTYPES (**designated here**). — B[B10 0367914!], BREM!, FR[FR36594*], GOET[GOET29/82/3!], L[L.2803201*], P[P04079587*, P04079588*], PH[PH00028868*, PH00028878*, PH00028879*], SGO[SGO4786*].

Nomenclatural note. The lectotype of *V. fonkii*, a synonym of *V. salicifolia* G.Forst., should be among the collections in SGO and among those the lectotype chosen is the one with the date (2.[18]57), collection number (*no. 149*) and the extensive description of the locality matching the protologue.

Alexandre Boreau (1803-1875)
Boreau was a French pharmacist, botanist and became director of the botanical garden in Angers in 1838 (Dayrat 2003), where most of his herbarium can be found. Duplicates are in several herbaria.

Veronica anagallis-aquatica L. f. ***anagalliformis*** Boreau

Flore du centre de la France et du bassin de la Loire, ed. 3, 2: 489. (Boreau 1857). — *V. anagallis-aquatica* var. *anagalliformis* (Boreau) Fiek, *Flora von Schlesien*: 329 (Fiek & Uechtritz 1881).

TYPE CITATION. — None designated.

LECTOTYPE (**designated here**). — "Angers marais de la Maine June 1853" [ANG*; Fig. 6].

ORIGINAL MATERIAL. — "Cher, Mehun; A. B. 21. Jun. 1854", MPU[no barcode *]; "*Veronica anagalliformis* Boreau inédit, Cher, St. Amand, bord du Cher, 28. juillet 1853, A. B.", P[P04040828*]; "*Veronica anagalliformis* mihi Cher, Bourges, 17. Juillet 1854 A. B.", P[P04040827*].

Nomenclatural note. Alexandre Boreau wrote an influential flora of central France (Boreau 1840, 1849, 1857), in which he described *V. anagallis-aquatica* f. *anagalliformis* with glandular inflorescence but not fitting to *V. anagalloides*. The name was often referred to in subsequent studies as form or variety of *V. anagallis-aquatica*.

Unfortunately, Boreau did not further describe the origin of the form. The specimens in P are distinguished from *V. anagallis-aquatica* by capsule shape and style length and have flower stalks curved upwards with small bracts, excluding *V. catenata*. The two specimens in Paris came through the Drake collection, a connection not mentioned by Bureau (1904), and to the general herbarium by M. Loret. The lectotype is chosen from the herbarium of Boreau in ANG (Fig. 6) and is the earliest collection by Boreau found. It also bears the annotation "*Veronica anagalloides*?" expressing the first doubt of Boreau regarding the identity of the specimens.

Ludovic Savatier (1830-1891)
Savatier was a medical officer in the French Navy who supported the formation of the Japanese Navy and, therefore, spent ten years (1867-1876) in Japan and collected 1600 plants (Stapf 1909). While much of his material was deposited in P, he kept a large number of specimens that were later sold by his daughter to Kew but apparently none of his collections of *Veronica*.

Veronica onoei Franch. & Sav.

Enumeratio plantarum in Japonia sponte crescentium 2: 457 (Franchet & Savatier 1878).

TYPE CITATION. — Japan, Nagano Pref.: "Hab. in silvis montis Asama yama, provinciae Kotske [= Kitasaku], ubi detexit botanicus Japonensis Ono (Savatier n. 3789)".

LECTOTYPE (**designated here**). — "3789 […] Nippon, in monte Asama Yama leg. Ono", P[P00587535*].

Veronica yedoensis Franch. & Sav.

Enumeratio plantarum in Japonia sponte crescentium 2: 458 (Franchet & Savatier 1878).

TYPE CITATION. — Japan, Tokyo Pref.: "Hab. in humidis: Yedo (Savatier, n. 2069)".

LECTOTYPE (**designated here**). — "2069 […] Nippon, ad Yedo Savatier", P[P03520407*].

Nomenclatural note. *Veronica onoei* is a relative of *V. officinalis*, whereas *V. yedoensis* was determined by Nakai in 1924 to be

Fig. 6. — Lectotype of *Veronica anagallis-aquatica f. anagalliformis* Boreau (Muséum de la ville d'Angers [ANG]).

a poor specimen of *V. peregrina* on the herbarium specimen. However, the specimen is not visible online since the specimen is kept in an envelope. The species is mentioned for the first time by Franchet & Savatier (1875) with the type specimen but without description. The validating description was provided later (Franchet & Savatier 1878).

Veronica ornata Monjuschko

Botanicheskie materialy Gerbariya glavnogo botaniczeskogo Sada 5: 120 (Monjuschko 1924). — *Pseudolysimachion ornatum* (Monjuschko) Holub, *Folia Geobotanica Phytotaxonomica* 2: 425 (Holub & Pouzar 1967).

TYPE CITATION. — Japan: "In silvaticis regionis montanae".

LECTOTYPE. — Designated by Elenevsky (1978): 110): "*Savatier no. 902*", LE.

ISOLECTOTYPES (**designated here**). — P[P03529498*, P03529514*].

Nomenclatural note. When publishing the name *V. ornata*, Monjuschko (1924) mentioned five specimens examined, one specimen by Savatier ("*no. 902*. Hakone, in rupibus fruticetis. 1866-1871. A. Franchet (sub nom. *V. incana* L."), two by Maximowicz and two from Siebold. It is not clear whether his comment "ex Mus. Bot. Acad. Scient. Petrop." refers just to the Siebold specimens or all five. The Paris specimens of *Savatier no. 902* are unlikely to have been inspected since they are labeled "in jugo Hakone" (P03429514) and "in tractu Hakone" (P03529498 from Drake herbarium). It appears that rather Franchet sent an additional specimen to St. Petersburg, which was seen by Elenevsky (1978) and chosen as lectotype.

Paul Guillaume Farges (1814-1912)
Farges was a French Catholic missionary who came to China in 1867 but only started collecting later, in 1892, when he worked in Sichuan (Stern 1944). Whereas his main collection is in Paris, specimens can be found in many other herbaria as well. This is relevant since collections were not used by Franchet exclusively for describing new species.

Veronica fargesii Franch.

Bulletin de la Société botanique de France 47: 21 (Franchet 1900).

TYPE CITATION. — China, Sichuan: "China occidentalis: prov. Su-tchuen, ad Han-ky-se [Han-kg-se] prope Tchen-keou, alt. 2000 m".

LECTOTYPE (**designated here**). — "1169 […] Han Ky se près de Tchen Keou alt. 2000 m 25 mai 1892 P. Farges" P[P03529342*; Fig. 7].

ISOLECTOTYPES (**designated here**). — GH[GH00056877!], K[K005095350!], P[P03529339*, P03529340*, P03529341*], S[S10-21955*], US[US00324049*].

Nomenclatural note. *Veronica fargesii* was described by Franchet (1900). Four collections of this species collected by Farges are in P. Of these, only one (P03529342; Fig. 7), bears a label with exact locality data matching the protologue and signed by Farges. It is, therefore, chosen as lectotype. The number 1169 also appears on another plate (P03529340), and one specimen (P03529339) bears the same label as P03529340 but not the number. One specimen (P03529341) belongs to the Bonati herbarium, has a newer label, and only has material in an envelope, possibly split by Bonati from the other specimens. Duplicates of the Bonati material are in GH, K, S, and US.

Veronica sutchuensis Franch.

Bulletin de la Société botanique de France 47: 20 (Franchet 1900).

TYPE CITATION. — China, Chongding: "Hab.-China occidentalis: prov. Su-tchuen, circa Tchen-keou-tin [= Chengkou], alt. 2000 m (Farges, n. 725)".

LECTOTYPE (**designated here**). — "Plantes de Chine. (Su-tchuen oriental.) District de Tchen-kéou-Tin. M. l'abbé Farges", P[P03520341*].

Nomenclatural note. *Veronica sutchuenensis* was published together with the former by Franchet (Franchet 1900). There is only one specimen of this species in P bearing all information in the protologue.

Veronica laxissima D.Y.Hong

Novon 6: 23 (Hong 1996).

TYPE CITATION. — China, Sichuan: "China. E. Sichuan: Chenkou (Tchen-keou-tin), R. P. Farges 543".

HOLOTYPE. — US[US00433154*].

ISOTYPE. — PE (not seen).

ISOTYPES (not mentioned by Hong 1996). — P[P03529840*, P03529841*, P03529842*].

Nomenclatural note. *Veronica laxissima* was later published by Hong (1996) based on material of Farges. Hong (1996) based his description on specimens from US and PE, but duplicates of the type collection can be found in P, although they lack the specific collection number of Farges. The specimen in US originates from the Drake herbarium and was sent to US from P.

Jean Marie Delavay (1834-1895)
Delavay travelled to China in 1867 and worked in the Guangdong and Yunnan provinces (Stern 1944).

Veronica piroliformis Franch.

Bulletin de la Société botanique de France 47: 20 (Franchet 1900).

TYPE CITATION. — China, Yunnan: "Hab. — China occidentalis: Yunnan in rupibus ad apicem montis Hee-chan-men [= Huchan'men] (Delavay, n. 210); in rupestribus calcareis montis koua-la-po [= Kona-Boro] (id., n. 133); Li-kiang, prope nives perpetuas (id.)".

LECTOTYPE (**designated here**). — "No. 133 […] Rochers et terrains calcaires des hautes montagnes, Mt. da Koua la po, près du Sommet, le 26 aout 1884 legi ipse J. M. Delavay", P[P03529799*].

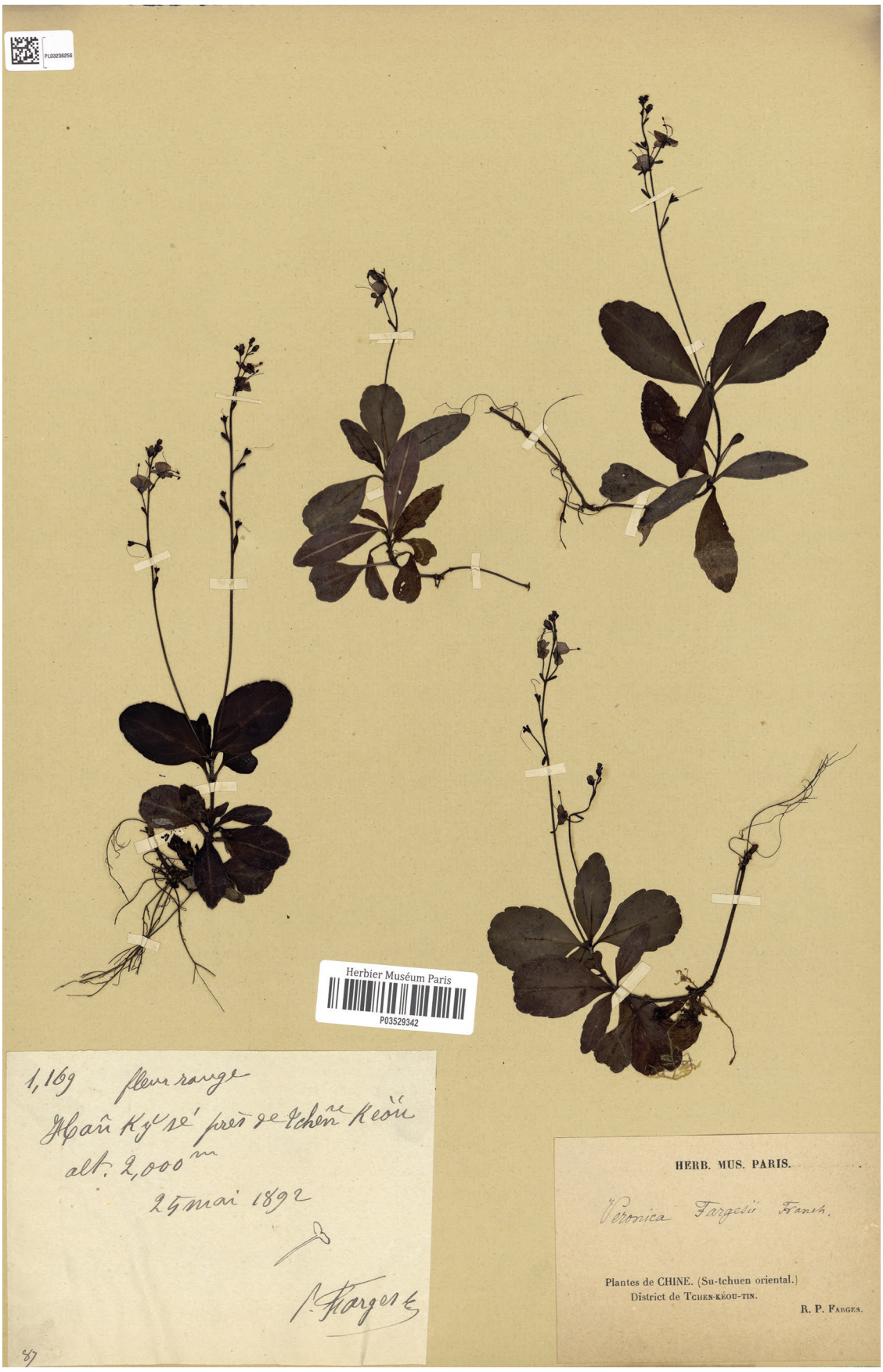

FIG. 7. — Lectotype of *Veronica fargesii* Franch. (P03529342).

ISOLECTOTYPES (**designated here**). — P[P03529795*, P03529796*].

SYNTYPES. — "No. 210 […] des rochers, au Sommet du Hee-chan men. Le 16 août 1883 Delavay", P[P00208377*, P03529800*]; "Terrains calcaires et pierreux au pied du Glacier de Li-kiang leg. Juillet 1884 legi ipse J. M. Delavay", P[P03802975*].

Nomenclatural note. Franchet (1900) described *V. piroliformis*, together with other new species based on the collections by Farges, based on three collections of Delavay from Yunnan, *Delavay no. 210*, *no. 133*, and one unnumbered from "Li-ki-ang". In Paris, two collections clearly belong to *Delavay no. 210* from Hee-chan-men (P00208377, P03529800). The collection *Delavay no. 133* from koua-la-po can be associated with three specimens (P03529796, P03529799, P03802974). One specimen (P03529795) comes from Yunnan. The remaining specimens were collected later and bear no collection number. One specimen (P03429797) was collected from Hee-chan-men, the locality of *Delavay no. 210*, on July 14th, 1887, whereas the original *no. 210* was collected on August 16th, 1883. Two specimens (P03529587, P03802974) were collected on August 5th, 1885, from koua-la-po, the same locality as *Delavay no. 133*, collected on August 26th, 1884. While it can be assumed that Franchet saw all specimens, it is not entirely clear whether he used the latter collections before making up his mind about the new species. I also do not consider P03529795, because it bears the *no. 133* but no further locality information. It seems to be a later split-off from another specimen. This leaves us with six specimens, at least one from each locality mentioned by Franchet (1900) in the protologue. Since the collection from Li-kiang (P03802975) does not bear the typical fruits and collection *no. 210* has unusually strongly dentate and rounded leaves, I choose *no. 133* as lectotype. Among the three specimens, P03529799 is the one with typical fruits.

Cyrus Guernsey Pringle (1838-1911)
Pringle was an American botanist who is known to have spread his herbarium collections widely (Stafleu & Cowan 1983) under different series names such as *Plantae Mexicanae*.

Veronica mexicana S.Watson

Proceedings of the American Academy of Arts and Sciences 23: 281 (Watson 1888).

TYPE CITATION. — Mexico, Chihuahua: "on cool damp bluffs of streams in the Sierra Madre; C. G. Pringle (n. 1349), Sep. 1887".

LECTOTYPE (**designated here**). — "C. G. Pringle Plantae Mexicanae 1887. State of Chihuahua. 1349 *Veronica Mexicana*, Watson, n. sp. Cool damp bluffs of streams, Sierra Madre. 22, September", GH[GH00091896!].

ISOLECTOTYPES (**designated here**). — AC[AC32046*], B (Stroh 1942, probably destroyed), CAS[CAS004941*], COLO[COLO410506*], E[E00248855!*], F[F-V0072725F = 104717!*], K[K000533570!*], MEXU[MEXU30618*], MIN[MIN190597*], NDG[NDG49276*], NY[NY00130754!*, NY00130755!*], P[P04078801*, P04078802*], PH[PH00028870*], S[S-G-6343*], UC[UC102869*, UC194367*], UPS!, US[US00122562*, US01108426*], VT[VT26797*], WU[WU070325!, WU0070326!].

Nomenclatural note. The only collection of *Veronica*, which made it to type material, is that of *V. mexicana*, a distinctive species from the Chihuahua region. It was shown to be related to Siberian and Himalayan species of *V.* subg. *Stenocarpon* (Albach 2006). The species was published by Watson (1888) alongside several other new species based on Mexican plants collected by Pringle but without stating a specific herbarium. Watson was curator at the Gray Herbarium, of which Pringle was collector. Therefore, the specimen in GH is chosen as lectotype and all other specimens of that collection as isolectotypes, including the ones from the Drake and Cosson herbaria in Paris.

Vaclav Stříbrný (1853-1933)
Stříbrný was a Czech gardener, who 1883 moved to Plovdiv to become a teacher and horticulturist. He collected more than 20 000 specimens, distributed widely (Křivka & Holubec 2010) but especially in SOM and, through his friend Josef Velenovsky, also in PRC (Křivka & Holubec 2010). Since Bureau (1904) did not mention Velenovsky, it can be assumed that Stříbrný specimens arrived in the Drake herbarium directly.

Veronica thracica Velen.

Sitzungsberichte der koeniglich-Boehmischen Gesellschaft der Wissenschaften, mathematisch-naturwissenschaftliche Classe 37 (1893): 50 (Velenovsky 1894). — *V. teucrium* subsp. *thracica* (Velen.) Velen., *Flora bulgarica. Supplementum* 1: 214 *Flora bulgarica. Supplementum* (Velenovsky 1898). — *V. teucrium* var. *thracica* (Velen.) K.Malý, Magyar botanikai Lapok7: 229 (Malý 1908).

TYPE CITATION. — Bulgaria, Plovdiv: " in collibus ad Philippopoliu [=Plovdiv], in apricis ad Philippop. et Stanimaka, leg. Stríbrny, May 1893".

LECTOTYPE. — Designated by Rojas-Andrés *et al.* (2016): 620): WU!

ISOLECTOTYPES. — Designated by Rojas-Andrés *et al.* (2016: 620), BM[BM000068141!], W[W1927-0015489, W1927-0015728], WU!

ISOLECTOTYPES (**designated here**). — P[P04219255*, P04219258*].

Nomenclatural note. In 1893, Velenovsky (1894) described *V. thracica* based on one of the collections by Stříbrný, a taxon later considered a subspecies or variety of *V. teucrium* or a synonym of *V. crinita* (Rojas-Andrés & Martinez-Ortega 2016) but most recently recognized at the species level again (Padilla-García *et al.* 2018).

Vincze de Borbás (1844-1905)
Borbás was a Hungarian botanist, who studied and worked in Budapest and Kolosvar (now Cluj) and became a pre-eminent specialist of the Hungarian flora (Knapp 1881). His private herbarium contained apart of his own specimens, specimens from many other collectors of his time with which he exchanged specimens. While his main herbarium was bought for the herbarium BP (Tuzson 1912), there are many duplicates around the globe. A main reason for this is his contribution to the Herbarium Normale exsiccata series. Thus, it is not surprising that type material of Borbás' taxa in *Veronica* is widespread. Bureau (1904) did not mention specimens of Borbas in the herbarium of Drake but only the Herbarium Normale.

Veronica velenovskyi Uechtr. ex Bornm. var. *subintegrifolia* Borbás

Herbarium Normale Schedae Centuriarum XXXV: 144, nr. 3439 (Dörfler 1898).

Type citation. — Hungary, Budapest: "Hungaria centr. In humidis calidis ad 'Bekás-Megyer' proper 'Budapest', Septembri 1894. Leg. V. v. Borbás et L. Richter".

Lectotype (**designated here**). — WU[WU0152672!].

Isolectotypes (**designated here**). — B[B 10 0367913!], BREM!, E!, M![2 sheets], MPU !, OXF!, P[P03520492*], PRC[PRC453965!, one more sheet!], W[W0222328!], Z!

Nomenclatural note. *Veronica velenovskyi* var. *subintegrifolia*, the entire-leaved and longer stemmed variety of *V. velenovskyi*, may be a type growing in submerged water with the serrate type a terrestrial form. *Veronica velenovskyi* is a synonym of *V. scardica*, which is a serpentine specialist related to *V. anagallis-aquatica*. The species is known from scattered localities between Austria and Iran and south to Egypt, although the common origin is unclear and parallel adaptation to serpentine soil is possible, especially of the Egyptian plants (Ellmouni *et al.* 2017). Borbás collected his type material near Budapest, whereas the type of *V. velenovskyi* is from the Bulgarian Black Sea Coast and that of *V. scardica* from Albania. Strangely, type material of Borbás name was not found in BP. The Herbarium Normale was distributed from Vienna by Dörfler in 1894 and since specimens from other collectors were not part of Dörfler's personal herbarium (Vogt *et al.* 2018), the best specimens are likely to be found in Vienna.

Antonio Baldacci (1867-1950)
Baldacci was an Italian scientist and diplomat who devoted a lot of his life to the exploration of the flora of Albania and visited Albania several times (Lack & Barina 2020).

Veronica saturejoides Vis. subsp. *munellensis* M.A.Fisch.

Österreichische Botanische Zeitschrift 118: 203 (Fischer 1970).

Type citation. — Albania: "In saxosis ad summum jugum montis Muela distr. Orosi.

Holotype. — "A. Baldacci (Iter albanicum quintum) *no. 89*, 30. Jun. 1897", WU[WU059322!].

Isotype. — W[W1898-0001589!].

Isotypes (not mentioned by Fischer 1970). — BM[Martínez Ortega, pers. comm.], G[G00086659!], K[K000806792!], M[M01885381!], P[P03517195*, P03517196*].

Nomenclatural note. On the fifth visit of Albania by Antonio Baldacci, he collected on the border to nowadays Northern Macedonia. There, he found plants he identified as *V. saturejoides* and which was later chosen as type of *V. saturejoides* subsp. *munellensis* by Fischer (1970), a taxon endemic to Albania and known only from two localities (Albach *et al.* 2009). Fischer (1970) chose the specimen in WU as holotype and another in W as isotype but there are further duplicates in several other herbaria since Baldacci spread his collections far around. Two specimens are in Paris, one in the general collection, received on February 25th, 1898, probably directly by Baldacci, the other through the Drake herbarium, which is known to contain many of Baldacci's specimens (Bureau 1904).

Antoine Le Grand (1839-1905) and Adrien Warion (1837-1880)
Le Grand was a French botanist and road inspector, which allowed him to collect widely in France (Flahault 1905). His herbarium is largely unknown, but Stafleu & Cowan (1979) mentions specimens in BR, CGE, P and WAG. Le Grand is said not to just have collected specimens but to be highly familiar with the ecology of the plants (Flahault 1905) and was likely in contact with a number of other botanists. The type specimens of *V. hederifolia* var. *minuta* Le Grand have been collected by Adrien Warion. Warion was a medical doctor in the French army, who collected plant specimens in the vicinity of his hospitals in Algeria, Maroc, Germany and France (Charpin & Aymonin 2004). The specimens of *V. hederifolia* var. *minuta* were collected in Vincennes near Paris in 1870. Warion is known to have sent material to Cosson (Cosson 1880) but not to Drake, so this specimen must have come through Le Grand (Bureau 1904).

Veronica hederifolia L. var. *minuta* Le Grand

Bulletin de l'Association française de Botanique 2: 69 (Le Grand 1899).

Type citation. — "Vincennes près Paris (Warion 1870)".

Lectotype (**designated here**). — "Paris: […] au bois de Vincennes. 21 avril 1870, A. Warion", P[P03517560*].

Isolectotype (**designated here**). — P[P03999132*].

Nomenclatural note. *Veronica hederifolia* and *V. sublobata* are two closely related species, distinguished by chromosome number and a few morphological characters (Fischer 1967). Unfortunately, neither the chromosome number is available for Le Grand's specimen nor are flowers present. The protologue and other morphological characters provide a mix of affinities for the plants, such as minute flowers and the relatively wide central lobe of the bracts speaking for *V. sublobata,* and the relatively short pedicel compared to the sepal speaking for *V. hederifolia*. The specific affinity of these plants requires further and more detailed analyses of the specimens. The specimen from the Drake herbarium is of slightly better condition and is more certain to have been at hand for Le Grand (see above), although both specimens are labelled with "n." or "nobis" after the taxon name.

The British connection
A number of specimens came to P from British sources. Some may have been officially exchanged between K or E and P, others may have been gifts from collectors like father and son Hooker. The exact route to P may be difficult to find out and may be different for various specimens.

Nathaniel Wallich (1786-1854)
Nathaniel Wallich was one the most important botanists in India and Nepal in the first half of the 19th century, being superintendent of Calcutta Botanical Garden between 1817 to 1846 (Candolle & Radcliffe-Smith 1981). However, he spent long times in London as well. Wallich collected a large number of herbarium specimens and received specimens from various collectors on the Indian subcontinent. His collections were sent to the Museum of the East India Company in London, where Wallich and colleagues arranged them into duplicate sets. Overall, he is expected to have made 60 sets of specimens of varying completeness with his main herbarium now in Kew (Candolle & Radcliffe-Smith 1981). The two specimens of *Veronica* in P have probably been sent or brought to the herbarium P by Adolphe Brongniart, a specialist of Rhamnaceae and Celastraceae, based on the handwriting on the labels and not Auguste Duvau who was intended to work with *Veronica* (Candolle & Radcliffe-Smith 1981) but died in 1831 shortly before or after the arrival of the specimens in Paris. The seven other *Veronica* in Wallich's list (Wallich 1828) have not been found in Paris.

Veronica undulata Wall.

Flora Indica 1: 147 (Roxburgh & Wallich 1820).

TYPE CITATION. — Nepal: "Discovered in the Turraye [subsylvatic region of Nepal] by Mr. W. Jack, an assistant surgeon on the Honourable Company's Bengal establishment".

NEOTYPE (**designated here**). — "Bareilly [Bareilly] Hindustonia 1825" [in India, Uttar Pradesh], *Wallich no. 406A/406.1*: K[K001109972*].

ISONEOTYPES (**designated here**). — E[E00456644*], PH[PH00028840*].

Nomenclatural note. *Veronica undulata* is a hexaploid relative of the cosmopolitan *V. anagallis-aquatica* (Albach *et al.* 2008). *Veronica undulata* occurs from Pakistan to Japan between 20°N and 48°N. Wallich differentiated it from related species by its lanceolate leaves with wavy margins and glandular inflorescence, although the smaller (shorter than calyx), white flowers are equally characteristic. Wallich (Roxburgh & Wallich 1820) mentioned in the protologue that the plant was collected by Mr. W. Jack in the Turraye (Nepal). William Jack is known to have travelled to Bengal before meeting Wallich and subsequently collected in Sumatra and other places in southeast Asia, but it is unclear whether Jack travelled in Nepal (Candolle & Radcliffe-Smith 1981; Noltie & Watson 2021). Also, neither Wallich (1828) nor Bentham (1835) mentioned a specimen by Jack but only those listed by Wallich (1828) and one by Royle from Kanaour despite Bentham having intensively worked on the collection of *Veronica* from Wallich (Candolle & Radcliffe-Smith 1981). Therefore, the attribution of a specimen to Jack from Nepal is likely an error or has been lost and no specimen conforming to the information in the protologue is likely to be found. Therefore, a neotype needs to be found with the help of Wallich's information.

In his *Numerical List* (Wallich 1828) three collections are mentioned under *no. 406*: "1. Bareilly [Bareilly] Hindustonia 1825 [in India, Uttar Pradesh]; 2. Noakote [Nawakot] Napaliae 1821 [in Uttarakhand]; 3. Sylhet [now Bangladesh, chiefly collected from the Khasia Hills, Indian State of Meghalaya according to Noltie & Watson (2021)], F. De Silva". All three collections are present in the Wallich herbarium in K (K001109972-K001109974) with further specimens in other herbaria. For example, a specimen of the third collection ("406C") is stored in P (P04049092), whereas a duplicate of 406B is found in E (E00456645). The first collection is the largest, well preserved and on its own sheet. It is, therefore, chosen as lectotype. The specimens in NY (NY00130779, NY00130780) mentioned by Pennell (1921) bears the note "Lindley" and, thus, refers to a different collection than the one mentioned by Wallich (1828). The specimen in the herbarium Bentham (K001070374) and others (BM000900922, M0188508) cannot clearly be assigned to one of the three collections.

Veronica himalensis D.Don

Prodromus Florae Nepalensis 92 (Don 1825).

TYPE CITATION. — Nepal: "Hab.in Gosaingsthan Nepalensium"[= Mt. Gosain Than, eastern Nepal]. Wallich.

LECTOTYPE (**designated here**). — "403 *Valeriana grandiflora* Wall in Herb. 1824 Gossain Thain Emodi" K-W[K001109968*].

ISOLECTOTYPES (**designated here**). — E[E00313951!*], G[G00673293*], K[K001070370*], KW!, P[P03529480*].

Nomenclatural note. *Veronica himalensis* is a tall herb from *V.* subgen. *Stenocarpon*. It was described by Don (1825) based on a collection of Wallich from "Gosaingsthan" in Nepal. Don (1825) associated the plant with *Wallich no. 403*, which is stated to be *Valeriana grandiflora* from "Gosain Than Emodii" in Wallich (1828). However, this mistake of associating *nos 403-405* with *Valeriana* rather than *Veronica* was explicitly mentioned by Wallich on his specimen *no. 403* (K001109968) and therefore earlier specimens with the incorrect genus name (e.g., K001070370) can be differentiated from later specimens with the corrected genus name, *Veronica grandiflora* Wall. (e.g., P, G), which is a later homonym of *V. grandiflora* J.Gaertn. Thus, this specimen must have been among the specimens sent to London prior to the arrival of Wallich's main herbarium in 1828 (Candolle & Radcliffe-Smith 1981) but it is not clear who gave the name *V. himalensis*, Don or Wallich. According to Noltie & Watson (2021), specimens from Gossain Than were likely collected by Bharat Singh in 1821 and reference to 1824 refers to cataloging.

Joseph Dalton Hooker (1817-1911)
Joseph Dalton Hooker is frequently regarded as the most important botanist of the 19th century. His importance is based on his friendship with Charles Darwin, being the second director of the Royal Botanic Gardens Kew and his important travels and collections, which started a hype in *Rhododendron*

gardening (Musgrave *et al.* 1998). He was trained as a botanist from birth by his father Sir William Hooker, later the first director of Kew Gardens. Joseph Dalton Hooker's first trip was a four-year long trip to Antarctica (1839-1843), visiting all adjacent continents, New Zealand, and many islands in the Antarctic Ocean (Musgrave *et al.* 1998).

Veronica benthamii ("*benthami*") Hook.f.

Flora Antarctica 1: 60, t.39, 40 (Hooker 1845-1847). — *Hebe benthamii* (Hook. f.) Cockayne & Allan., *Transactions and Proceedings of the New Zealand Institute* 57: 43 (Cockayne & Allan 1926).

TYPE CITATION. — New Zealand, Auckland Island: "Lord Auckland's group and Campbell's Island; on rocky places on the hills", J. D. Hooker, Nov. 1840.

LECTOTYPE. — Designated by L. B. Moore in Allan (1961); second-step lectotype **designated here**, "Lord Auckland's group J. D. Hooker", XI.1840, based on *Flora Antarctica* 1: vii, K[K00107643!].

ISOLECTOTYPES (**designated here**). — K[K00107642!], MPU[MPU013821!*], P[P03520233*].

Nomenclatural note. On the first trip of Joseph Dalton Hooker to Antarctica, Hooker also collected type specimens of three new *Veronica* species, *V. macroura* from New Zealand and *V. odora* and *V. benthamii* from the Antarctic Islands Auckland Island and Campbell Island. The lectotypes of Hooker are found in Hooker's herbarium in Kew but isotypes have been sent to other important herbaria, such as *V. benthamii* from Campbell Island to P. The specimen from the Auckland Islands is chosen as lectotype since it contains detailed sketches of the plant's details.

David Lyall (1817-1895)
David Lyall was a Scottish surgeon and botanical explorer. He was a good friend of Joseph Dalton Hooker since their joint expedition to the Antarctic (Lyall 2010). On their way, the two explored together the flora of Tasmania and New Zealand. Four years later, Lyall returned to New Zealand on another expedition (1847-1849; Lyall 2010) and must have collected then *V. lyallii*. His collection formed an important basis for Hooker's flora of New Zealand (Hooker 1853).

Veronica lyallii Hook.f.

Flora Novae-Zelandiae 1: 196 (Hooker 1853). — *Hebe lyalli* (Hook. f.) A. Wall, *Transactions and Proceedings of the New Zealand Institute* 60: 385 (Wall 1929). — *Parahebe lyallii* (Hook. f.) W. R. B. Oliv., *Records of the Dominion Museum, Wellington* 1: 230 (Oliver 1944).

TYPE CITATION. — New Zealand, Southland: "Milford sound, Lyall".

LECTOTYPE (**designated here**). — K[K001070733*].

ISOLECTOTYPES (**designated here**). — K[K001070732*, K001070734*], P[P04079577*].

Nomenclatural note. The specimen in Kew is usually considered the holotype (Garnock-Jones & Lloyd 2004) but the existence of three specimens in K, one given to Bentham in 1854, and one in P, given to the general herbarium in 1854, means that Hooker had most likely all specimens, probably separating them after the description of the new species and, thus, requiring a lectotypification. The specimen in P is obviously a small twig sent as a duplicate. Of the three specimens in K, K001070732 and K001070734 are obviously cut from the same sheet, whereas K001070733 is still complete and fits nicest to the protologue.

Gustav Mann (1836-1916)
Mann was a German botanist, born in Hanover when it was still ruled in personal union with Great Britain. By this connection of Hanover and Great Britain Mann got into contact with the Royal Botanic Gardens, where he became gardener and got the attention of William Hooker, director of the Royal Botanic Gardens Kew. He sent him to a collection trip for four years to western tropical Africa and later to India with especially his African plants being an important first collection of plants from western African tropical mountains (Hemsley 1916).

Veronica mannii Hook.f.

Journal of the Proceedings of the Linnean Society, Botany 6: 19 (Hooker 1862). — *V. glandulosa* subsp. *mannii* (Hook.f.) Elenevsky, *Byulleten Moskovskogo Obshchestva Ispytatelei Prirody Otdel Biologicheskii* 82 (1): 156 (Elenevsky 1977).

TYPE CITATION. — Equatorial Guinea, Fernando Po: "Ad cacumen Clarence Peak, alt. 10,700 ped.".

LECTOTYPE (**designated here**). — "N 604 [...] on the very top of Peak Clarence Fernando Poo December 1860 G. Mann", K[K000540457!].

ISOLECTOTYPES (**designated here**). — B (Stroh 1942), F[F72726!*], GOET[GOET019917!], S[S10-22095*], U[U.1723239*].

Nomenclatural note. Among the specimens collected in the western African tropical mountains by Gustav Mann, *Veronica mannii* is closely related and currently treated as subspecies of the otherwise East African montane *V. glandulosa*, which Hooker (1862) even alluded to in the protologue. It is supposed to differ by narrow leaves and sepals and bracts shorter than the flowers (Hooker 1862). The main collection of Mann is in Kew, but duplicates have been sent around widely. However, care must be taken since Mann collected several specimens of the taxon under different numbers. Therefore, the specimen in P[P03558680], which has only a label "Mann 1859-1863" with no. "2090" is only a syntype.

Veronica africana Hook.f.

Journal of the Proceedings of the Linnean Society, Botany 7: 208 (Hooker 1864).

TYPE CITATION. — Cameroon: "Cameroons Mountains, alt. 7000 feet".

LECTOTYPE (**designated here**). — "N 1263 Cameroon Mountain Elev. 7000 ft Mann 1862" K[K000028833!].

ISOLECTOTYPE (**designated here**). — P[P03429486*].

Nomenclatural note. The second species described by Hooker based on collections of Mann is *V. africana* Hook.f. from the Cameroon Mountains. Nowadays, it is considered a synonym of *V. abyssinica*, a highly variable species widespread in Africa in need of further analysis. Hooker (1864) suggested that *V. africana* differs from *V. abyssinica* in shorter petioles and leaves truncate or cordate at base, but a closer morphological and genetic analysis will be necessary to see whether *V. africana* deserves taxonomic recognition. Similar to *V. mannii*, the type material was found in K and the specimen in P is an isotype.

James Edward Tierney Aitchison (1836-1898)
Aitichison was born in India but grew up in Scotland, where he became a doctor but also an enthusiastic field botanist (Hill 1899). In 1858, Aitchison entered the East India Company as surgeon and remained in India with one interruption until 1888. He worked in many different places gaining an excellent knowledge of the Indian flora (Hill 1899) and collected up to 20 000 specimens including 75 species new to science. His collections were sent to Kew from 1862 onwards from where sets were distributed to several herbaria including Paris, Harvard, the British Museum and Florence, although the first did not receive a full set (Hill 1899). While in India, Aitchison was in contact with other people interested in plants who likely contributed to his herbarium, like the German missionary Heinrich Jäschke or colonel Henry Collett, who was stationed in Kuram together with Aitchison. During his time in London (1862-1865), Aitchison worked in Kew with William Hemsley, and it was likely the latter who was aware of other important collections from the region there, such as those of Falconer.

Veronica rupestris Aitch. & Hemsl.

Journal of the Linnean Society, Botany 19: 180, pl. 25 (Aitchison 1882).

TYPE CITATION. — Pakistan, Khyber Pakhtunkhwa: "Kuram district, on shaded moist localities, at from 8000 to 11,000 feet altitude, Saféd-koh, *Collett no. 112*. [India, Himachal Pradesh] Lahul, *Jaeschke. Herb. Falconer no. 784*, Kew distribution in part".

TYPE MATERIAL. — *Aitchison/Collett no. 112*, FI[FI009712*]; *Falconer no. 784*, P[P03529391*]; *Journal of the Linnean Society* 19: pl. 25 (Aitchison 1882).

Nomenclatural note. *Veronica rupestris* is a showy plant described from Pakistan and India (Himachal Pradesh) but likely conspecific with *V. lanosa* described from Indian Himachal Pradesh (Pennell 1943). Aitchison (1882) compared his species with *V. lanosa*, from which it is said to differ in having axillary inflorescences (not terminal) and capsule longer than calyx. However, the latter is not a distinguishing character, and the former is known to be variable in the genus and sometimes even within species (Albach *et al.* 2004a). Aitchison (1882) stated two collections under this name, *Collett no. 112* and *Jaeschke in Herb. Falconer no. 784*. However, several other specimens can be found that Aitchison collected under that name (*no. 198*, *238*, *331*) before the publication date (e.g., BM000997928, P03529390). One of each of the type collections has been found, one in Florence, one in Paris, from the herbarium of the East India Company and distributed from Kew to the general herbarium. Surprisingly, the collections have not been found in Kew. Pennell (1943) mentioned a specimen in GH, but this has also not been digitized nor found during a visit. Other collections to be inspected are those of Calcutta, St. Petersburg, and Saharanpur (now at DD) (Hill 1899).

Richard Strachey (1817-1908), James Edward Winterbottom (1803-1854) and other English botanists in India
Richard Strachey was a British officer of the East India Company who worked as a military engineer and scientific investigator in botany, meteorology, geology, and physical geography (Holdich 1908). He was among the first westerner explorers of the interiors of the Himalayas and its northern side (Holdich 1908). Winterbottom had studied medicine in Oxford but never practiced medicine. Instead, he went as a botanist to India in 1846 and joined Strachey's expedition as a volunteer (Hooker 1854).

Veronica umbelliformis Pennell

Monographs of the Academy of Natural Sciences of Philadelphia 5: 87, fig. 10B (Pennell 1943).

TYPE CITATION. — India, Uttarakhand: "alpine, 4100 meter altitude, Barji Kong Pass, Kumaun, collected in fruit August 1848, by R. Strachey and J. E. Winterbottom, *no. 10*".

HOLOTYPE. — "R. Strachey and J. E. Winterbottom. No. 10 […] Barji Kang Kumaon Elevation above the Sea 13500 Feet" GH[GH00091903!*].

ISOTYPE (not mentioned in protologue). — BM[BM000900925!*], K[K001070365*], P[P00208414*], PH[PH00028892*].

Nomenclatural note. *Veronica umbelliformis* was described by Pennell (1943) based on a collection of Strachey and Winterbottom from Barjikang Pass in the Pithoragarh district. Pennell (1943) cited *no. 10* of Strachey & Duthie (1906), which is a catalogue number rather than a collection number. However, *no. 10* in Strachey & Duthie (1906) is *V. javanica*. Since *no. 9* is *V. capitata*, a similar species, reported from Barjakang Pass, some confusion seems to have happened. Something similar seems to have happened with *no. 4* (P00208415), which is *V. ciliata* (*no. 2* in Strachey & Winterbottom) but is *V. beccabunga* in Strachey & Duthie (1906). Strachey & Duthie (1906) reported that they distributed the collections to K, BM, LINN and "some foreign museums", apparently including P. Pennell (1943) reported only one specimen for his *V. umbelliformis* considered the holotype but there exist several duplicates. Strangely, a label on the specimen in P

states that it was given to P by Strachey and Winterbottom in 1843, before the travels to the area by Strachey and Winterbottom (1846-1849; Strachey & Duthie 1906) and the collection date reported by Pennell (1943). There has been some discussion around this name, which is nowadays considered a synonym of *V. szechuanica* subsp. *sikkimensis*, the western subspecies of *V. szechuanica* (Hong & Fischer 1998), but they belong to a poorly investigated, heterogeneous group of species (Buhk *et al.* 2015).

Veronica capitata Royle ex Benth. var. ***sikkimensis*** Hook.f.

The flora of British India 4: 296 (Hooker 1885). — *V. szechuanica* subsp. *sikkimensis* (Hook.f.) D.Y.Hong in P.C.Tsoong & D.Y.Hong., *Flora Reipublicae Popularis Sinicae: Scrophulariaceae* 67 (2) (Tsoong & Yang 1979).

Type citation. — India, "Sikkim: Lachen, 12.000ft. J.D.H.".

Lectotype (**designated here**). — "Lachen 12.000ft, July 16/49 […] Coll. JDH", K[K001070369!].

Syntype. — "(13.000ft, 20. Jun.)", K[K005096109!].

Nomenclatural note. The specimen in P is on the same sheet as a specimen of *V. capitata* collected by J.-D. Hooker and H. Thomson in Sikkim. The preparation on one sheet is noteworthy since this seems to have been done to compare the two specimens. They are similar and considered conspecific nowadays, however under *V. szechuanica*. The specimen by Hooker and Thomson from Sikkim is likely an isotype of *V. capitata* var. *sikkimensis* Hook.f. but lacks the specific locality data mentioned in the protologue. Two specimens in K meet the requirements, although one has been collected 1000 ft further up and has been prepared on a sheet with another collection. It is, therefore, considered a syntype.

Veronica maddeni Edgew. ex Hook.f.

The Flora of British India 4: 296 (Hooker 1885), *nom. inval.* (Art. 36.1c; publ. in synonymy).

Type citation. — none designated.

Lectotype (**designated here**). — K[K005096065!].

Nomenclatural note. Strachey was acquainted with other botanists in India, e.g., Edward Madden (Terrot 1856) and likely Michael Edgeworth. Being born in Ireland, Edgeworth studied botany and oriental languages in Edinburgh and was later appointed to the East India Company for civil service (Jacob 2000). From 1831 to 1850 Edgeworth travelled India, collected plants, and studied Indian languages, culture, and antiquities (Anonymous 1883). His herbarium is mainly in Kew with further material at G-DC and OXF (Stafleu & Mennega 2000) with that of Madden in K, OXF, CAL and E (Stafleu & Cowan 1981).

The name *V. maddeni* Edgew. was mentioned by Hooker (1885) in synonymy of *V. javanica* Blume with the note "mss" indicating that Edgeworth sent him a manuscript in which this species was described. The name was subsequently cited from Hooker (e.g., Dutta 1960). The name does not appear in any publication of Edgeworth and since Edgeworth (1846) noted that he sent his Scrophulariaceae to Bentham, I also checked relevant literature of Bentham with no success. However, there is a specimen in K-Benth sent by Edgeworth labeled "46 *Veronica* sp. n., Himalaya 3 to 8.000 ft banks, M. Edgeworth 1840". The specimen can be identified as *V. javanica* but is comparably small-leaved, basally strongly branched and appears decumbent with long stems. The name appears also on specimens collected by Griffiths (*no. 3921*) distributed at Kew in 1862-3 (K000662121, K005096048, P03529521, GOET), by J. D. Hooker and J. Thomson (K005096056, K005096058, K005096066, K005096067, KW, P03529522) and Strachey and Winterbottom in 1843 in Kumaon, Naini Tal, 1500 feet (K005096059, P03529520). Thus, it seems that Edgeworth communicated his name to relevant botanists in India and Kew without ever validly publishing the name.

George Forrest (1873-1932)

George Forrest was a Scottish botanist who worked for the Royal Botanic Gardens Edinburgh, when he was appointed for a plant collecting trip to China. He became one of the most important plant hunters in China, especially in Yunnan and Tibet (Musgrave *et al.* 1998). He has been reported to have sent consistently herbarium material to Edinburgh (E), which is why his type specimens in E are often considered holotypes (e.g., Wood 2012). However, there is no indication of the origin of herbarium specimens in Diels (1912) who published the new, enigmatic species of *Veronica* from Yunnan. Diels named the species after Forrest, the only *Veronica* type specimen of him, which Forrest collected on his first trip to China. The specimen in Paris was sent from Edinburgh after publication of the species. So, it is a rightful isolectotype. The specimen in MO was sent from the British Museum but no type specimen was found in BM.

Veronica forrestii Diels

Notes from the Royal Botanic Garden Edinburgh 5: 282 (Diels 1912).

Type citation. — China, Yunnan: "Dry open situations amongst rocks on the eastern flank of the Tali Range, Lat. 25°40'N Alt. 8-10,000 ft. W. Yunnan, *G. Forrest. No. 4195*".

Lectotype (**designated here**). — E[E00456646!].

Isolectotypes (**designated here**). — MO[MO-1617741!*], P[P00208389*].

Giraudias Herbarium

Ludovic Giraudias (1848-1922) was a civil servant at various places in France, who botanized in his spare time. He was the founder of the Association pyrénéenne pour l'échange des plantes (Terré 1953) and as such likely received plants from all over Europe in exchange. He died in Paris (Terré 1953), which may be the reason for his herbarium being found in P. Apart

Fig. 8. — Lectotype of *V. verna* f. *brevistyla* (P03803363) from Muséum national d'Histoire naturelle.

from the collectors below, single type specimens of Błocki, Lejeune and Sennen were found in the herbier Giraudias.

Georg Stephan Froelich (1839-1893)
Froelich was a German teacher in Silesia (now Poland) who collected extensively in his home area and published a number of names, mainly at the rank of form, which he recognized based on his extensive field work. He likely sent around specimens widely but there is nothing known about a specific herbarium collection and that likely got lost during the world wars. In *Veronica*, 11 names (all intraspecific taxa) are attributed to Froelich.

Veronica verna f. ***brevistyla*** G.Froel.

Schriften der physikalisch-oekonomischen Gesellschaft zu Königsberg 26: 6 (Froelich 1885).

Type citation. — None designated.

Lectotype (**designated here**). — "Flora Borussiae occidentalis, Thorn, Acker zu Neu Weifshof, 20.5., 19.6.1885, G. Froelich", P[P03803363*; Fig. 8].

Isolectotype (**designated here**). — M!

Nomenclatural note. In *V. verna*, Froelich published a forma *brevistyla* and a forma *longistyla* based on style length. Normally, these different forms are recognized as species, *V. verna* and *V. dillenii*, respectively, because of other differences, mainly in size but also habitat. However, it has not yet been tested in depth whether these deserve recognition at the species rank or whether Froelich was correct at treating them as forms. In such a case, Froelich's name *V. verna* f. *longistyla* G.Froel. would be the correct name for the taxon currently recognized as *V. dillenii*. Nevertheless, *V. verna* f. *brevistyla* seems to be a synonym of *V. verna* since the style is not shorter than in normal *V. verna*.

Frédéric Gérard (?-?)
Gérard was a French botanist, whose main botanical interest was the flora of French Vosges (Gérard 1890). Nothing is known about his herbarium. The specimens in Paris are from herbarium Giraudias ex Ecole Normale Supérieure, herbarium L. Rotereau via herbarium Caen, E. G. Camus, and the general herbarium, all with the label of Flora selecta exsiccata, published by Ch. Magnier. Since the labels including a description cite the publication by Gérard (1890), they are considered to date after 1890.

Veronica hederifolia L. var. ***gracilis*** F.Gérard

Revue de Botanique 8: 183 (Gérard 1890), *nom. illeg.* (Art. 53.1; non *V. hederifolia* var. *gracilis* Peterm.).

Type citation. — France "Assez commun dans les lieux cultivés, à Chatel, sur le muschelkalk, à Rambervillers, à la limite du muschelkalk et des grès bigarrés".

Lectotype (**designated here**). — "Vosges: Chatel, champs cultivés, F. Gerard 27. Apr. 1888", P[P04964112*].

Isolectotypes (**designated here**). — MPU[MPU005259!*], P[P02415853*, P03805450*, P03944470*].

Nomenclatural note. *Veronica hederifolia* var. *gracilis* is described as slenderer than *V. hederifolia*, with less hairy leaves, paler flowers, cilia lobes of the calyx half less long than those of the latter and being about 1 millimeter in length. All these characters and the type specimens suggest that Gérard (1890) refers to *V. sublobata*, a species only separated much later (Fischer 1967).

Johann Wiesbaur (1836-1906)
Johann Wiesbaur was an Austrian clergyman and botanist, who later became high school teacher in Moravia, today in the Czech Republic (Stafleu & Cowan 1988). He authored more than 65 names, especially in the genera *Viola* and *Hieracium* but also 20 names in *Veronica*, mainly in *V.* subsect. *Agrestes*. While little is known about his herbarium, specimens can be found in many herbaria, especially in BRNU, PR, but also W and B and others (Stafleu & Cowan 1988). However, P was not mentioned. Nevertheless, two specimens of him have been found in P, which are important for the typification of two varietal names in the species *V. agrestis*. Both came to P via the herbarium of L. Giraudias ex Ecole Normale Supérieure. Based on specimens in BRNU, this seems to be no direct contact of Wiesbaur with Giraudias but an exchange of Giraudias with J. Podpera in BRNU. In both cases, no specimens were found in PR and BRNU. It is known that many *Veronica* specimens from BRNU were given to Ernst Lehmann (herbarium TUB), the leading *Veronica* expert at that time before World War II and have not been returned. However, only one specimen was found in TUB. So, the fate of these specimens is unclear.

Veronica agrestis L. var. ***glabrescens*** Wiesb.

Deutsche Bot. Monatsschrift 5: 170 (Wiesbaur 1887).

Type citation. — Not given.

Lectotype (**designated here**). — Czech Rep., Usti nad Labem: "Flora bohemica, Böhm. Erzgebirge, Mariaschein [= Bohosudov], in agris, J. Wiesbaur 21. Oct. 1884", P[P03803403*].

Isolectotype (**designated here**). — GOET!

Other original material. — "13. Oct. 1883", WU!; "21. Nov. 1883", TUB!; "9. Oct. 1884", K[K000806824!*]; "21. Oct. 1884", GOET!; "21. Nov. 1884", B!

Veronica agrestis L. var. ***albida*** Wiesb.

Deutsche Bot. Monatsschrift 5: 170 (Wiesbaur 1887).

Type citation. — None given.

LECTOTYPE (**designated here**). — Czech Rep., Usti nad Labem: "Böhm. Erzgebirge, Streckenwald, J. Wiesbaur, 21. Oct. 1884" P[P03975495*].

ISOLECTOTYPE (**designated here**). — GOET!

Nomenclatural note. Wiesbaur (1887) mentions previous references for *V. agrestis* var. *glabrescens* ("Société helvétique 1885 und Gen. Dubl. Verz. des schles. bot. Tauschvereins 1885/86") but the name was not found in any publication of the Société Helvétique des Sciences Naturelles, and the other reference is just a list of names. However, the diagnosis in Wiesbaur (1887) validates the names. Six specimens collected on five dates have been found for *V. agrestis* var. *glabrescens*. The specimen in P is especially well preserved, has a duplicate in GOET and is collected on the same day as the original material of *V. agrestis* var. *albida*, making it more likely that these were really considered distinct types by Wiesbaur.

Gonçalo Sampaio (1865-1937)
The life of Sampaio was summarized by Cabral (2009). Sampaio started studying in Porto in 1885 and switched to the Polytechnic Academy in 1890 to study natural sciences. At that time, the centers of botany in Portugal were the universities in Lisbon and Coimbra, and Sampaio learned herborization at the latter institution. Sampaio started collecting plants in 1892 and by 1896 he had established himself as a plant collector and author of scientific studies on the flora of Portugal. It is in this framework of collections of new plants that Sampaio published one of his two names in *Veronica*, *V. demissa* from north of Porto. Later Sampaio became one of the most important Portuguese botanists and professor in Porto.

Veronica demissa Samp.

Annaes de sciencias naturaes (Porto) 7: 117 (Sampaio 1901).

TYPE CITATION. — Portugal, Porto: "Habitat in arenosis maritimis, prope "Villa do Conde" […] Encontrei-a pela primeira vez em 2 de maio do anno corrente".

LECTOTYPE. — Designated by Sánchez Agudo *et al.* (2012: 868): PO[PO6935*].

ISOLECTOTYPES (**designated here**). — "April 1901", K[K000806830!*]; "May 1901", BREM!, GB[GB0782882!], MA[MA111989*], MPU!, P[P03945080*].

Nomenclatural note. *Veronica demissa* is stated by Sampaio (1901) to differ from *V. arvensis* by its smaller stature, yellowish-green color, and slightly fleshy leaves. Furthermore, bracts are all ovate, obtuse, and shorter than the flowers. Sepals are shorter than the capsule, smaller corolla, resembling *V. peregrina*, which has white flowers without visible veins. Sampaio (1901) stated that he never observed intermediates to *V. arvensis*. Indeed, all collections by Sampaio are highly similar, conform to the description and are basally strongly branched. Still, most of the characters are in the range of variation of *V. arvensis*, especially those on nutrient-poor, warm, and exposed habitats. As stated by Sampaio (1901) he found the plants in coastal habitat and in fact this seems to be a coastal ecotype.

The name *V. demissa* was lectotypified by Sánchez Agudo *et al.* (2012) with the specimen present in Porto (PO). In the description of the species, Sampaio (1901) stated that he collected many specimens and sent them to several correspondents directly. Therefore, it is no surprise to find isotypes in other herbaria. Sánchez Agudo *et al.* (2012) mentioned a specimen in Madrid (MA111988), but that specimen has the wrong date (1903). There is another specimen in MA with the right date and both were labeled by Sanchez Agudo as isolectotype. I, here, provide a more complete list of isotypes.

Alfred Reynier (1845-1932)
Reynier was a French botanist with various professional activities, born and died in Marseille (Charpin & Aymonin 2004).

Veronica agrestis L. var. ***subabortiva*** A.Reyn.

Bulletin de l'Académie internationale de géographie botanique 11: 291 (Reynier 1902). — *V. filiformis* var. *subabortiva* (A.Reyn.) A.Reyn., *Bulletin de l'association pyrénéenne pour l'échange des plantes* 15: 17 (Reynier 1905).

TYPE CITATION. — France, Bouches du Rhône: "dans les prairies riveraines de l'Huveaune au sud d'Aubagne, puis aux bords des champs humides au nord et à l'ouest de cette ville".

LECTOTYPE (**designated here**). — "*Exsiccata de la Société Cénomane no. 400*" P[P03999078*].

ISOLECTOTYPE (**designated here**). — P[P04040689*].

Nomenclatural note. The Reynier herbarium is in AIX but no specimen of *V. agrestis* var. *subabortiva* was found there. The specimens in P came there from the herbarium Giraudias ex Ecole Normale Supérieure and the herbarium Dr. Guétrot. Reynier (1902) first considered the new taxon that he found to be a variety of *V. agrestis* without capsules. Later (Reynier 1905), he realized his mistake and recombined the name under *V. filiformis*, which was dispersed as cover of wine grapes from Georgia to southern France (Lehmann 1942). *Veronica filiformis* is a self-incompatible species, rarely setting seed and full capsules in the introduced area (Scalone & Albach 2012). Thus, there is no taxonomic value nowadays to this name.

Lujo Adamovic (1864-1935)
Adamovic was born in Rovinj in Croatia, educated in Belgrade, where he studied botany under Josif Pancic (Jasprica & Kovačić 2001). He became highschool teacher, defended his dissertation in Berlin in 1898 and became director of the Botanical Garden and the herbarium in Belgrade in 1901 but left under political pressure in 1906. He moved as lecturer to the University to Vienna (until 1915), after which he went to Montenegro (Jasprica & Kovačić 2001). In his time in Belgrade he worked with O. Bierbach, who was then inspector of the herbarium (Vukojičić *et al.* 2011) and who collected important material for Adamovic, as well as accompanied others on their travels through the Balkan Peninsula, raising their

Fig. 9. — Lectotype of *V. surculosa* var. *macedonica* Adamovic (P03838967).

enthusiasm for plants, among them J. Kindl (Adamović 1909). Little is known about Kindl, but he seems to have supported Adamovic rather than having collected plants. In 1904, Adamovic dedicated *V. kindlii* Adamovic to this man based on a collection on Nidze Planina on the border between Northern Macedonia and Greece, a name largely ignored. The species was later (Rojas-Andrés *et al.* 2015) resurrected based on DNA analyses. Rojas-Andrés *et al.* (2016) searched for herbarium material of this collection but could not find any, eventually designating the illustration in the description as lectotype.

Veronica surculosa Boiss. ex Balansa
var. ***macedonica*** Adamovic

Allgemeine Botanische Zeitschrift für Systematik 11: 2 (Adamovic 1905).

TYPE CITATION. — Greece/Macedonia: "Auf Alpenmatten der Nidze Planina (Kajmakcalan)", Kindl.

LECTOTYPE (**designated here**). — "O. Bierbach, Jul. 1904", P[P03838967*, Fig. 9].

Nomenclatural note. Adamovic (1905) published the name *V. surculosa* var. *macedonica* based on a collection of Kindl from Nidze Planina. Bornmüller (1927) remarked that the specimen is in B, but this specimen was likely destroyed in World War II. In this respect, the finding of a specimen in P (Fig. 5) is significant. Although contrary to the protologue, the specimen was not written to be collected by Kindl but by Bierbach, I believe that the attribution in the protologue is more honoring Adamovic's beneficiary than the truth and Bierbach stamped appropriately his own collection, which he may have collected together with Kindl. Therefore, I believe that the specimen in P, belonging to the herbarium of Giraudias, is original material of *V. surculosa* var. *macedonica*.

Comparing the protologues of the two taxa, a great resemblance is apparent but also significant differences (Table 2). However, looking at these differences in more detail, the lectotype and the specimen in P are more similar than the comparison of the protologues. Using the identification key of Rojas-Andrés & Martinez-Ortega (2016), the specimen of *V. surculosa* var. *macedonica* is *V. teucrioides* due to the solitary inflorescences. Comparing the descriptions of *V. teucrioides* and *V. kindlii* in Rojas-Andrés & Martinez-Ortega (2016), there are few differences between the two species other than *V. teucrioides* consistently having single inflorescences, whereas *V. kindlii* has alternate and rarely solitary inflorescences. Additionally, medium leaves are all glabrous or subglabrous in *V. teucrioides* but sparsely pubescent in *V. kindlii*. These characters need to be investigated in the actual specimen in P. Both species are sister in the cpDNA analysis of Rojas-Andrés *et al.* (2015) but slightly differ in their ITS-sequence. The distinction between the two species requires further investigation of herbarium material and in the field. Up until that time, two hypotheses remain: 1) Adamovic rightfully distinguished *V. kindlii* and *V. teucrioides*, which he named *V. surculosa* var. *macedonica*, co-occurring on Nidze Planina and both collected by Bierbach and Kindl in 1904; or 2) the variation on Nidze Planina belongs to one species and *V. kindlii* and *V. teucrioides* are conspecific but polyphyletic when analyzing their nuclear ribosomal DNA.

GRENIER HERBARIUM

Another important herbarium is that of Jean Grenier, who started studying medicine but then became one of the important botanists in France around the middle of the 19th century as author of the Flore de France (Grenier & Godron 1850) and other important floristic works (Poisson 1876). He was professor in Besançon and collected plants extensively all over France and received many collections from other botanists. However, in the end he decided that his herbarium would be best stored in a larger institution and gave his herbarium during his lifetime to the herbarium in Paris (Poisson 1876). He did not own a lot of old type material, although according to Poisson (1876) collections of important international botanists (e.g., Boissier, Heldreich, Steven, Schimper, Lejeune, Fischer, Villars, etc.) should be part of the herbarium. However, no type material of these collectors was found, only those of some French botanists.

Joseph Miégeville (1819-1901)

Joseph Miégeville was a French clergyman and naturalist, who worked on the flora of the Pyrénées. His herbarium is unknown according to https://kiki.huh.harvard.edu/databases/botanist_search.php. Therefore, identifying a specimen by him in P (P03427418; Fig. 10) is significant, although the specimen does not belong to the herbarium of Miégeville but was sent by him to Grenier in 1868. The case is, thus, similar to that of *Trisetum baregense* Laffitte & Miégev., which was also lectotypified by a specimen in P sent to Grenier (Barberá *et al.* 2018). The specimen demonstrates that *V. palmatiloba* Miégev. is a synonym of *V. verna* L.

Veronica palmatiloba Miégev.

Bulletin de la Société botanique de France 14: 146 (Miégeville 1867).

TYPE CITATION. — France, Ariège: "In montibus Pyrenaeis centralibus".

LECTOTYPE (**designated here**). — "Sentenac, région alpine, au canton de Vicdessos, Ariège, 21. May 1863", P[P03427418*; Fig. 10].

(Louis) Eugène Michalet (1829-1862)

Michalet was a French botanist working in Besançon with Grenier on the flora of Jura, but Michalet died at early age (Stafleu & Cowan 1981). He is stated by Poisson (1876) to have provided specimens for Grenier, but his own herbarium was acquired by Henri Blanche (Blanche 1866), now possibly at STR. Although he published names himself, the one name based on his collection in the genus *Veronica* was published by Grenier and is that of a variety of *V. anagallis-aquatica* from the French Jura Mountains.

Fig. 10. — Lectotype of *V. palmatiloba* (P03427418).

TABLE 2. — Differences between *of Veronica kindlii* and *V. surculosa* var. *macedonica* from Nidze Planina based on protologues. In brackets characters of the type specimens.

***Veronica kindlii* Adamovic**	***Veronica surculosa* var. *macedonica* Adamovic**
More or less densely hirsute	Not glandular hairy
In upper parts 2-3 dentate, in lower parts entire	Leaves clearly and largely dentate (leaves slightly dentate in upper part, lower part entire)
Mostly revolute (not obvious)	Leaves not leathery, flat, not hairy
Racemes axillary, solitary or alternate, dense, capitate (in full flower)	Raceme usually solitary and elongate (Raceme solitary, elongate in fruit)
Pedicels equal or slightly longer than bracts	Pedicel much surpassing the bract and calyx (Pedicel slightly longer than bract)
Calyx oblong-lanceolate	Calyx linear (similar to lectotype of *V. kindlii*)

Veronica anagallis-aquatica L. var. ***pseudoanagalloides*** Gren.

Flore de la chaîne jurassique: 579 (Grenier 1869).

TYPE CITATION. — France, Jura: "*V. anagalloides* Michalet exsicc. Fasc. 1, *no. 29* et non-null. auct.; *V. fallax* Gren.ined.".

LECTOTYPE (**designated here**). — "Bords des mares et fossés Asnans et Longwy, canton de Chaussin - Alluvion du Doubs", *Michalet no. 29*, 30. Aug. 1855 P[P04575448*].

ISOLECTOTYPE (**designated here**). — P[P04040347*].

Nomenclatural note. This species and its close relatives are notoriously polymorphic and difficult to identify. The specimen of Michalet can be identified by the bracts being longer than the pedicel, the latter spreading at wide angle from the stem. Also, the description, peduncle, and pedicel glandular-hairy, supports the identification as *V. catenata* Pennell. While the lectotype bears a label indicating that it was given to P by Grenier in 1875 (but also the stamp of herbier Camus), the isolectotype has no indication of how it came to P.

OTHER COLLECTORS

Alexandre Louis Simon Lejeune (1779-1858)

Lejeune was a Belgian botanist, who studied pharmacy and medicine and practiced since childhood botanical studies (Kickx 1861). He became doctor in Verviers and started to explore the area. He published several books on the flora of Spa and later on the flora of Belgium (Kickx 1861). After his death, his herbarium was sold to the Jardin botanique de Bruxelles BR (Verloove 2017) but during his lifetime he was in contact with many other botanists throughout Europe and exchanged specimens (Kickx 1861). Of the five names in *Veronica* published by Lejeune, four are represented in the herbarium of P. As discussed by Verloove (2017) specimens from Lejeune are not dated and without exact locality and, therefore, cannot be used as lectotypes (e.g., P03517288) but need to be neotypes.

Veronica paludosa Lej.

Flore des environs de Spa 1: 22 (Lejeune 1811).

TYPE CITATION. — Belgium, Liège: "Se trouve dans les prés marécageux, entre Andremont et Henri-Chapelle, et entre Verviers et Limbourg".

NEOTYPE. — Designated by Verloove (2017), "621. Dr. Lejeune, distributed sub n. 2519 Rchb., Fl. Germ.", BR[BR000001066105].

ISONEOTYPE. — Designated by Verloove (2017), U[U.1723840].

ISONEOTYPES (**designated here**). — HAL[HAL077545!], HBG[HBG512098*], K[K000806854!*], MPU[MPU091715!], O[O-V2246187*], P[P03517293*], TUB!, W!

Nomenclatural note. *Veronica paludosa* has variously been identified as *V. spicata* (Härle 1932), *V. spicata* × *V. longifolia* (Fedde & Schuster 1914), and *V. longifolia*. Verloove (2017) discussed the plant and assigned it to *V. longifolia*, a reasoning followed here.

Veronica alternifolia Lej.

Flore des environs de Spa 2: 286 (Lejeune 1813).

TYPE CITATION. — Belgium, Liège: "Se trouve sur les bords des bois entre Verviers et Limbourg".

NEOTYPE. — Designated by Verloove (2017), "754. *Veronica alternifolia* Lej. Rchb. Fl. germ. sub n. 2522 Gegend von Spa, Dr. Lejeune", BR[BR000001066108].

ISONEOTYPES. — Designated by Verloove (2017), HAL[HAL 0136123*, HAL 0136124*], HBG[HBG512099*], MPU[MPU207333*].

ISONEOTYPES (**designated here**). — BP[BP349892!], HAL[HAL077433!], K[K000806808!*, K000806809!*], LMO[LMO754!], P[P03517298*], TUB!, W[W1889-208304!].

Nomenclatural note. *Veronica alternifolia* is difficult to assign to a species since it is mostly filed as *V. spicata* but sometimes filed as *V. longifolia* (Reichenbach herbarium). Even plants found in various herbaria are heterogeneous, sometimes assignable to one, sometimes to the other, mostly, however, they seem to be hybrids. Verloove (2017) discussed the name and assigned it to *V. longifolia,* and I follow that decision until more information becomes available.

Veronica limosa Lej.

Revue de la flore des environs de Spa: 2 (Lejeune 1824). — *V. beccabunga* var. *limosa* (Lej.) Dumort., *Florula Belgica* 35 (Dumortier 1827).

TYPE CITATION. — Belgium, Liège: "Elle habite les bourbiers près Battice, Charneux etc.".

ORIGINAL MATERIAL. — P[P04051594*], W[W1889-193326!].

Nomenclatural note. *Veronica limosa* is a synonym of *V. beccabunga* but is said to differ from it by its reddish flower and longer bracts (Lejeune 1824). Dumortier (1827) later changed the rank to that of a variety. Similar to the case of the other species of Lejeune, the specimens are not dated and don't have exact localities. However, the specimen in P is from the herbarium of Lejeune directly and not from the Reichenbach exsiccata as in the previous cases. Only one other specimen has been found but the herbarium in BR has not been checked thoroughly, yet, which prevents me from typifying the name at this moment.

Veronica laxiflora Lej.

Revue de la flore des environs de Spa 4 (Lejeune 1824).

TYPE CITATION. — Belgium, Liege/Limburg?: "dans le bois taillis nommé Bois-Laihé, entre Verviers et Limbourg".

NEOTYPE. — Designated by Verloove (2017), "Belgium 622 […] distributed sub n. 2520 Rchb., Fl. Germ.", BR[BR000001085682].

ISONEOTYPES. — Designated by Verloove (2017), HAL[HAL 0135733], HBG[HBG512095*], P[P03975508*, P04051287*].

ISONEOTYPES (**designated here**). — K[K000806810!*], MPU!, TUB!

Nomenclatural note. *Veronica laxiflora* is mostly considered a hybrid of *V. spicata* and *V. longifolia*. Verloove (2017) analysed the specimens and synonymized it with *V. longifolia*. The same reasoning as for *V. alternifolia* applies.

Vicenzo Tineo (1791-1856)

Tineo was an Italian botanist, who became the second director of the Botanical Garden of Palermo in 1812 and established it as a center for botany of the Central Mediterranean (Barone *et al.* 2023). His herbarium (post-1821) forms the basis of the the Herbarium Siculum in Palermo PAL (Mazzola *et al.* 1997).

Veronica pseudoarvensis Tineo

Plantarum rariorum Siciliae 3: 34 (Tineo 1846).

TYPE CITATION. — Italy, Sicily: "Palermo al ponte dello Ammiraglio, luogo di Carnazzo; fra la Bagheria e Misilmeri alla Porcara".

LECTOTYPE (**designated here**). — "12 Maggio 1835 Porcara fra la Bagheria e Misilmeri", PAL[PAL44025!*].

ISOLECTOTYPE (**designated here**). — "Porcara prope Misilmeri Maggio 1835", PAL[PAL44021!*] .

SYNTYPES. — "Marzo 1831 S. Erasmo prope il Prete luogo di Carnazzo", PAL[PAL44016!*]; "Palermo Ponte dello Ammiraglio", FI[FI002466*].

POSSIBLE ORIGINAL MATERIAL. — "Palermo Tineo", PAL[PAL44018!*, PAL44019!*, PAL44024!*], P[P04051482*].

Nomenclatural note. *Veronica pseudoarvensis* is stated by Tineo (1846) to differ from typical *V. arvensis* in larger, intensive blue corolla (equalling the calyx, not smaller and pale blue to white) and pedicel elongated to the length of the calyx (not subsessile). Both characters can be seen in *V. arvensis* occasionally, and especially the second character can be easily seen in the specimens of Tineo. The specimens resemble in these respects *V. sartoriana* from Greece, which additionally differs from *V. arvensis* in glandular indumentum and a strongly emarginate capsule. The indumentum has not been reported by Tineo (1846) and cannot be seen in scanned specimens, but the capsules are, in fact, deeply emarginate. Thus, there seems to be some kind of continuous variation between both species, which needs to be investigated in further detail. Since the types are expected to be in PAL, we chose the specimen in PAL with correct place and time as lectotype and the specimen from FI as isolectotype. The latter specimen bears no direct indication of the date, other than given to the herbarium in 1849. Its status is, therefore, debatable. The specimen in P corresponds in all characters to those two specimens, bears the same handwriting and is also from Palermo but has no indication of the collection date, and the label is identical to other specimens in PAL. It belongs to the herbarium of Adrien de Jussieu.

Ferdinand von Mueller (1825-1896)

Ferdinand von Mueller was one of the most important early explorers of the Australian flora. Born in Germany, von Mueller was educated as pharmacist but moved in 1848 due to a hereditary lung disease to southern Australia for the better climate (Knapp 1877b). He immediately started exploring the area and collected, among many others, type specimens of *V. decorosa* in October 1851. This exploration earned him the position of governmental botanist in Melbourne (Knapp 1877b), where he soon later collected type specimens of another *Veronica* species, *V. notabilis*. In 1857, von Mueller became director of the Botanical Garden in Melbourne, which allowed him to publish new names based on plants collected in the garden and he worked with Bentham on the Flora Australiensis (Knapp 1877b). Late in his life, he even extended his interest to New Guinea (Warburg 1897). His main herbarium remained in MEL, but he sent many specimens to Europe with important sets at BM, K, P, and W (Stafleu & Cowan 1981), which makes it difficult to track all type specimens.

Veronica decorosa F.Muell.

Linnaea 25 (1852, publ. 1853): 430 (von Mueller 1852). — *Parahebe decorosa* (F. Muell.) B. G. Briggs & Ehrend., *Flora of South Australia,* 4th ed., pt. 3: 1301 (Jessop & Toelken 1986). — *Derwentia decorosa* (F.Muell.) B.G.Briggs & Ehrend., *Telopea* 5: 261 (Briggs & Ehrendorfer 1992).

TYPE CITATION. — Australia, South Australia: "In convallibus rupestribus tractus montani Flinders ranges, e.g. a monte Remarkable, ad montem Brown".

LECTOTYPE. — Designated by Briggs & Ehrendorfer (1992: 261), MEL[MEL21494*].

SYNTYPES (mentioned by Briggs & Ehrendorfer 1992). — MEL[MEL21495*], K[K001070449*].

SYNTYPES (not mentioned by Briggs & Ehrendorfer 1992). — MEL[MEL2294832*], HBG[HBG512110*], P[P03520212*, P03520213*].

Nomenclatural note. *Veronica decorosa* is an accepted species, endemic to South Australia as discussed by Briggs & Ehrendorfer (1992). It is not clear due to sparse information on the labels whether the specimens are all from the same locality. They were therefore considered syntypes by Briggs & Ehrendorfer (1992). The specimens in P are for the same reasons considered syntypes.

Veronica notabilis F.Muell.ex Benth.

Flora Australiensis. 4: 511 (Bentham & Mueller 1869).

TYPE CITATION. — Australia, "N.S. Wales. Grose river, R. Brown; Clarence River, Beckler; near Berwick, Robinson; Illawarra, A. Cunningham. Victoria. Shady places, Dandenong Ranges, and Sealer's Cove, rare, F. Mueller. Tasmania. St. Patrick's River, Gunn.".

LECTOTYPE. — Designated by Briggs & Ehrendorfer (2006: 289), "Secus rivos umbrosus montium Dandenong-range, F. von Mueller, Jan. 1853", MEL[MEL18102*].

SYNTYPES (mentioned by Briggs & Ehrendorfer [2006] as "probable isolectotypes"). — K[K001070411*], MEL[MEL18099*, MEL18101*, MEL18103*, MEL18118*], LD!

SYNTYPES (mentioned by Briggs & Ehrendorfer 2006). — MEL[MEL17933*, MEL18107*, MEL18117*], NSW[NSW5980, NSW5981).

SYNTYPES (not mentioned by Briggs & Ehrendorfer 2006). — BM[BM001040708!], MEL[MEL2256860*].

Nomenclatural note. *Veronica notabilis* is another accepted species, endemic to southeastern Australia, described by von Mueller as discussed by Briggs & Ehrendorfer (2006). Several specimens were similarly to *V. decorosa* not considered lectotypes but only probable lectotypes, which are effectively syntypes. The specimen in P (P04079566) is from the general herbarium and received only in 1885 with a label certainly dating after 1867, casting doubt on its type status.

Veronica hulkeana F.Muell.

Transactions and proceedings of the Botanical Society of Edinburgh 7: 154 (von Mueller 1863). — *Parahebe hulkeana* (F. Muell.) Heads, *Botanical Journal of the Linnean Society* 115: 82 (Heads 1994). — *Heliohebe hulkeana* (F. Muell.) Garn.-Jones, *New Zealand Journal of Botanic* 31: 328 (Garnock-Jones 1993). — *Hebe hulkeana* (F. Muell.) Cockayne & Allan, *Transactions and Proceedings of the New Zealand Institute* 57: 43 (Cockayne & Allan 1926).

TYPE CITATION. — New Zealand: "cult. in Melb. Bot. Gard".

LECTOTYPE. — Designated by Garnock-Jones (1993), MEL[MEL1594290*].

ISOLECTOTYPES (**designated here**). — GOET[GOET009573!*], P[P03520246*, P03520249*], WU[WU035646!].

Nomenclatural note. One of the species described by von Mueller based on plants grown in the botanical garden is *V. hulkeana*. Garnock-Jones (1993) lectotypified the name when recombining it under *Heliohebe* without looking for specimens in Europe. So, isolectotypes are added here.

Veronica lendenfeldii F.Muell.

Transactions of the Royal Society of Victoria, N. S. 1, 2: 29 (von Mueller 1889). — *Parahebe lendenfeldii* (F. Mueller) P. Royen, *Taxon* 19: 483 (van Royen & Ehrendorfer 1970). — *Hebe lendenfeldii* (F. Mueller) Pennell, *Brittonia* 2: 184 (Pennell 1936).

TYPE CITATION. — Papua-New Guinea: "Summit of Mt. Victoria", MacGregor.

LECTOTYPE (**designated here**). — "Mt. Victoria, New Guinea. 1889 Sir W. Maccgregor" MEL[MEL18568*].

ISOLECTOTYPES (**designated here**). — BISH[BISH1014829*], K[K001070723*, K001070726*], MEL[MEL18567*, MEL18569*, MEL18571*, MEL18572* p.p., MEL18578*, MEL18579*, MEL18580*], P[P04079580*, P04079581*].

Nomenclatural note. In 1889, von Mueller published new taxa based on the collections of William MacGregor from New Guinea, among them *V. lendenfeldii*. There are many specimens of this collection in MEL and some in other herbaria. The specimens in P are both from the general herbarium with labels of von Mueller. Among those in MEL, I expect the type to bear the name given to it by von Mueller, which is not the case in all of them. So, the lectotype is chosen because it has been labeled by von Mueller with the name, is well preserved and presents the broad-leaved form considered typical in the protologue.

Ferdinand Paul Wirtgen (1806-1870)
Wirtgen was a German pharmacist and botanist, son of Philipp Wilhelm Wirtgen, an expert on the flora of the Rhineland (Matzke-Hajek 2005). Stafleu & Cowan (1988) mention that his main collection is in BHU and was subsequently given to NHV. However, his herbarium exsiccate series "Herbarium Plantarum criticarum select. Hybr. Florae Rhenanae", to which his specimens of *Veronica* belong, is more widely dispersed with mentions in FH, NY, PC by Stafleu & Cowan (1988).

Veronica spicata L. var. ***ciliata*** F.Wirtg.

Herbarium plantarum criticarum, selectarum, hybridarum que Florae Rhenanae XII: 701 (Wirtgen 1862). Description on printed label "Cal. Lacin. Longe ciliatis" (calyx lobes long ciliate).

TYPE CITATION. — Germany, Rhineland-Palatia: "Auf Sandfeldern zu Budenheim unterhalb Mainz, *F. Wirtgen no. 701*, 27. Jul. 1862".

FIG. 11. — Lectotype of *V. spicata* var. *ciliata* (P04574562).

LECTOTYPE (**designated here**). — P[P04574562*; Fig. 11].

ISOLECTOTYPES (**designated here**). — P[P03517248*, P04906314*].

Nomenclatural note. Whereas the *V. chamaedrys* f. *arenaria no. 620* (fasc. XI; P01975923, P04574528) is only an herbarium name due to the lack of a description, his *V. spicata* var. *ciliata* is an effective publication ("Cal. lacin. longe ciliatis"; Fig. 11). The former name is found in the herbarium Drake and Edmond Camus, while the latter name originates from the Drake herbarium, which seems to have a complete set (Bureau 1904), the herbarium Edmond Camus (based on handwriting with consecutive numbers) and the Catholic University of Paris. No specimen of that name was found in NHV (Killmann & Ackermann, pers. comm.). So, the specimen from the herbarium Camus (Fig. 11) is chosen here as lectotype.

Frederick Townsend (1822-1905)
Townsend was an English landowner, botanist, and member of parliament (Stafleu & Cowan 1986). He published a few new names based on plants near his home in Hampshire and from travels, among the latter *Veronica lilacina* from the Swiss Alps.

Veronica lilacina F.Towns.

Bulletin de la Société botanique de France 25: 16 (Townsend 1878).

TYPE CITATION. — Switzerland, Wallis: "in graminosis dumosis siccioribus alpium, Bel-Alp et Riederhorn, dans le canton du Valais".

TYPE MATERIAL. — BR[BR0000035780830*] (VIII.1877); MPU! (VIII.1877); OXF! (IX.1877); P[P03804937* (VIII.1877), P04964155* (VII-VIII.1877), P04051291* (VII.1877), P04051293* (VIII.1877)].

Nomenclatural note. *Veronica lilacina* is a synonym of *V. bellidioides*, from which Townsend separated his species based on larger size, more dentate leaves, different capsule shape, and being exclusively glandular pubescent. These characters are not considered enough to warrant special recognition nowadays. The type collection is from Bel-Alp in canton Wallis of Switzerland, but Townsend also mentioned other localities based on studies of different herbaria. He advertised his new species widely (Townsend 1878), so it is not surprising that a number of specimens can still be found in herbaria. Stafleu & Cowan (1986) state Townsend's herbarium is in SLBI, with other material at C, CGE, K, NMW, OXF and WAR. I have only inspected OXF and K among these herbaria and, therefore, refrain from a typification. The specimens in P came to the herbarium via the Herbier Delacour, Camus, and two directly from Townsend to the general herbarium.

Paul Ernst Emil Sintenis (1847-1907)
Sintenis was a German pharmacist and plant collector who visited Anatolia six times between 1883 and 1894 (Baytop 2010). He collected more than 10 000 specimens located in 78 herbaria, of which more than 200 are type specimens (Baytop 2010). His original collection is in Lund (Baytop 2010). Eight names in *Veronica* are based on collections of Sintenis, one from his second Turkey trip to south Anatolia, one from his third trip, three from his fifth trip and the final three from his final trip, all to North Anatolia. Sintenis did not describe the taxa himself but provided them to others, mainly Freyn, Bornmüller, and Haussknecht (Baytop 2010), so the type specimens should in many cases looked for in their herbaria. Interestingly, the specimens of Sintenis in P are coming from various herbaria, which means that P has not received a complete set of Sintenis collections.

Veronica pectinata L. var. ***mardinensis*** Bornm.

Repertorium specierum novarum regni vegetabilis 9: 113 (Bornmüller 1910). — *V. macrostachya* var. *mardinensis* (Bornm.) Riek, *Repertorium specierum novarum regni vegetabilis*, Beihefte 79: 21, 27. (Riek 1935). — *V. macrostachya* subsp. *mardinensis* (Bornm.) M.A.Fisch. in P.H.Davis, *Flora of Turkey and the East Aegean Islands* 6: 743 (Fischer 1978).

TYPE CITATION. — Turkey, Mardin: "[…] von Sintenis ausgegebene Pflanze (iter 1888, *no. 900*) von Mardin".

LECTOTYPE (**designated here**). — "P. Sintenis: Iter orientale 1888. No. 900. *Veronica aleppica* Boiss. Kurdistania. Mardin: in declivibus montium. VI.", JE[JE00000099!*].

ISOLECTOTYPES (**designated here**). — BP[BP156230!], BR[BR0000005422678!*], E[E00326071!*], GOET!, P[P03529729*], S[S10-22001*], WU[WU070323!, WU070324!].

Nomenclatural note. *Veronica pectinata* is a variable species but predominantly western and central Anatolian. Sintenis' collection from Mardin was used by Bornmüller (1910) to publish a new variety. However, the species does not occur in southern Anatolia. Riek (1935) was the first to recognize that the specimen of Sintenis shows better correspondence with *V. macrostachya* Vahl. This is also a polymorphic species and in need of more intense investigation. The specimen in JE shows this taxonomic history. Stapf was the first to identify the specimen as *V. aleppica* Boiss., now considered a synonym of *V. macrostachya*, then Bornmüller left his suspicion of an affinity to *V. pectinata* on his label, followed by Riek's labelling of *V. macrostachya* var. *mardinensis* and Fischer's labelling of *V. macrostachya* subsp. *mardinensis*.

Veronica sumilensis Freyn & Sint.

Bulletin de l'herbier Boissier 4: 55 (Freyn 1896).

TYPE CITATION. — Turkey, Trabzon: "Armenica turcica, Sumila [near Trabzon; Sumela-monastery]: in parietibus rupium die 5. Augusto 1889 cum fructibus maturis leg. Sintenis (*exs. 1731*); [Turkey, Gümüshane] Gümüschkane: in fissuris rupium tracti Karagöldagh [= Karagöl Dagi] loco dicto Alask-Sawesi die 29. Julio 1894 etiam fructiferam leg. Sintenis (*exs. 7237*)".

LECTOTYPE (**designated here**). — (*Sintenis no. 1731*): LD[LD1218210*].

SYNTYPES. — *Sintenis no. 7237*, B[B 10 0278564!*], BP[BP349973!], BR[BR0000005422708*], JE[JE00000184!*], K!, LD[LD1218150*], P[P03520325*], PR[PR377333!], PRC!, W[W1896-983!], Z[Z28949!].

Nomenclatural note. *Veronica gentianoides* is another highly variable species. Freyn (1896) published the name *V. sumilensis* and differentiated it from *V. gentianoides* based on erect habit, smaller growth, smaller seeds, and some other characteristics. Fischer & Öztürk (1989) described the variability of the *V. gentianoides* in Turkey and *V. sumilensis* corresponds to their *V. gentianoides* var. *alpina*.

Veronica debilis Freyn

Bulletin de l'herbier Boissier 4: 56. (Freyn 1896).

TYPE CITATION. — Turkey, Gaziantep: "Antiochia, Aintab [= Gaziantep]: prope Sam die 25. Martio 1892 leg prost. Manissadjian (*exs. 993*); [Turkey, Sanliurfa] Mesopotamia, Biredschik [= Birecik]: in monte Dschebel-Taken, aprili 1889 leg. Sintenis (*exs. 129* pro *V. reuteriana*).

SYNTYPES. — *Sintenis no. 129*, B[B10 0278589!*], BP[BP349666!], BR[BR0000005422692!*, BR0000005423026!*], E[E00326075!*], JE[JE00000137!*], LD[LD1038038*], M[M0188534!*], P[P05408548*], WU[WU070337!, WU070338!, WU070339!]; (*Manissadjian 993*): M[M0188533!*].

Nomenclatural note. *Veronica debilis* is an accepted species and belongs to *V.* sect. *Acinifolia*, related to *V. syriaca*. Stapf, who first determined the species, realized that it is a novel species and provided the herbarium name *V. takensis* on some of the specimens (e.g., JE00000137, WU070338, WU070339). The specimen in Lund is determined by Freyn but does not have the locality "Dschebel-Taken" and is from May, not April 1888, whereas all other specimens seen have no indication that they were seen by Freyn. Thus, I currently refrain from typifying the name. The specimen in P is from the herbarium Chevallier.

Veronica schizocalyx Freyn & Sint.

Österreichische Botanische Zeitschrift 44: 324 (Freyn 1894). — *V. pectinata* var. *schizocalyx* (Freyn & Sint.) M.A.Fisch., *Flora of Turkey and the East Aegean Islands* 6: 745 (Fischer 1978).

TYPE CITATION. — Turkey, Kastamonu:"Paphlagoniae, Küre-Nahas, in declivibus saxosis ad Tschucha Chan die 3. Majo 1892 leg. Sintenis! (Exsic. No. 3732)".

LECTOTYPE (**designated here**). — LD[LD1227249!*].

ISOLECTOTYPES (**designated here**). — BP[BP349684!], BR[BR0000005422371!*], FI[FI015731*], GOET[GOET011131!], JE[JE00000176!*], LD[LD1224203!*], OXF!, P[P04077654*], PR[PR377328!, PR377329!], PRC[PRC453971!*], S[S10-24968*], W[W1893-3784!], WU[WU070318!*, WU070319!*], Z[Z28948!*].

Nomenclatural note. As mentioned above, *V. pectinata* is a polymorphic species and it is not clear whether this is in fact a good species or contains different lineages deserving the rank of species each. Fischer (1978) recognized three varieties, the type variety from western Anatolia, *V. pectinata* var. *glandulosa* also from western to central Anatolia and *V. pectinata* var. *schizocalyx* with pinnatifid calyx lobes and smooth seeds from northern and northwestern Anatolia. Fischer (1978) gives Bornmüller (1909) as source for the name at the varietal name. However, there the species *V. schizocalyx* of Freyn and Sintenis (Freyn 1894) is mentioned as synonym of *V. pectinata* var. *glabrescens*. Therefore, the first publication of the combination at the varietal level is Fischer (1978). Riek (1935) mentioned a specimen from B, which is likely lost.

Veronica fuhsii Freyn & Sint.

Österreichische Botanische Zeitschrift 44: 325 (Freyn 1894).

TYPE CITATION. — Turkey, Kastamuna: "Paphlagonia, Tossia, in regione subalpina montis Giaurdagh [Gavur Da.], die 17. Majo 1892 leg. Sintenis! (Exsicc. *no. 3869*)".

LECTOTYPE (**designated here**). — LD[LD1223528!*].

ISOLECTOTYPES (**designated here**). — BP[BP348696!], JE[JE00000104!*], P[P03529316*], PR[PR377327!], S[S10-22068*], W!, WU[WU070332!*], Z[Z28944!*].

Veronica bartsiifolia ("bartsiaefolia") Freyn

Bulletin de l'herbier Boissier 4: 57 (Freyn 1896).

TYPE CITATION. — "Armenia turcica, Gümüschkhane: in graminosis ad Godena, 8. Majo (*exs. 5474*); Ruphena in campsis otiosis, 13. Majo (*exs. 5474b*); prope monaster [= Manastir]. Wang 28. Majo (*exs. 5474c* et *d*); Taltaban, in campis, 3. Julio (*exs. 7576*) anni 1894 leg. Sintenis".

SYNTYPES. — *Exs. 5474*, BP[BP8348278!], GB[GB0782882!], JE[JE00000117!*], P[P04048938*], STU!; *exs. 5474b*, BP[BP03962556, BP04048959, BP04049043), JE[JE00000116!*], M[M0188543!*, M0188545!*], S[S10-21946*], STU!; labeled as *5475* but with locality of *5474b*); *exs. 5474c*, BP[BP348264 !], JE[JE00000115!*], M[M0188544!*]; *exs. 5474d*, BP[BP348263!], BR[BR0000005422999!], JE[JE00000114!*], STU!; no specimen of *Sintenis no. 7576* is known.

Nomenclatural note. *Veronica bartsiifolia* is a name given to large plants of *V. biloba* by Boissier (1879) based on specimens collected by Balansa (not found in G). However, since Boissier did not provide a description and it is given in synonymy of *V. biloba*, it has not been validly published. Freyn (1896) provided a description based on specimens collected by Sintenis. It is nowadays considered a synonym of *V. argute-serrata*, which is distinguished from *V. biloba* by being larger and having dentate bracts. However, the separation of these two species is unclear. Freyn (1896) provided five syntypes. Only one specimen, Sintenis 5474, is found in Paris. Given the many duplicates and the uncertainty of the intraspecific structure of *V. biloba* and *V. argute-serrata*, it seems premature to typify the name.

Veronica sintenisiana Gand.

Bulletin de la Société botanique de France 66: 220 (Gandoger 1919).

TYPE CITATION. — Turkey, Gümüshane: "Armenia, Gumuschkhane ad Godena (Sintenis n. 5474!)".

SYNTYPES. — JE[JE00000117*], P[P04048938*].

Nomenclatural note. Gandoger (1919) published another name (*V. sintenisiana* Gand.) based on one of these Sintenis collections (*no. 5474*) of *V. argute-serrata* but with a different description. I similarly refrain from typifying that name.

Veronica sintenisii Hausskn.ex Bornm.

Repertorium specierum novarum regni vegetabilis 10: 422 (Bornmüller 1912).

TYPE CITATION. — Turkey, Gümüshane: "Anatolia boreali-orientalis, prov. Pontus (Armenia turcica): montis Ciganadagh in pascuis alpinis (Szandschak Gümüsch-khane); 23. V. 1894, leg. Sintenis (Iter Orientale, 1894; *no. 5584*).

LECTOTYPE (**designated here**). — "P. Sintenis: Iter orientale 1894. No. 5584. *Veronica sintenisii* Hskn. Armenia turcica. Szandschak Gümüschkhane. Cigandagh, in pascuis alpinis. 23. V", B[B100278595!*].

ISOLECTOTYPES (**designated here**). — BP[BP349838!, BP349839!], HBG[HBG512101*], JE[JE00000107!*, JE00000110!*], K[K001070203*], L[L0700159*], LD[LD1214596!*], P[P04077590*, P04077593*, P04077594*], PR[PR377326!], PRC[PRC453979!, PRC453980!, PRC453984!], S[S10-25576*], STU!, US[US00324230*], W!, WU!

Nomenclatural note. The final name based on Sintenis' collections is *V. sintenisii*, a name provided by Haussknecht and published by Bornmüller (1912), who was not sure about its affinities and suggested an affinity to *V. thymifolia* and *V. filicaulis* (synonym of *V. kurdica*). Fischer (1978), however, synonymized the name with *V. baranetzkii*, which is closely related to *V. armena* and *V. orientalis* (Doostmohammadi *et al.* 2022). The group needs further, more-detailed investigations. The lectotype is chosen from the herbarium Bornmüller in B.

Joseph Bornmüller (1862-1948)

Joseph Bornmüller was a German botanist and gardener who worked at the herbarium in Jena. He was the first curator of the Herbarium Haussknecht, which houses the collections of Haussknecht from the Near East (Baytop 2009). Baytop (2009) and Wagenitz (1960) give an overview of Bornmüller's collection trips. Bornmüller made his first trip to the Near East in 1887. Afterwards he worked in Belgrade Botanical Gardens for two years. In 1889-1890 he collected in north-central Turkey, among others *V. gentianoides* var. *pontica*. His next trip was in 1892-1893 to Iran and Mesopotamia, where he collected *V. biloba* var. *glandulosissima*, *V. pseudodivaricata*, *V. intercedens* and *V. aleppica* var. *schizostegia*. In 1897, Bornmüller collected in Syria and Palestine, among others *V. glaberrima* var. *glanduligera*. In 1899, he returned to northcentral Anatolia and travelled westwards, collecting *V. pectinata* var. *villosa* near Bursa, before turning southeastwards to Konya, where he sampled *V. pectinata* var. *glandulosa*. Bornmüller travelled a second time to Iran in 1902, collecting *V. kurdica* f. *inciso-crenata*, *V. kurdica* f. *major* and *V. chionantha*. He continued to travel across Europe and the Near East collecting until 1929. Among his about 20,000 collections from Anatolia, 189 types from the Turkish Flora are recorded. Bornmüller's herbarium is in Berlin (Wagenitz 1960), but Stafleu & Mennega (1993) record that his specimens are distributed across 36 herbaria, and Baytop (2009) state another five herbaria. Here, I report specimens from two more herbaria (BR, MPU). The 18 specimens in Paris are mainly from the general herbarium, partly from the herbarium Th. Delacour (one), Drake (three), and Cosson (two), further stressing the wide distribution of Bornmüller's collections.

Veronica gentianoides Vahl var. *pontica* Bornm.

Mittheilungen des Thüringischen Botanischen Vereins 20: 41 (Bornmüller 1905).

TYPE CITATION. — Turkey, Siwas: "Prov. Pontus: Siwas, in pratis alpinis montis Yildiss-dagh, 20-2100 m s. m., 6. VI. 1890 legi (Bornm. No. 1659)".

LECTOTYPE (**designated here**). — "J. Bornmüller, plantae Anatoliae orientalis 1890 No. 1659 […] Pontus australis: in pratis alpinis montis Yildiss-dagh inter Siwas et Tokat. Alt. 20-2100 m s.m. leg d. 6/7 VI. 1890", JE[JE00002305!*].

ISOLECTOTYPES (**designated here**). — B[B 10 0278584*, B 10 0278583*], BP[BP349528!, BP349359!], FI[FI015712*], GB[GB0783407!], HBG[HBG512103*], K!, LD[LD1015877!], P[P03529819*, P[P03962539*], PR[PR377334!], STU!

Nomenclatural note. *Veronica gentianoides* is widespread in the Caucasus and northern and eastern Turkey reaching Crimea in the North and northwestern Iran in the east. It forms a variable species aggregate and it is not clear, which taxa actually form separate species. Bornmüller (1905) separated *V. gentianoides* var. *pontica* based on the densely glandular indumentum, obtuse leaves and pedicels being shorter than bracts. On his specimens, Bornmüller even considered it a separate species, calling it *V. pontica* Hausskn. & Bornm. (a later homonym of *V. pontica* (Rupr.) Wettst.) or *V. longibracteata* Hausskn. & Bornm. (a later homonym of *V. longibracteata* Link). Why Bornmüller (1905) settled for the rank of variety in the publication is unclear. On the specimen in Jena, there is a note of Bornmüller to Haussknecht that he collected 50-60 sheets, of which 11 are known to me and four additional were stated by Fischer & Öztürk (1989). Apparently, collecting such a large number of specimens took some time since the specimens in Paris (as most type specimens) were collected a day later than indicated in the publication. Even on the specimen in JE, the date is given as 6/7 June 1890. The name was synonymized with the newly described *V. kopgecidiensis* from Northern Turkey by Fischer & Öztürk (1989), who mentioned specimens of this collection from G, W, WU, and Z, which have not been found.

Veronica biloba L. var. *glandulosissima* Bornm.

Beihefte zum botanischen Centralblatt 22: 112 (Bornmüller 1907a).

TYPE CITATION. — Iran, Kerman: "Mt. Kuh-i-Dschupar [= Kuh-i-Jupar, *c.* 29°55.8'N, 57°11.5'E], 7.V.1892 leg (Bornm. Exsicc. No. 5017; edit. 1894)".

LECTOTYPE (**designated here**). — "J. Bornmüller: Iter Persico-turcicum 1892-93 No. 5017 […] Persia, prov. Kerman: in monte Kuh-i-Dschupar. 28-3200 m.s.m. 1892. V. 7. Legit et determ.: J. Bornmüller", JE[JE00000136!*].

ISOLECTOTYPES (**designated here**). — BP[BP348273!], BR[BR0000005422333!*], HBG[HBG512112*], K[K001070272*], OXF!, P[P04048967*], PRC[PRC453974!*], STU!, WU!

Nomenclatural note. *Veronica biloba* is a polymorphic annual species occurring from Lebanon and southern Turkey to Mongolia. The indumentum is variably eglandular and/or glandular and hexaploid and octoploid populations are known (Albach 2008b). The closely related *V. argute-serrata*, occurring basically from the same region with the same variation in indumentum, is distinguished from *V. biloba* by dentate bracts. Based on this character, Fischer (1981) synonymized *V. biloba* var. *glandulosissima* with *V. argute-serrata*. However, this character is influenced by the environment. Own experiments demonstrated that seeds from classical *V. biloba* produce plants with dentate bracts when grown in nutrient-rich soil with sufficient water. Therefore, *V. biloba* and *V. argute-serrata* are likely to be synonymized after more detailed investigation and variants with divergent characters such as strong glandular indumentum are likely to be split.

Veronica pseudodivaricata Parsa

Kew Bulletin 1948: 222 (Parsa 1948).

TYPE CITATION. — Iran, Kerman: "Kerman, Kuh-i-Dschupar [Kuh-i-Jupar, *c.* 29°55.8'N, 57°11.5'E], 3300 m., 7 May 1897, Bornmüller 5023".

LECTOTYPE (**designated here**). — "Bornmüller (Iter persico-turcicum) *no. 5023* (as *V. speluncicola*)", K[K001070257*].

ISOLECTOTYPES (**designated here**). — BP[BP349841!], HBG[HBG512100*], JE[JE00000175!*], OXF!, P[P04077705*], PRC!, STU!, W[W1897-0001251!], WU!

Nomenclatural note. *Veronica pseudodivaricata* has been described by Parsa (1948) from southeastern Iran. It is synonymized with *V. rubrifolia* described from northern Iran, a species reported from the Sinai Peninsula to western China, although morphological differences between plants from southern and northern Iran are known (Fischer 1981). If the southern populations would be split at the species level, *V. pseudodivaricata* would be the valid name for that taxon. Bornmüller labeled the type specimens mostly (incl. K, P, but not JE) with the name "*V. speluncicola* Bornm. sp. n." but the name has never been validly published. Parsa certainly saw the specimen from K, but it is not clear, which other specimens he saw. Therefore, the specimen from Kew is used as lectotype and the other specimens as isolectotype.

Veronica intercedens Bornm.

Beihefte zum botanischen Centralblatt 22: 112 (Bornmüller 1907a).

TYPE CITATION. — Iraq, Arbil: "Kurdistania (Assyria orientale): in montis Kuh-Sehfin (Kuh-Sefin) regione superiore, östlich von Erbil, 15-1600 m, Bornmüller (Iter Persico-turcicum) *no. 1638*, 12. May 1893".

LECTOTYPE. — Designated by Gabrieljan in Takhtajan (1987: 236), W!

ISOLECTOTYPES. — Designated by Gabrieljan in Takhtajan (1987: 236), LE[LE00017165!*], WU.

ISOLECTOTYPES (**designated here**). — BP[BP348889!], BR[BR0000005423057!*], HBG[HBG512105*], K!, LD[LD1226653!*], P[P03529518*], Z[Z28945!*].

Nomenclatural note. *Veronica intercedens* is a species related to *V. cardiocarpa* but clearly morphologically distinct. The species was lectotypified by Gabrieljan (Takhtajan 1987), but he missed several isolectotypes. Therefore, the lectotypification is amended here.

Veronica aleppica Boiss. var. *schizostegia* Bornm.

Repertorium specierum novarum regni vegetabilis 9: 113 (Bornmüller 1910). — *V. aleppica* subsp. *schizostegia* (Bornm.) Bornm. *Beihefte zum botanischen Centralblatt* 28: 480 (Bornmüller 1911). — *V. schizostegia* (Bornm.) Doostm. & Bordbar Biology 11: 639 (Doostmohammadi *et al.* 2022).

TYPE CITATION. — Iraq, prov. Arbil: "Kurdistania Turcica (Assyria): in monte Kuhi-Sefin supra pagum Schaklava, 1000 m. s. m. (6. V. 1893 legi; exsicc. *no. 1628*). — Kurdistania persica: In monte Pir-Omar-Gudrun (VI. 1867, leg. Haussknecht) et [Iran, prov. Kerman] inter Kerind et Kermanschah/Gawarreh in monte Kuh-i-Dalahu (9. VI. 1906, leg. Th. Strauss".

LECTOTYPE. — Designated by Fischer (1981); second-step lectotype designated by Doostmohammadi *et al.* (2022: 22), B[B 10 0278579!].

ISOLECTOTYPES. — Designated by Doostmohammadi *et al.* (2022: 22), B[B 10 0278578!], BP[BP347767!], BR[BR0000005423033!], JE[JE00000152!], OXF!, P[P03529531*, P03529532*], W[W1895-1676!], WU[WU029659!].

Nomenclatural note. *Veronica schizostegia* was initially considered by Bornmüller to be a distinct species, which is the name under which the type material can be found in herbaria, but he changed his mind in his publications and called it either a variety (Bornmüller 1910) or subspecies of *V. aleppica* (Bornmüller 1911). The taxon was later (Riek 1935) considered to be a synonym of *V. macrostachya*. However, phylogenetic analyses of DNA sequence data revealed that these plants from Kurdish parts of Iraq and Iran do not form a monophyletic group with Anatolian and Levantine specimens of *V. macrostachya*, thus, confirming Bornmüller's initial thought. Bornmüller (1910) stated three collections of three collectors for his name but only two specimens of his own collection are in P.

Veronica glaberrima Boiss. & Balansa var. ***glanduligera*** Bornm.

Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien 48: 614 (Bornmüller 1898).

TYPE CITATION. — Lebanon: "Sannin, an Bachrändern der subalpinen und alpinen Region, 1800-2300 m (*exs. 1219*)".

LECTOTYPE (**designated here**). — "J. Bornmüller: Iter Syriacum 1897 No. 1219 *Veronica conferta* Boiss. ß. Glanduligera Bornm. Libani in excelsis jugi Sanin. 22-2300 m. s. m. 1897 VI. 16. leg. et determ. J. Bornmüller", JE[JE00009351!*].

ISOLECTOTYPES (**designated here**). — BP[BP348462!], BREM!, GB[GB0783414!], HBG[HBG512109*], K[K001070258!], OXF!, P[P03529409*, P03529410*, P03529412*], PRC[PRC453963*], W[W1898-0004982*], Z[Z51386!*].

Nomenclatural note. The small annual species of *V.* sect. *Acinifolia* have caused a lot of problems due to the reduced habit (see for example above). Bornmüller (1898) described *V. glaberrima* var. *glanduligera* from Lebanon without discussion of its affinity. On the type material, though, he used the name *V. conferta* var. *glanduligera*. Fischer (1972) separated this variety from *V. glaberrima* s.str. and synonymized it under *V. nudicaulis*. Later, Fischer (1978) synonymized *V. glaberrima* with *V. pusilla* and *V. nudicaulis* with *V. hispidula*. The two species are well-separated phylogenetically and by seed ultrastructure (Muñoz-Centeno *et al.* 2006) but still are difficult to separate based on herbarium material. Therefore, Bornmüller's type material would ideally be investigated in detail.

Veronica pectinata L. var. ***villosa*** Bornm.

Beihefte zum botanischen Centralblatt 24: 484 (Bornmüller 1909).

TYPE CITATION. — Turkey, Bursa: "bei Mudania [= Mudanya] in Bithynien […] (Bornm. No. 5378, 5379)".

LECTOTYPE (**designated here**). — "J. Bornmüller: Iter Anatolicum tertium 1899 No. 5379. *Veronica pectinata* L. var. *villosa* Bithynia: Mudania in saxosis 1899 V. 14. leg. et determ. J. Bornmüller", B[B 10 0278569*].

ISOLECTOTYPES (**designated here**). — B[B 10 0278570* without number but based on date], BREM!, JE[JE00000156!*], P[P03529907*, P03529920*], STU!

SYNTYPES. — "J. Bornmüller: Iter Anatolicum tertium 1899 No. 5378 *Veronica pectinata* Bithynia: Mudania, in olivetis. 1899 V. 11 leg. et determ. J. Bornmüller", B[B 10 0278571*, B 10 0278572*], BP[BP349581!], P[P03529937*].

Nomenclatural note. Bornmüller (1909) described the variation of indumentum in *V. pectinata* and described the two extremes as *V. pectinata* var. *glabrescens* and var. *villosa* based on his collections but only specimens of the latter are in Paris. Of the two collections, *no. 5378* and *no. 5379*, stated by Bornmüller in the protologue, *no. 5379* is chosen as lectotype, because the specimen in JE is the only one labelled var. *villosa* by Bornmüller. *Bornmüller no. 5378* in B is labelled as "f. *tomentosa*".

Veronica pectinata L. var. ***glandulosa*** Riek ex M.A.Fisch.

Plant Systematics and Evolution 128: 296 (Fischer 1977a).

TYPE CITATION. — Turkey, Konya: "Turcia, (B3) provincia Iconii (Konya), Lycaonia veterum, in saxosis et rupestribus montis Sultan Dag Sultan Dag ad Aksehir altit. 1000-1100 m s. m.; die 14. Jun. 1899 leg. J. Bornmüller 5381".

HOLOTYPE. — JE[JE00000157!*].

ISOTYPES. — W not found, WU[WU038199!*].

ISOTYPES (not mentioned in the protologue). — BREM!, P[P03529908*, P03529936*], STU!

Nomenclatural note. Later Riek (1935) mentioned the existence of glandular types of *V. pectinata* and provided the name but not a formal description. Fischer (1977b) validly published the name and typified it with Bornmüller's collection *no. 5381* from Inner Anatolia. However, Fischer (1977b) did not mention the existence of further isotypes in BREM and P (one from the general herbarium, one from Cosson/Durand).

Veronica kurdica Benth. f. ***major*** Bornm.

Bulletin de l'herbier Boissier 7: 971 (Bornmüller 1907b).

TYPE CITATION. — Iran, Mazandaran: "In regione alpina montis Demawend [= Damavand], 30-3500 m. s. m. (17.VII. 1902; no 7818 et 7819; c. fruct.)". — "In montibus prope Paschinar, 5-600 m. s. m. (12. V. 1992; no 7813, c. fruct.)".

LECTOTYPE (**designated here**). — "J. Bornmüller: Iter Persicum alterum. 7818 […] Persia borealis: m. Demawend in regione alpina 30-3500 m. s. m. 1902. VII. 17. Leg. J. et A. Bornmüller", P[P03529306*].

Nomenclatural note. Bornmüller (1907b) also described the variation of *V. kurdica*, providing three intraspecific taxa (*V. kurdica* f. *major*, f. *inciso-crenata*, f. *nivalis*). Of these, only the first and last form were considered to belong to *V. kurdica* by Fischer (1981) with *V. kurdica* f. *inciso-crenata* being synonymized with *V. orientalis*. Given the polyphyly of *V. orientalis* (Sonibare *et al.* 2014; Doostmohammadi *et al.* 2022) it is not clear, though, to which clade of *V. orientalis* this taxon belongs. Bornmüller (1907b) states three of his collections under *V. kurdica* f. *major* and *V. kurdica* f. *inciso-crenata*, each, and five under *V. kurdica* f. *nivalis*. Surprisingly, none of the latter has been found, yet. Of the three collections of *V. kurdica* f. *major* only one, and of *V. kurdica* f. *inciso-crenata* only two have been found so far and only one each has been found in P with the Paris specimen of *V. kurdica* f. *major* being the only one specimen of this taxon at all. The two collections of *V. kurdica* f. *inciso-crenata*, *no. 7814* and *no. 7823*, differ considerably in leaf morphology with *no. 7814* having incised leaves all the way up to the vegetative apex, whereas *no. 7823* better conforms to the protologue with ovate or oblong and incised leaves below only.

Veronica kurdica Benth. f. *inciso-crenata* Bornm.

Bulletin de l'herbier Boissier 7: 971 (Bornmüller 1907b).

TYPE CITATION. — Iran, Teheran: "Alpium Totschal [= Tochal] in saxosis prope Imam-sade-Davud, 3000 m.s. m. (29. V. 1902; *no. 7824*)". — "In valle Dos-derre et in jugo Ladd supra Sheheristaniek [Shahrestanak], 24-3000 m.s.m. (4. VI. 1902; no 7823.)". — "In montibus supra Rudbar [= Roodbar] vallis fluvii Sefid-rud, 300-500 m.s.m. (7. V. 1902; *no. 7814*)".

LECTOTYPE (**designated here**). — "Iter Persicum alterum. 1902 No. 7823 […] Persia borealis: m. Elburs, in alpinis Totschal, Ladd. C. 26-3000 m. s. m. 1902. VI. 4. leg. J. et A. Bornmüller", P[P03529312*].

ISOLECTOTYPES (**designated here**). — BREM!, MPU!, STU!

SYNTYPE. — *Bornmüller no. 7814*, JE[JE00000113!*].

Veronica chionantha Bornm.

Bulletin de l'herbier Boissier 7: 972 (Bornmüller 1907b). — *V. leucantha* Bornm. (non *V. leucantha* Helm), *nom. inval.* (Art. 30.1; herbarium name).

TYPE CITATION. — Iran, Alborz: "Elburs occident. in jugo Gerdene-Bary ad locum dictum 'Assalek' dititonis Asadbar [= Azadbar], in fissuris rupium verticalium, 2800-2900 m. s. m. (26. VI et 2. VII 1902; no 2825 sub nomine *V. leucantha* […])".

LECTOTYPE (**designated here**). — "J. Bornmüller: Iter Persicum Alterum. 1902 No. 2825 *Veronica leucantha* Bornm. sp. n. Persia borealis: montium Elburs occ., in jugo Gerdene Bary ad locum Assaleh ditionis Asadbar, ad rupes in fissuris 2900 m. s. m. 1902 26. VI u. 2. VII leg. J. et A. Bornmüller", B[B 10 0278590*].

ISOLECTOTYPES (**designated here**). — B[B 10 0278592*], BP[BP348992!], JE[JE00000138!*], K[K001070251*], P[P04048046*], STU[STU-PH-2011-079005!*], W[W1904-0001398A], WU[WU030434!, WU070340!].

Nomenclatural note. In the same publication, Bornmüller (1907b) published *V. chionantha*, a distinctive alpine species, endemic to the Alborz Mountains. The specimen in B has been chosen as lectotype since it is clearly the one in the figure published along with the first description of the species.

Frère Sennen (Étienne Marcellin Granier-Blanc) (1861-1937)
Frère Sennen was a French clergyman with a great interest in botany, becoming eventually vice-president of the French Botanical Society (de Gelcen 1937). In 1904, he crossed the Pyrénées and became director of a school in Catalonia (de Gelcen 1937). Shortly after that he started close interaction with Spanish botanists, like Carlos Pau, and other clergymen, like Frere Bianor (Mallorca) and Frere Elias (Castille) (Vereecke 2022). His herbarium is in BC but his exsiccate series "Exsiccata Plantes d'Espagne", which he started in 1907, is widespread (Stafleu & Cowan 1985).

Veronica prostrata L. var. *sennenii* Pau

Boletin de la Sociedad Aragonesa de Ciencias Naturales 6: 28 (Pau 1907). — *V. senneni* (Pau) M.M.Mart.Ort. & E.Rico, *Anales Jardin Botanico Madrid* 57: 477 (Martinez-Ortega & Rico 2000).

TYPE CITATION. — Spain, Burgos: "Obarenes (Sennen et Elias).

LECTOTYPE. — Designated by Martinez-Ortega & Rico (2000): 477): "Castille: Obarenes, prairie 1906 30/5", BC[BC829724*].

ISOLECTOTYPE. — Designated by Martinez-Ortega & Rico (2000: 477), BC[BC829723*].

ISOLECTOTYPE (**designated here**). — P[P03838566*].

Nomenclatural note. *Veronica prostrata* var. *sennenii* was described by Pau (1907) based on a collection by Sennen and Elias. AFLP analyses suggested that it is an auto-octoploid derivative of *V. satureiifolia* (Martínez Ortega *et al.* 2004). The specimen in P is in the general herbarium but does not belong to the exsiccata series, which started a year later (Stafleu & Cowan 1985).

Veronica polita Fr. var. *dentata* Sennen & Pau

Boletin de la Sociedad Aragonesa de Ciencias Naturales 6: 28 (Pau 1907).

TYPE CITATION. — Spain, Burgos: "Bujedo in hortis (Sennen et Elias)".

LECTOTYPE (**designated here**). — "*F. Sennen no. 472* […] Castille: Bugedo, champs et jardins 1906 4 IV Fre Elias" BC[BC45494*].

ISOLECTOTYPES (**designated here**). — DR!, GB[GB0782630!], H[C.336235*], P[P04056444*, P04214312*].

Nomenclatural note. *Veronica polita* var. *dentata* was described by Sennen and Pau (Pau 1907) based on plants collected by Pau and frere Elias in Castille. It was suggested to differ from *V. polita* by the ovate, obtuse calyx lobes with toothed margin. The original specimens clearly belong to *V. agrestis*, which is also widespread in Spain but typically less common. So, Sennen and Pau may not have been as familiar with this species. The obtuse calyx lobes are typical for *V. agrestis*, whereas the toothed sepal is very rare for it and all related species. It can be clearly seen on the lectotype in BC but not the other specimens. The specimens in P come from the herbarium of the university in Caen and the herbarium of abbé Toussaint, suggesting a link among botanically interested priests.

Veronica teucrium L. var. *catalaunica* Sennen & Pau ex Watzl

Abhandlungen der zoologisch-botanischen Gesellschaft Wien 5: 48 (Watzl 1910).

TYPE CITATION. — Spain, Gerona: "Catalogne, Fortià et Cabanas, pelouses, Sennen (Pl. d'Esp., P, D) *no. 336*, May-Jun. 1907".

LECTOTYPE. — Designated by Andrés Sanchez *et al.* (2008: 81); see also Martínez Ortega (1999) for more explanations on the specimens), W[W1908-0002588!].

ISOLECTOTYPES. — Designated by Andrés-Sánchez *et al.* (2008: 81): BC[BC831933, BC45083], BM, MA[MA425319], [RNG], WU.

ISOLECTOTYPES (**designated here**). — BR[BR0000035771166*], DR!, FI[FI015711*], JE[JE00001940!*, JE00001941!*], K[K000806843!*],

LD[LD1306507*, LD1361445*], LY[LY0467576*, LY0467577*, LY0467578*], MPU[MPU027932!], P[P03975540*, P04056568*], PI[PI058445*], [SEV83574, not seen), U[U.1723437*]. The specimen CAS27371 is not a lectotype despite the correct label but the plants on the sheet are *V. longifolia*.

Nomenclatural note. *V. teucrium* var. *catalaunica* was described by Watzl (1910) based on specimens collected by Sennen in Catalonia. It is suggested to differ from typical *V. teucrium* in short grey indumentum. Watzl (1910) mentioned a similarity with *V. prostrata* despite growing where only *V. orsiniana* and *V. teucrium* are known. Andrés-Sánchez *et al.* (2008) synonymized it with *V. orsiniana* without further comments, but this is considered valid here based on habit and locality.

Veronica bianoris Sennen

Boletín de la Sociedad Ibérica de Ciencias Naturales 29, 12: 85 (Sennen 1930).

TYPE CITATION. — Spain, Baleares: "Baléares: Torrent entre Palma et Pont d'Inca. Leg. F. Bianor".

LECTOTYPE (**designated here**). — "F. Sennen […] No. 3126 […] Baléares: Torrent et fossés, entre Palma et Pont d'Inca. 1917-28-VIII Leg. Fre. Bianor", MA[MA112388*].

ISOLECTOTYPES (**designated here**). — BC[BC45242*], BM (Sellers 1983), BR[BR0000026250403V*], LY[LY0468008*], MA[MA112625; Martínez Ortega, pers. comm.), P[P03838844*, P05109696*], [RNG; Martínez Ortega, pers. comm.], [W; Martínez Ortega, pers. Comm.].

Nomenclatural note. *Veronica bianoris* was published by Sennen (1930) based on a plant from Mallorca collected by frère Bianor, suggested to be close to *V. anagalloides*, with which it is nowadays synonymized. It is not clear from the initial publication, how Sennen differentiated *V. bianoris* from *V. anagalloides.* The type material looks rather typical of *V. anagalloides*.

Veronica maresii Sennen

Boletín de la Sociedad Ibérica de Ciencias Naturales 29: 86 (Sennen 1930). — *V. beccabunga* var. *maresii* (Sennen) O.Bolós & Vigo, *Collectanea Botanica* 14: 98 (de Bolós & Vigo 1983).

TYPE CITATION. — Spain, Baleares: "Torent entre Palma et Pont d'Inca. Leg. F. Bianor".

LECTOTYPE (**designated here**). — "F. Sennen […] No. 3127 […] Baléares: Torrent entre Palma et Pont d'Inca. 1917-28-VIII Leg. Fre. Bianor", BC[BC45209*].

ISOLECTOTYPES (**designated here**). — BC[BC831985], LY[LY0472879*], P[P03838845*], W[W1922-15184!].

Nomenclatural note. *Veronica maresii* was described by Sennen (1930) from the Baleares and is usually considered a synonym of *V. beccabunga* (de Bolòs & Vigo 1983). However, the description with upper stem leaves sessile and lower ones petiolate is characteristic for *V. anagallis-aquatica*. Also, pedicels longer than bracts and sepals longer than capsule are atypical for *V. beccabunga* and suggest that it is a strongly branched, ascending form of *V. anagallis-aquatica*. This is confirmed by the type specimens.

Mikhail Grigorevich Popov (1893-1955) and Alexei Ivanovich Vvedensky (1898-1972)

Popov graduated from St. Petersburg University in 1917 and then taught in Saratov and Tashkent (Kovtonyuk & Belyaeva 2015). Vvedensky was a student of Popov, born in Penza, now in the Volga Federal District, where he became director of the herbarium in 1919 but in 1920 joined Popov in Tashkent for establishing educational institutions in Uzbekistan and explored the largely unknown flora of the region (Khassanov *et al.* 2022). Whereas Popov left Tashkent in 1927 for Georgia (Kovtonyuk & Belyaeva 2015), Vvedensky stayed in Uzbekistan. Vvedensky became head of the herbarium in the Botanical Garden of the university and established a journal publishing the main findings on the flora there (Khassanov *et al.* 2022). His herbarium TAK was later united with that of the Academy of Sciences of the Uzbek SSR. Vvedensky established an exchange of duplicates with Soviet herbaria, but also W, P, BM, and K (Khassanov *et al.* 2022). Later, he became associate professor in 1935, revised several genera for the Flora of SSR (but not *Veronica*) and Flora of Uzbekistan (including *Veronica*; Vvedensky 1961; Khassanov *et al.* 2022). Popov and Vvedensky published four species of *Veronica* including *V. nanella* Vved., which is not present in P, and *V. mogoltavica* Popov ex Vved., which is a replacement name. I have been unable to find a direct reference to the herbarium TASH in the publication of *V. ferganica*, so it is considered a lectotype here. The specimen of *V. ferganica* in P (P03529338) has been collected after publication from the locus classicus, as have specimens in MA and BR. Only the specimen of *V. stylophora* is type material. It was sent to the general herbarium after publication. Thus, it was not mentioned in the protologue, similar to the other 14 other isotypes known.

Veronica ferganica Popov

Trudy Turkestanskogo Gosudarstvennogo Universiteta 4: 64, fig. 20 (Popov 1922).

TYPE CITATION. — Uzbekistan, Fergana: "In collibus lapidosis montium Sary-tau (M. G. Popov)".

LECTOTYPE (**designated here**). — "Slantsevyye kholmy Sary-tau 1920-VI-25 M. Popov", TASH[TASH003023*].

Veronica stylophora Popov ex Vved.

Bulletin de l'Université de l'Asie centrale 11 (supplément): 21 (Vvedensky 1925).

TYPE CITATION. — Uzbekistan, Samarkand: "Distr. Katta-Kurgan. Ad declivia argillosa in elevatione Zindan-tau haud procul a p. Mussakak, Popov (Exs. Herb. Fl. As. Med.) *no. 167*, 1925. V. 6. fl. et fr.".

HOLOTYPE. — TASH[TASH003028*].*

Isotypes (not mentioned in protologue). — B[B 10 0278565!], BC[BC83337*], BP[BP349972!], CAS[CAS27372*], K[K001070337*], LE[LE, 3 sheets, Kosachev pers. comm.], MA[MA112261!*], MW[MW0594708*], NY[NY00130763!*], P[P03520323*], S[S10-25551*], TUB!, W[W1927-0011498!].

Gheroghe Bujorean (1893-1971) and Erasmus Julius Nyárády (1881-1966)

Bujorean was a Hungarian-Romanian ecologist who studied in Cluj and later became professor for agronomy in Timisoara. Nyarady was a Hungarian-Romanian botanist who first became a teacher and then curator of the Cluj-Napoca Botanical Garden. His main herbarium is, therefore, at CL (and CLA, CLCB) with other material widely spread (A, BP, DBN, E, GB, GH, W, but not P) according to Stafleu & Cowan (1981).

Veronica crinita Kit. f. *viridis* Nyár.

Buletinul Grădinii Botanice şi al Muzeului Botanic dela Universitatea din Cluj 6: 97 [p. 73 in old pagination] (Nyárády 1926).

Type citation. — Romania, Caras-Severin: "In fissuris calcareis Prolaz, supra balneas Baile Herculane-Thermas Herculis. Alt. cca 450-500 m. s. m., G. Bujorean [Schedae ad "Flora m Romaniae Exsiccatam" *no. 676*], 15. May 1922".

Original material. — K[K000806786*, K000806787*], P[P04219306*].

Nomenclatural note. In 1922, when Bujorean collected the type material of *V. crinita* f. *viridis*, he was PhD student and Nyárády had just became curator of the Botanical Garden in Cluj. *Veronica crinita* f. *viridis* is a form of *V. crinita* that is less hairy and has small leaves. Material probably arrived via direct exchange with Cluj in the general herbarium P in 1927. A lectotypification is not possible without an inspection of the herbarium CL.

René Maire (1878-1949) with René Verriet de Litardière (1888-1957) and Louis Emberger (1897-1969)

René Maire is likely the most influential botanist for the flora of North Africa. In 1911, he obtained the chair of botany in Algier specializing in cytology of plants and mushrooms but suffered an eye infection in World War I, causing him to specialize on phytogeography afterwards (Maire 2017). He explored large parts of Northern Africa, described more than 2500 taxa, and attempted to write the Flore de l'Afrique du Nord, which was finished by colleagues (Maire 2017). Maire worked together with many colleagues, among them René Verriet de Litardière and Louis Emberger. Litardière was a French botanist, first in Lille (1921-1931) and subsequently in Grenoble (Stafleu & Cowan 1981). He was a specialist for the flora of Corse but was in contact with Maire, likely to find similarities in the floras of Corse and Northern Africa.

Emberger was a French botanist, who worked in Montpellier (1921-1925), Rabat (1925-1936) and back in Montpellier (1937-1968). During his time in Rabat, he collected together with Maire plants belonging to *V. rosea*.

Veronica repens DC. var. *cyanea* Litard. & Maire

Mémoires de la Société des sciences naturelles du Maroc 4: 17 (Litardière & Maire 1924).

Type citation. — "In ditionis Ourika jugo Tachdirt, ad alt. 3150 m.; in ditionis Reraya et ditionis Tifenout scaturiginosis infra jugum Tagherat, ad alt. 3.200-3.350 m. (Lit. & Maire, 1922); in ditionis Reraya valle amnis Ouenkrim, ad alt. 2.900-3.180 m. ; in ditionis Tifenout valle amnis Ifni, ad alt. 3.150-3.250 m., et valle amnis Quelga 3.020-3.180 m.; in ditionis Goundafa valle amnis Agoundis, 3.320 m. (Lit. 1923)".

Lectotype. — Designated by Martinez-Ortega & Rico (2001b): "M. Grand Atlas, Ourika, Tizi-n-Tachdirt !, 3000-3200 m, 26.vii.1922, Dr. R. Maire" MPU[MPU000301!*].

Isolectotype (**designated here**). — P[P00083132*].

Syntypes. — "M. Grand Atlas, Reraya: […] Tizi-n-Tagherat, 3200 m […] 21.7.1922 Dr. M. Maire […] 3300-3350 m 22.7.1922", MPU[MPU000302*, MPU000303*]; "Litardière […] 1923 […] Reraya: Ht. vallée du l'acif Ouenkrim, […] 24 juillet", MPU[MPU000304*].

Nomenclatural note. The excursions of Maire, Verriet de Litardière and Emberger to Morocco in 1922 resulted in the description of *V. repens* var. *cyanea*, considered a vicariant of the Corsican *V. repens*, and in 1926 in the collection of *V. chartonii* Litard. & Maire.

Veronica chartonii Litard. & Maire

Mémoires de la société des sciences naturelles du Maroc 26: 31 (Litardière & Maire 1930).

Type citation. — Morocco, Souss-Massa-Draa: "Hab. inter lapides calcareos labentes in editis alpinis Atlantis Majoris: in ditionis Glaoua monte Anremer [= Djebel Anr'emer], supra lacum, ad alt. 3200-3600 m, junio et julio florens".

Lectotype. — Designated by Andrés Sánchez *et al.* 2008: 83): "R. Maire […] 1926 […] In Atlantis majoris monte Anremer […] 3200-3500 m […] 27. julii", MPU[MPU002409!*].

Isolectotype. — Designated by Andrés Sánchez *et al.* (2008: 83), RAB[RAB032125*].

Isolectotypes (**designated here**). — P[P00083128*], G[G00439684*], S[S10-21973!*].

Veronica rosea Desf. var. *virgata* Emb. & Maire

Mémoires de la Société des sciences naturelles du Maroc 21-22: 44 (Emberger & Maire 1930). — *V. rosea* subsp. *virgata* (Emb. & Maire) Dobignard & D.Jord., *Saussurea* 18: 93 (Dobignard & Jordan 1987).

Type citation. — Morocco, Oriental: "Hab. In callitrietis et quercetis Atlantis Medii, solo calcareo et margaceo, ad alt. 1.000-1.300 m: propre Castellum Pinorum haud procul ab oppido Ahermoumou; prope castellum Arourirt (Emberger & Maire, 1927)".

Lectotype. — Designated by Rojas-Andrés *et al.* (2016): 623): "R. Maire […] 1927 […] in quercetis infra castellum Aourirt, 1250 m […] 18 junii", MPU[MPU006151!*].

Syntype. — "R. Maire […] 1927 […] prope Ahermoumou […] 17.6.", MPU[MPU006152!*], P[P00083129*], RAB[RAB032343*].

Veronica rosea Desf. var. *pallida* Maire

Bulletin de la Société d'histoire naturelle d'Afrique du Nord 20: 30 (Maire 1929).

TYPE CITATION. — Morocco, Meknès-Tafilalet: "Hab. in pascuis lapidosis calcareis ad radices Atlantis Majoris prope oppidum Midelt, ad alt. 1500 m, maio florens (Emberger et Maire 1927)".

LECTOTYPE. — Designated by Andrés-Sánchez *et al.* (2008: 83), "Grand Atlas, Midelt, rocailles calcaires, 1500 m, 8. May 1927, R. Maire", MPU[MPU002082!*].

ISOLECTOTYPES (**designated here**). — MPU[MPU002159!*], P[P00083130*].

Veronica rosea Desf. var. *glabrescens* Emb. & Maire

Bulletin de la Société d'histoire naturelle d'Afrique du Nord 28: 372 (Maire 1937).

TYPE CITATION. — Morocco, Meknès-Tafilalet: "Grand Atlas oriental: rochers calcaires des gorges de Ksiret, de l'Akka-n-Ouyad, de Bab-n-Ouyad, 1950-2300 m."

LECTOTYPE. — Designated by Andrés-Sánchez *et al.* (2008): 83): "In rupibus calcareis Atlantis Majoris Orientalis, secus amnem [along the river] Ansegmir, in faucibus [= gorge] Ksiret, 1950 m, Maire, 19. Jun. 1936", MPU[MPU002732!*].

ISOLECTOTYPE. — Designated by Andrés-Sánchez *et al.* (2008: 83), MPU[MPU002730!*].

ISOLECTOTYPES (**designated here**). — P[P00083131*], RAB[RAB032327*]. — Syntypes (reported here): "Akka-n-Ouyad" MPU[MPU002728!*, MPU002729!*], P[P03413387*, P03807923*], RAB[RAB032326*, RAB032328*]; "Bab-n-Ouyad" MPU[MPU002730!*, MPU002731!*], P[P03807939*].

Veronica rosea Desf. f. *ciliatisepala* Maire

Bulletin de la Société d'histoire naturelle d'Afrique du Nord 31: 33 (Maire 1940).

TYPE CITATION. — Morocco, Meknès-Tafilalet: "Grand-Atlas: Akka-n-Ouyad; crêtes au dessus de Bab-n-Ouyad".

LECTOTYPE. — Designated by Rojas-Andrés *et al.* (2016): 622): "Falaises calc. des gorges de l'Akka-n-Ouyad, à 2000 m", L. Emberger 19.6.1936", RAB[RAB032331*].

ISOLECTOTYPE. — Designated by Rojas-Andrés *et al.* (2016: 622), RAB[RAB032333, RAB032334, RAB032335, RAB032336]!*.

SYNTYPES. — Reported by Rojas-Andrés *et al.* (2016: 622), "crêtes au dessus de Bab-n-Ouyad In rupestribus calcareis Atlantis Majoris supra Bab-n-Ouyad, *Maire no. 650*, 27. Jun. 1939", RAB[RAB032330*, RAB032332*].

SYNTYPES. — MPU[MPU004302!*], P[P03807924*].

Nomenclatural note. *Veronica rosea* is endemic to the Atlas Mountains and grows in various habitats there. Maire was concerned with the variability of *V. rosea* for a number of years. In 1929, Maire published a key to the five varieties and four subvarieties he recognized at that time. Maire's herbarium is, therefore, important for documenting the diversity of the species and possible separation of taxa.

Veronica anagallis-aquatica L. f. *minuta* Maire

Bulletin de la Société d'histoire naturelle d'Afrique du Nord 31: 33 (Maire 1940).

TYPE CITATION. — Algeria/Maroc: "Algérie: lieux un peu humides sur le Mont Mahme (Aurès) vers 2000 m. Maroc [Meknès-Tafilalet]: dépressions un peu humides au dessus d'Agoudal (Grand Atlas) vers 2400 m (*Maire et Weiller no. 596*)".

LECTOTYPE (**designated here**). — " Dr. R. Maire iter Maroccanum XXIX socio M. Weiller 1939 […] In humosis depressis inundatis Atlantis Majoris supra Agoudal, solo calcareo *no. 596* […] 26-6" MPU[MPU004619!*].

ISOLECTOTYPES (**designated here**). — P[P03807952*], RAB[RAB032033*].

Auguste Pomel (1821-1898)
Auguste Pomel was a French botanist and geologist who worked in various posts in Algeria since 1852 (Dayrat 2003). He published more than 800 names but the only new taxon in *Veronica* that he collected, *V. hederifolia* var. *brevipes*, a synonym of *V. sibthorpioides* Debeaux, Degen & Hervier, was not published by himself. Pomel gave his manuscript on the flora of Algeria together with herbarium and notes to Battandier and Trabut (Battandier *et al.* 1890), which they stored in Algier (AL) from where it was later largely transferred to MPU. Therefore, the lectotype should be chosen from that herbarium. Since the name has been chosen by Pomel and it is likely that other specimens were distributed to other herbarium later as indicated by the fact that all are labelled as type, the other specimens are considered isolectotypes.

Veronica hederifolia L. var. *brevipes* Pomel ex Batt. & Trab.

Flore de l'Algérie 1: 648 (Battandier *et al.* 1890). — *V. brevipes* Pomel, *nom. inval.* (Art. 30.1; herbarium name).

TYPE CITATION. — Algeria, Tlemcen: "Garrouban".

LECTOTYPE (**designated here**). — "Ghar Rouban. A. Pomel" MPU[MPU000133!*].

ISOLECTOTYPES (**designated here**). — LD[LD1219989!*], P[P00083127*].

André Maublanc (1880-1958)
André Maublanc was a French mycologist and plant pathologist with a keen interest in the systematics of fungi but also of higher plants. He collected all kinds of organisms and visited frequently the Muséum national d'Histoire naturelle and inspected the specimen with a keen eye for anomalies (Viennot-Bourgin 1958). It is, therefore, not surprising to find collections of him in P. Since the plants have been part of the *Société française d'Échanges de Plantes*, it is also not surprising that there are five specimens from four herbaria, the herbier Segret ex herbier Université Catholique Paris, the herbier Bernard de Retz, herbier J. Arènes, and two from the general herbarium.

TABLE 3. — Number of types of *Veronica* L. in the different sub-herbaria of P. Note that if a certain herbarium was part of another sub-herbarium, the type was counted twice. The following herbaria are represented with a single type specimen: Abbé Toussaint, Arènes, Bonati, Chevallier, Cluj, De Retz, Edinburgh, Hennecart, Lejeune, Léveillé, Parceval-Grandmaison, Richard, Rotereau, Segret, Simon, Strachey & Winterbottom and Wallich.

Herbarium	Number of types
General herbarium	106
Cosson	72
Drake	53
Bunge	15
Giraudias	10
Herbier de l'Afrique du Nord plus Algier, Maire	10
Univ. Caen	6
Lamarck	5
Lenormand	5
Melbourne plus F. von Müller	5
Camus	4
Grenier	4
Kew plus W. Hooker and J. D. Hooker	4
Moquin-Tandon	4
Reichenbach	4
Steudel	4
Humboldt & Bonpland plus Bonpland	3
Poiret	3
Puel	3
Tournefort	3
Chaubard	2
Jussieu	2
Delacour	2
Guétrot	2
Université catholique de Paris	2
Vaillant	2

Veronica acinifolia L. f. ***gracilis*** Maubl.

Société française d'Échanges de Plantes 403 (Maublanc 1941).

TYPE CITATION. — France, "Loire-Inférieure: La Birochère, près de Pornic, *A. Maublanc no. 403*, 15. Apr. 1941".

LECTOTYPE (**designated here**). — P[P04214197*].

ISOLECTOTYPES (**designated here**). — P[P03792283*, P03807158*, P03839735*, P03837901*].

Nomenclatural note. *Veronica acinifolia* f. *gracilis* is a form from dry habitat with small, unbranched habit and small leaves. There is a full printed description available on the specimen from the herbier Segret, which is why it is chosen as lectotype.

GENERAL DISCUSSION

Complete digitization not only confirmed the presence of ten types, previously reported, but allows the identification of hundreds of types of important collections, some suspected to be housed in P, other unsuspected types demonstrating the importance of P as major center of biodiversity research in the past centuries. The herbarium P has, based on my analysis 245 types (including isotypes, (iso-)lectotypes, (iso-)neotypes but not counting syntypes; Appendix 1). Especially remarkable is the number of isolectotypes, which demonstrates that many important collections are stored in P, although the respective taxonomist or collector did not work in Paris nor gave his herbarium to P, which explains the lack of holotypes. With that number of types, the herbarium P ranks as the herbarium with most types of *Veronica* worldwide. The only other herbaria reaching more than 100 types in the genus are K (Kew) and LE (St. Petersburg). LE and K are the herbaria with most holotypes of *Veronica*, which demonstrates the importance of the scientists who worked at these herbaria. For Kew this demonstrates the importance of the collections from the colonies worldwide, especially India and New Zealand, which were gathered in Kew. For LE, this demonstrates the diversity of the genus in Northern Asia. Other important herbaria with more than 50 types are BP, KW, W, and WU.

NEW ISOLECTOTYPES AND ISOTYPES

Before this study, one lectotype and six isolectotypes (for three names) were designated from the herbarium P. This is surprising given the richness of the collections and the known old and important herbaria housed in P. My thorough investigation clarified that this is not due to the herbarium being depauperate in types but previous taxonomists having largely ignored the collection. Overall, 34 new lectotypes, 177 new isolectotypes were designated from herbarium P here for 106 names in *Veronica* (Appendix 1). This demonstrates how important it is to check P thoroughly for lectotypifications. Especially, in the 19th century duplicates were sent to French botanists and to P by important scientists, which seems to have been largely forgotten.

The situation is further exemplified by nine names for which holotypes were designated without mentioning the duplicates (11 specimens for seven names) of the type collection in P. According to the code (Turland *et al.* 2018) such duplicates are also called isotypes. Such situations derive from cases, in which taxonomist describe taxa based on collections without thoroughly checking for all available original specimens. Similar reasons can be thought of why five isoneotypes were designated (for three names) for previously neotyified names. This is understandable for Russian and Czech taxonomists publishing between 1925 and 1967, respectively. However, there are also clear cases of overlooking the herbarium P. Surprising is the case of *V. umbelliformis* (Pennell 1943) since Pennell is known to have visited P before that time (Pennell 1944).

THE DISTRIBUTION OF TYPES AMONG COLLECTIONS

How did this large collection of original material arrive in P? As mentioned above, many botanists sent duplicates to large herbaria to make their new names better known. Examples are Bornmüller or von Mueller from Melbourne. Part of the story is also exchange with major other herbaria such as Kew. In addition, the herbarium in Paris also acquired other herbaria, when these were closed (e.g., the herbaria in Algier and Caen). However, what made the herbarium P really exceptional is the acquisition of the large herbaria of major collectors of other herbaria, Cosson and Drake (Table 3). These collectors did not collect or describe type specimens of their own but bought collections after the death of the initial collector and combined them to valuable collections for comparative purposes. Consequently, many duplicates of type collections were later recombined, for example those of Aucher-Éloy or Kotschy.

Digitization has certainly made it much easier to locate type material. However, there are still many unrecognized types, because some large collections have not been completely digitized or made available (e.g., LE). Other, smaller herbaria simply do not have the resources to digitize their collections completely and some important collections may still reside unnoticed in some herbaria. Despite the possibility to find now type specimens of many names, the physical specimens remain a crucial resource. As exemplified here by *V. hederifolia* var. *minuta*, specimens online lack the resolution to clearly inspect important indumentum characters and distinguish between closely related species. Such problems occur in several groups of *Veronica* (Albach & Fischer 2003; Rojas-Andrés *et al.* 2016). Therefore, the inspection of these specimens in person will remain necessary to conclusively identify species and synonymize names. Nevertheless, the current study provides a nearly complete overview of the type collections of Paris, which allows better curation and conservation of these specimens.

Acknowledgements
I thank the curators of the numerous herbaria visited in the past 25 years for allowing me to study their collections and especially curators of herbaria ANG, FI, G, and W for checking their herbaria and providing information and photos of collections without my visit. I thank Drs Thierry Deroin and Petr Kosachev, the reviewers of the article, for devoting their time to evaluate this manuscript. The study would, further, not have been possible without the great digitization efforts of all the herbaria worldwide.

REFERENCES

ADAMOVIC L. 1905. — Neue Bürger der altserbischen und macedonischen Flora. *Allgemeine Botanische Zeitschrift für Systematik* 11: 1-3.
ADAMOVIĆ L. 1909. — *Die Vegetationsverhältnisse der Balkanländer*. Wilhelm Enge, Leipzig, 567 p. (Die Vegetation der Erde: 11).
AITCHISON J. E. T. 1882. — On the flora of the Kuram valley etc., Afghanistan. *Journal of the Linnean Society, Botany* 19: 139-200. https://doi.org/10.1111/j.1095-8339.1882.tb00357.x
ALBACH D. C. 2006. — Evolution of *Veronica* (Plantaginaceae) on the Balkan Peninsula. *Phytologia balcanica* 12 (2): 231-244.
ALBACH D. C. 2008a. — Further arguments for the rejection of paraphyletic taxa: *Veronica* subgen. *Pseudolysimachium* (Plantaginaceae). *Taxon* 57 (1): 1-6. https://www.jstor.org/stable/25065943
ALBACH D. C. 2008b. — *Veronica*, *in* GHANZAFAR S. A., HEPPER F. N. & PHILCOX D. (eds), *Scrophulariaceae – Flora of Tropical East Africa*. Royal Botanic Gardens, Kew: 100-105.
ALBACH D. C. 2023. — What is a species in *Veronica*? Reflections on the occasion of Manfred A. Fischer's 80th birthday. *Neilreichia* 13-14: 305-323.
ALBACH D. C. & CHASE M. W. 2001. — Paraphyly of *Veronica* (Veroniceae; Scrophulariaceae): Evidence from the internal transcribed spacer (ITS) sequences of nuclear ribosomal DNA. *Journal of Plant Research* 114: 9-18. https://doi.org/10.1007/PL00013971
ALBACH D. C. & FISCHER M. A. 2003. — AFLP- and genome size analyses: contribution to the taxonomy of *Veronica* subg. *Pseudolysimachium* sect. *Pseudolysimachion* (Plantaginaceae), with a key to the European taxa. *Phytologia balcanica* 9 (3): 401-424.
ALBACH D. C. & KOSACHEV P. A. 2018. — (2645-2646) Proposals to conserve the names *Veronica capitata* Royle ex Benth. against *V. capitata* Fisch. ex Colla and *V. minuta* CA Mey. against *V. minuta* Krock.(Plantaginaceae). *Taxon* 67 (5): 1037-1038. https://doi.org/10.12705/675.21
ALBACH D. C., MARTÍNEZ ORTEGA M. M., FISCHER M. A. & CHASE M. W. 2004a. — Evolution of Veroniceae: A phylogenetic perspective. *Annals of the Missouri Botanical Garden* 91 (2): 275-302. https://www.jstor.org/stable/3298609
ALBACH D. C., MARTÍNEZ ORTEGA M. M., FISCHER M. A. & CHASE M. W. 2004b. — A new classification of the tribe Veroniceae - problems and a possible solution. *Taxon* 53 (2): 429-452. https://doi.org/10.2307/4135620
ALBACH D. C., SCHÖNSWETTER P. & TRIBSCH A. 2006. — Comparative phylogeography of the *Veronica alpina* complex in Europe and North America. *Molecular Ecology* 15: 3269-3286. https://doi.org/10.1111/j.1365-294X.2006.02980.x
ALBACH D. C., MARTINEZ-ORTEGA M. M., DELGADO SANCHEZ L., WEISS-SCHNEEWEISS H., ÖZGÖKCE F. & FISCHER M. A. 2008. — Chromosome numbers in Veroniceae: Review and several new counts. *Annals of the Missouri Botanical Garden* 95 (4): 543-566. https://doi.org/10.3417/2006094
ALBACH D. C., VON STERNBURG M., SCALONE R. & BARDY K. 2009. — Phylogenetic analysis and differentiation of *Veronica* subgenus *Stenocarpon* in the Balkan Peninsula. *Botanical Journal of the Linnean Society* 159: 616-636. https://doi.org/10.1111/j.1095-8339.2009.00958.x
ALBACH D. C., PIFKÓ D. & BARINA Z. 2017. — Typifications and taxonomic notes for *Veronica* subgen. *Pseudolysimachium* (Plantaginaceae) based on material from the Hungarian Natural History Museum Budapest BP[BP]. *Phytotaxa* 331 (1): 16. https://doi.org/10.11646/phytotaxa.331.1.2
ALLAN H. H. 1961. — *Flora of New Zealand* Vol. I. R. E. Owen, Government Printer.
SORRY, REFERENCE MISSING IN BIBLIOGRAPHY
ANDRÉS-SÁNCHEZ S., RICO E., HERRERO A., SANTOS-VICENTE M. & MARTÍNEZ ORTEGA M. M. 2008. — Combining traditional morphometrics and molecular markers in cryptic taxa: towards an updated integrative taxonomic treatment for *Veronica* subgenus *Pentasepalae* (Plantaginaceae sensu APG II) in the western Mediterranean. *Botanical Journal of the Linnean Society* 159: 68-87. https://doi.org/10.1111/j.1095-8339.2008.00917.x
ANIOTSBÉHÈRE J. C. 1999. — À propos de *Veronica peregrina* L. *Bulletin de la Société linnéenne de Bordeaux* 27: 77-79. https://www.biodiversitylibrary.org/page/47062138
ANONYMOUS 1883. — Michael Pakenham Edgeworth. *Proceedings of the Linnean Society of London* 1880-1881: 63.
AUCHER-ÉLOY R. 1843. — *Relations de voyages en Orient de 1830 à 1838... revues et annotées par M. le comte Jaubert*. Vol. 2. Roret, Paris, 436 p.
BALL J. 1875. — Descriptions of some new species, subspecies, and varieties of plants collected in Morocco by J. D. Hooker, G. Maw, and J. Ball. *Journal of Botany* 13: 172-177.
BALL J. 1878. — Spicilegium florae maroccanae. *Journal of the Proceedings of the Linnean Society* 16: 281-772.
BARBERÁ P., ROMERO-ZARCO C. & AEDO C. 2018. — Taxonomic revision of *Trisetum* Sect. *Trisetum* (Poaceae: Pooideae: Aveninae) from Eurasia and North Africa. *Annals of the Missouri Botanical Garden* 103 (3): 350-392. https://doi.org/10.3417/2018067
BARDY K. E., ALBACH D. C., SCHNEEWEISS G. M., FISCHER M. A. & SCHÖNSWETTER P. 2010. — Disentangling phylogeography, polyploid evolution and taxonomy of a woodland herb (*Veronica chamaedrys* group, Plantaginaceae s.l.) in southeastern Europe. *Molecular Phylogenetics and Evolution* 57 (2): 771-786. https://doi.org/10.1016/j.ympev.2010.06.025
BARNES P. 2001. — Japan's Botanical Sunrise: plant exploration around the Meiji Restoration. *Curtis's Botanical Magazine* 18 (2): 117-131.

Barone G., Domina G., di Gristina E., Mirabile G. & Gargano M. L. 2023. — Typification of names published by Vincenzo Tineo from Sicily. *Phytotaxa* 612 (2): 139-147. https://doi.org/10.11646/phytotaxa.612.2.2

Barrie F. R. 2006. — Report of the General Committee: 9. *Taxon* 55 (3): 795-800. https://doi.org/10.2307/25065657

Battandier J. A., Trabut L., Flagey C., Debray F. & Petit P. 1890. — *Flore de l'Algérie*. Vol. 1. A. Jourdan, Alger, 825 p.

Bayly M. J., Garnock-Jones P. J., Mitchell K. A., Markham K. R. & Brownsey P. J. 2000. — A taxonomic revision of the *Hebe parviflora* complex (Scrophulariaceae), based on morphology and flavonoid chemistry. *New Zealand Journal of Botany* 38: 165-190. https://doi.org/10.1080/0028825X.2000.9512676

Baytop A. 2005. — A plant collector in Anatolia in the first half of the XIXth century: Rémi Aucher-Éloy (1793-1838). *Osmanlı Bilimi Araştırmaları* 6 (2): 71-78.

Baytop A. 2009. — Joseph Bornmüller'in (1862-1948) Anadolu'da Bitki Toplama Gezileri. *Osmanlı Bilimi Araştırmaları* 10 (2): 103-114.

Baytop A. 2010. — Plant collectors in Anatolia (Turkey). *Phytologia Balcanica* 16 (2): 187-213.

Baytop A. & Tan K. 2008. — Theodor von Heldreich (1822-1902) and his Turkish collections. *Turkish Journal of Botany* 32 (6): 471-479.

Bentham G. 1835. — *Scrophularineae Indicae*. J. Ridgway, London, 57 p.

Bentham G. 1846. — Scrophulariaceae, *in* Candolle A. de (ed.), *Prodromus systematis naturalis regni vegetabilis*. Vol. 10. Victor Masson, Paris: 448-491. https://doi.org/10.5962/bhl.title.286

Bentham G. & Mueller F. von 1869. — *Flora Australiensis*. Vol. 4. L. Reeve & Co., London, 576 p.

Blanche H. 1866. — Note sur l'herbier de M. Michalet. *Bulletin de la Société botanique de France* 13: 148-149.

Blanco F. de C. P. & Puig-Samper Mulero M. Á. 1995. — Plantas de RA Philippi (1808-1904) en el herbario de la Comisión Científica al Pacífico (1862-1866) del Real Jardín Botánico de Madrid. *Anales del Jardin Botanico de Madrid* 53: 55-99.

Boccone P. 1697. — *Museo di fisica e di esperienze variato, e decorato di osservazioni naturali*. I. B. Zuccato, Venice, 319 p.

Boewe C. 1987. — Who's buried in Rafinesque's tomb? *The Pennsylvania Magazine of History and Biography* 111 (2): 213-235.

Boissier E. 1844. — *Diagnoses Plantarum Orientalium Novarum*. Vol. 4. B. Hermann, Leipzig, 86 p. https://bibdigital.rjb.csic.es/idurl/1/10698

Boissier E. 1846. — *Diagnoses Plantarum Orientalum Novarum*. Vol. 7. B. Hermann, Leipzig, 130 p.

Boissier E. 1853. — *Diagnoses Plantarum Orientalium Novarum*. Vol. 12. H. Wolfrath, Neuchatel, 120 p. https://bibdigital.rjb.csic.es/idurl/1/10712

Boissier E. 1856. — *Diagnoses Plantarum Orientalium Novarum*. Ser. 2, Vol. 3. B. Hermann, Leipzig, 177 p. https://bibdigital.rjb.csic.es/idurl/1/10730

Boissier E. 1859. — *Diagnoses Plantarum Orientalium Novarum*. Ser. 2, Vol. 6. B. Hermann, Leipzig, 148 p. https://bibdigital.rjb.csic.es/idurl/1/10733

Boissier E. 1879. — *Flora Orientalis*. Vol. 4. H. Georg, Geneve & Basel, 1276 p. https://doi.org/10.5962/bhl.title.20323

Bolòs O. de & Vigo J. 1983. — Notes sobre taxonomia i nomenclatura de les plantes, II. *Collectanea Botanica* 14: 89-103. https://hdl.handle.net/2445/30342

Bonati M. G. 1927. — Scrophulariacées, *in* Lecomte M. H. & Gagnepain F. (eds), *Flore générale de l'Indo-Chine*. Vol. 4. Masson et Companie, Paris: 337-464.

Bonpland A. & Humboldt A. V. 1799-1804. — *Registre de notes botaniques*. 279 p.

Boreau A. 1840. — *Flore du centre de la France, ou Description des plantes qui croissent spontanément dans la région centrale de la France, et de celles qui y sont cultivées en grand, avec l'analyse des genres et des espèces*. 2 Vols. Roret, Paris, 330 p. https://bibdigital.rjb.csic.es/idurl/1/11941, https://bibdigital.rjb.csic.es/idurl/1/11942

Boreau A. 1849. — *Flore du Centre de la France ou description des plantes qui croissent spontanément, ou qui sont cultivées en grand dans les départements arrosés par la Loire et ses affluents, avec l'analyse des genres et des espèces*. 2nd edition. Roret, Paris, 643 p.

Boreau A. 1857. — *Flore du centre de la France et du bassin de la Loire*. 3rd edition. Roret, Paris, 771 p. https://doi.org/10.5962/bhl.title.11988

Borissova A. G. 1955a. — Species novae generis *Veronica* L. *Botaniceskie Materialy Gerbarija Botaniceskogo Instituta Imeni V. L. Komarova Akademii Nauk SSSR* 17: 341-356.

Borissova A. G. 1955b. — *Veronica*, *in* Shishkin B. K. & Bobrov E. G. (eds), *Flora URSS*. Vol. 22. Izdatel'stvo Akademii Nauk SSSR, Moskva, Leningrad: 329-500.

Bornmüller J. 1898. — Ein Beitrag zur Kenntnis der Flora von Syrien und Palästina. *Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien* 48: 544-653. https://www.biodiversitylibrary.org/page/13253448

Bornmüller J. 1905. — Novitates Florae Orientalis series I. *Mittheilungen des Thüringischen Botanischen Vereins* 20: 1-51.

Bornmüller J. 1907a. — Plantae Straussianae. *Beihefte zum Botanischen Centralblatt, Abteilung B* 22: 102-142. https://www.biodiversitylibrary.org/page/3884659

Bornmüller J. 1907b. — Beiträge zur Flora der Elbursgebirge Nord-Persiens. *Bulletin de l'herbier Boissier* ser. 2, 7: 965-980. https://www.biodiversitylibrary.org/page/33744529

Bornmüller J. 1909. — Ergebnisse einer im Juni des Jahres 1899 nach den Sulta-dagh in Phrygien unternommenen botanischen Reise. *Beihefte zum Botanischen Centralblatt, Abteilung B* 24: 440-488. https://www.biodiversitylibrary.org/page/34014136

Bornmüller J. 1910. — *Veronica aleppica* Boiss. ß. *schizostegia* Bornm. (nov. var.). *Repertorium specierum novarum regni vegetabilis* 9: 113. https://www.biodiversitylibrary.org/page/231219

Bornmüller J. 1911. — Collectiones Straussianae novae. *Beihefte zum Botanischen Centralblatt, Abteilung B* 28: 458-535. https://www.biodiversitylibrary.org/page/33511172

Bornmüller J. 1912. — *Veronica sintenisii* Hausskn., eine noch unbeschriebene Art aus Kleinasien. *Repertorium specierum novarum regni vegetabilis* 10: 422. https://www.biodiversitylibrary.org/page/182077

Bornmüller J. 1927. — Beiträge zur Flora Mazedoniens. III. *Beiblatt zu den Botanischen Jahrbüchern für Systematik, Pflanzengeschichte und Pflanzengeographie* 140: 1-195.

Bory J. B. G. M. & Chaubard L. A. 1832. — *Expédition scientifique de Morée*. Levrault, Strasbourg, 400 p.

Bory J. B. G. M. & Chaubard L. A. 1838. — *Nouvelle Flore du Péloponnèse et des Cyclades*. Levrault, Paris, 87 p. http://nbn-resolving.de/urn:nbn:de:bsz:14-db-id3936926989

Briggs B. G. & Ehrendorfer F. 1992. — A revision of the Australian species of *Parahebe* and *Derwentia* (Scrophulariaceae). *Telopea* 5 (1): 241-287. https://doi.org/10.7751/telopea19924967

Briggs B. G. & Ehrendorfer F. 2006. — New Australian species and typifications in *Veronica* sens. lat. (Plantaginaceae). *Telopea* 11 (3): 276-292. https://doi.org/10.7751/telopea20065729

Brongniart A. 1854. — Notice historique sur M. Achille Richard. *Bulletin de la Société botanique de France* 1: 373-386. https://doi.org/10.1080/00378941.1854.10825479

Brummitt R. K. 2005. — Report of the Committee for Spermatophyta: 56. *Taxon* 54 (2): 527-536. https://doi.org/10.2307/25065389

Buhk N., Zhao L., Li H. & Albach D. C. 2015. — Molecular systematics and morphometrics in *Veronica* subsect. *Canae* (Plantaginaceae). *Plant Systematics and Evolution* 301: 1967-1979. https://doi.org/10.1007/s00606-015-1214-1

Bureau M. É. 1904. — Notice sur Emmanuel Drake del Castillo. *Bulletin de la Société botanique de France* 51 (suppl. 1): 107-128.

Cabral J. P. 2009. — *Gonçalo Sampaio Professor e Botanico Notavel*. Universidade do Porto, Porto, 343 p.

Candolle A. P. de 1834. — Notice historique sur la vie et les travaux de M. Desfontaines. *Annales des sciences naturelles. Botanique*, 2ème série 1: 129-151.

CANDOLLE R. D. & RADCLIFFE-SMITH A. 1981. — Nathaniel Wallich, MD, PhD, FRS, FLS, FRGS,(1786–1854) and the Herbarium of the Honourable East India Company, and their relation to the de Candolles of Geneva and the Great Prodromus. *Botanical Journal of the Linnean Society* 83 (4): 325-348. https://doi.org/10.1111/j.1095-8339.1981.tb00355.x

ČELAKOVSKY L. 1877. — Kritische Bemerkungen zu Wigand's "Darwinismus", betreffend die Unterschiede der Darwin'ischen Descendenzlehre und der "Genealogie der Urzellen". *Sitzungsberichte der koeniglich-Boehmischen Gesellschaft der Wissenschaften in Prag* 1877: 94-120. https://www.biodiversitylibrary.org/page/39351725

CHARPIN A. & AYMONIN G. G. 2003. — Bibliographie sélective des Flores de France. III. Notices biographiques sur les auteurs cités : D-I. *Le Journal de Botanique* 21 (1): 49-88.

CHARPIN A. & AYMONIN G. G. 2004. — Bibliographie sélective des Flores de France. V. Notices biographiques sur les auteurs cités : P-Z et compléments. *Le Journal de Botanique* 27: 47-87.

CHASE A. 1935. — The Durand Herbarium. *Bartonia* 17: 40-45. https://www.jstor.org/stable/41609597

CHAUBARD L. A. 1853. — Fragments de Botanique critique. *Actes de la société Linnéenne de Bordeaux* 19: 225-241. https://www.biodiversitylibrary.org/page/3354169

CLOS M. D. 1893. — Chaubard et la Flore Agenaise. *Bulletin de la Société botanique de France* 40: 243-250. https://www.biodiversitylibrary.org/page/314742

COCKAYNE L. & ALLAN H. H. 1926. — The present taxonomic status of the New Zealand species of *Hebe*. *Transactions of the New Zealand Institute of Technology* 57: 11-47.

COSSON E. 1880. — Plantæ Novæ Floræ Atlanticæ. *Bulletin de la Société botanique de France* 27 (2): 67-74. https://www.biodiversitylibrary.org/page/221214

COSSON E. 1881. — *Compendium florae atlanticae: seu expositio methodica plantarum omnium in Algeria, necnon in regno tunetano et imperio maroccano hucusque notarum ;* ou, *Flore des états barbaresques, Algérie, Tunisie et Maroc*. Vol. 1. Impr. Nationale, Paris, 267 p. https://doi.org/10.5962/bhl.title.53507

COSSON E. & GERMAIN E. 1845. — *Flore descriptive et analytique des environs de Paris*. Ed. 1. Fortin, Masson & Co., Paris, 342 p. https://gallica.bnf.fr/ark:/12148/bpt6k64340912

CZEREPANOV S. K. 1981. — *Plantae vasculares URSS*. Akademia Nauka, Leningrad, 512 p.

DAYRAT B. 2003. — *Les botanistes et la flore de France : trois siècles de découvertes*. Publications scientifiques du Muséum, Paris, 690 p. https://sciencepress.mnhn.fr/fr/collections/archives/les-botanistes-et-la-flore-de-france

DESFONTAINES R. 1798. — *Flora atlantica sive historia plantarum*. Vol. 1. Blanchon, Paris, 120 p. https://doi.org/10.5962/bhl.title.323

DESFONTAINES R. 1829. — *Catalogus plantarum horti regii Parisiensis*. Ed. 3. J. S. Chaude, Paris, 484 p. https://doi.org/10.5962/bhl.title.69101

DIELS L. 1912. — Plantae Chinenses Forrestianae. *Notes from the Royal Botanic Garden Edinburgh* 5: 161-304. https://www.biodiversitylibrary.org/page/30822414

DIETRICH A. G. 1831. — *Species plantarum, exhibentes plantas rite cognitas ad genera relatas cum differentiis specificis, nominibus trivialibus, synonymis selectis, locis natalibus secundum systema sexuale digestas*. G. C. Nauck, Berlin, 735 p.

DOBIGNARD A. & JORDAN D. 1987. — Nouvelles observations sur la flore du Maroc 1. Contribution à l'étude de la flore du Haut-Atlas. *Saussurea* 18: 67-101.

DOIDGE E. M. 1950. — History of observations on the fungi and lichens of South Africa. *Bothalia* 5 (1): 18-43. https://doi.org/10.4102/abc.v5i1.1868

DON D. 1825. — *Prodromus Florae Nepalensis*. J. Gale, London, 256 p. https://doi.org/10.5962/bhl.title.86

DOOSTMOHAMMADI M., BORDBAR F., ALBACH D. C. & MIRTADZADINI M. 2022. — Phylogeny and historical biogeography of *Veronica* subgenus *Pentasepalae* (Plantaginaceae): Evidence for its origin and subsequent dispersal. *Biology* 11 (5): 639. https://doi.org/10.3390/biology11050639

DÖRFLER I. 1898. — *Herbarium normale. Schedae ad Centuriam XXXV*. O. Hensel, Wien. https://doi.org/10.5962/bhl.title.79657

DRAKE DEL CASTILLO E. 1900. — Notice sur la vie et les travaux de A. Franchet. *Bulletin de la Société botanique de France* 47 (1): 158-172. https://www.biodiversitylibrary.org/page/320774

DRÈGE J. F. 1843. — *Zwei pflanzengeographische Documente*. Besondere Beigabe zur Flora 1843 Band II, 230 p. https://doi.org/10.5962/bhl.title.87612

DUMORTIER B.-C. 1827. — *Florula belgica*. J. Casterman, Tournay, 172 p. https://www.biodiversitylibrary.org/page/63005154

DUTTA N. M. 1960. — The genus *Veronica* Linn. of Eastern India. *Journal of the Bombay Natural History Society* 57 (3): 590-596. https://www.biodiversitylibrary.org/page/47542188

EDGEWORTH M. P. 1846. — Descriptions of some unpublished species of plants from North-Western India. *Transactions of the Linnean Society* 20: 23-91. https://www.biodiversitylibrary.org/page/6208027

ELENEVSKY A. G. 1969. — Systematics and geography of *Veronica anagallis-aquatica* L. *Byulleten' Moskovskogo Obshchestva Ispytatelei Prirody Otdel Biologicheskii* 74: 72-80.

ELENEVSKY A. G. 1977. — Sistema roda *Veronica* L. *Byulleten' Moskovskogo Obshchestva Ispytatelei Prirody Otdel Biologicheskii* 82 (1): 149-160.

ELENEVSKY A. G. 1978. — *Sistematika i geografiya veronik SSSR i prilezhashchikh stran*. Vol. 2. Nauka, Moscow, 258 p.

ELLMOUNI F. Y., KARAM M. A., ALI R. M. & ALBACH D. C. 2017. — Molecular and morphometric analysis of *Veronica* L. section *Beccabunga* (Hill) Dumort. *Aquatic Botany* 136: 95-111. https://doi.org/10.1016/j.aquabot.2016.09.010

EMBERGER L. & MAIRE R. 1930. — Matériaux pour la flore Marocaine. *Mémoires de la société des sciences naturelles du Maroc* 21/22 (1929): 21-53. https://bibdigital.rjb.csic.es/idurl/1/12470

ENGLER A. 1892. — *Über die Hochgebirgsflora des tropischen Afrika*. Verlag der Königlichen Akademie der Wissenschaften, Berlin, 461 p.

FEDDE F. & SCHUSTER K. 1914. — Novorum generum, specierum, varietatum, formarum, nominum Siphonogarum Index. *Just's Botanischer Jahresbericht* 42 (2): 1-254. https://www.biodiversitylibrary.org/page/3029140

FENZL E. 1843. — Pemptas stirpium novarum capensium. *Linnaea* 17: 323-334. https://www.biodiversitylibrary.org/page/107116

FENZL E. 1867. — Theodor Kotschy: eine Lebensskizze. *Almanach der kaiserlichen Akademie der Wissenschaften* 17: 251-264.

FISCHER E. 2006. — *Veronica* L., *in* HEDBERG I., KELBESSA E., EDWARDS S., DEMISSEW S. & PERSSON E. (eds), *Flora of Ethiopia and Eritrea*. Vol. 5. Gentianaceae to Cyclocheilaceae. National Herbarium, Addis Ababa University, Addis Abeba & Uppsala: 280-284.

FISCHER F. E. L. & MEYER C. A. 1835. — *Index Seminum, quae Hortus Botanicus Imperialis Petropolitanus pro Mutua Commutatione Offert*. Hortus Botanicus Imperialis Petropolitanus, St. Petersburg, 42 p. https://www.biodiversitylibrary.org/page/45789930

FISCHER M. A. 1967. — Beiträge zur Cytotaxonomie der *Veronica hederifolia*-Gruppe (Scrophulariaceae). *Österreichische Botanische Zeitschrift* 114: 189-233. https://doi.org/10.1007/BF01373910

FISCHER M. A. 1970. — *Veronica quezelii* und *V. saturejoides* Vis. subsp. *munellensis*, zwei neue Sippen der Sektion *Veronicastrum* aus ostmediterranen Gebirgen. *Plant Systematics and Evolution* 118: 201-205. https://doi.org/10.1007/BF01377856

FISCHER M. A. 1972. — Neue Taxa, Chromosomenzahlen und Systematik von *Veronica* subsect. *Acinifolia* (Römpp) Stroh. *Österreichische Botanische Zeitschrift* 120: 413-437. https://doi.org/10.1007/BF01324625

FISCHER M. A. 1977a. — Two new *Veronica* species (Scrophulariaceae) of Turkey and Iraq. *Plant Systematics and Evolution* 128: 237-241. https://doi.org/10.1007/BF00984560

FISCHER M. A. 1977b. — Taxa et nomina nova generis *Veronicae* (Scrophulariaceae) Turciae. *Plant Systematics and Evolution* 128: 293-297. https://doi.org/10.1007/BF00984565
FISCHER M. A. 1978. — *Veronica* L., *in* DAVIS P. H. (ed.), *Flora of Turkey and the East Aegean Islands*. Vol. 6. University Press, Edinburgh: 689-753.
FISCHER M. A. 1980. — *Veronica*, *in* CHARPIN A. (ed.), *Nouvelle Flore du Liban et de la Syrie*. Vol. 3. Dar el-Machreq, Beyrouth: 242-265.
FISCHER M. A. 1981. — *Veronica*, *in* RECHINGER K. H. (ed.), *Flora des iranischen Hochlandes und der umrahmenden Gebirge*. Vol. 147. Akademische Druck- und Verlagsanstalt, Graz: 52-165.
FISCHER M. A. 1986. — *Veronica minuta* – a "new" species of the Caucasus because confused since 150 years. *Zametki po sistematike i geografii rastenii* 41: 90-105.
FISCHER M. A. 1987. — On the origin of *Veronica persica* (Scrophulariaceae) - a contribution to the history of a neophytic weed. *Plant Systematics and Evolution* 155: 105-132. https://doi.org/10.1007/BF00936294
FISCHER M. A. & ÖZTÜRK A. 1989. — Three new endemic taxa of *Veronica* (Scrophulariaceae) from Turkey, *in* TAN K. (ed.), *The Davis & Hedge Festschrift: Plant Taxonomy, phytogeography and related subjects*. Edinburgh University Press, Edinburgh: 53-63.
FLAHAULT M. C. 1905. — Notice sur Antoine Le Grand. *Bulletin de la Société botanique de France* 52: 388-395. https://www.biodiversitylibrary.org/page/325076
FRANCHET A. 1900. — Les Scrofularinées de la Chine, dans l'herbier du Muséum de Paris. *Bulletin de la Société botanique de France* 47: 10-37. https://www.biodiversitylibrary.org/page/58908346
FRANCHET A. & SAVATIER L. 1875. — *Enumeratio plantarum in Japonia sponte crescentium*. Vol. 1. F. Savy, Paris, 485 p. https://doi.org/10.5962/bhl.title.75
FRANCHET A. & SAVATIER L. 1878. — *Enumeratio plantarum in Japonia sponte crescentium*. Vol. 2. F. Savy, Paris, 789 p. https://doi.org/10.5962/bhl.title.75
FRESENIUS J. B. G. W. 1844. — Bemerkungen über einige abyssinische Pflanzen. *Botanische Zeitung* 2: 354-357. https://www.biodiversitylibrary.org/page/32653575
FREYN J. 1894. — Plantae novae Orientales. *Österreichische Botanische Zeitschrift* 44: 324-327.
FREYN J. 1896. — Ueber neue und bemerkenswerthe orientalische Pflanzenarten. *Bulletin de l'herbier Boissier* 4: 42-57. https://www.biodiversitylibrary.org/page/33637374
FRIIS I. 1993. — C. F. Hochstetter's scientific names for G. W. Schimper's early collections of African plants. *Fragmenta Floristica Geobotanica* 2 (1): 183-201.
FRIIS I. 2017. — Old tropical botanical collections: how to improve their availability, comprehensibility and use in modern taxonomy? *Webbia* 72 (1): 5-16. https://doi.org/10.1080/00837792.2017.1301708
FROELICH G. 1885. — [no title]. *Schriften der physikalisch-oekonomischen Gesellschaft zu Königsberg* 26: 5-6.
GANDOGER M. 1919. — Sertum plantarum novarum. Pars secunda. *Bulletin de la Société botanique de France* 66: 216-233. https://www.biodiversitylibrary.org/page/345066
GARNOCK-JONES P. J. 1993. — *Heliohebe* (Scrophulariaceae – Veroniceae), a new genus segregated from Hebe. *New Zealand Journal of Botany* 31: 323-339. https://doi.org/10.1080/0028825X.1993.10419510
GARNOCK-JONES P. J. & LLOYD D. G. 2004. — A taxonomic revision of *Parahebe* (Scrophulariaceae – Antirrhinoideae) in New Zealand. *New Zealand Journal of Botany* 42: 181-232. https://doi.org/10.1080/0028825X.2004.9512899
GARNOCK-JONES P. J., ALBACH D. C. & BRIGGS B. G. 2007. — Botanical names in Southern Hemisphere *Veronica* (Plantaginaceae): sect. *Detzneria*, sect. *Hebe*, and sect. *Labiatoides*. *Taxon* 56: 571-582. https://doi.org/10.1002/tax.562028
GELCEN S. L. DE 1937. — Un grand botaniste qui vient de disparaître: le Frère Ṣennén (1861-1937). *Bulletin de la Société botanique de France* 84 (2): 161-176. https://doi.org/10.1080/00378941.1937.10837361
GÉRARD F. 1890. — Notes sur quelques plantes des Vosges. *Revue de Botanique* 8: 51-240. https://www.biodiversitylibrary.org/page/14653489
GIACÒ A., ASTUTI G. & PERUZZI L. 2021. — Typification and nomenclature of the names in the *Santolina chamaecyparissus* species complex (Asteraceae). *Taxon* 70 (1): 189-201. https://doi.org/10.1002/tax.12429
GILLETT J. B. 1972. — WG Schimper's botanical collecting localities in Ethiopia. *Kew Bulletin* 27 (1): 115-128. https://doi.org/10.2307/4117875
GMELIN J. F. 1791. — *Systema Naturae*. Ed. 13, Vol. 2, pars 1. G. E. Beer, Leipzig, 884 p. https://doi.org/10.5962/bhl.title.36932
GOVAERTS R., NIC LUGHADHA E., BLACK N., TURNER R. & PATON A. 2021. — The World Checklist of Vascular Plants, a continuously updated resource for exploring global plant diversity. *Scientific data* 8 (1): 215. https://doi.org/10.1038/s41597-021-00997-6
GRENIER M. C. 1869. — *Flore de la chaîne jurassique*. Vol. 2. F. Savy, Paris, 654 p.
GRENIER M. C. & GODRON M. 1850. — *Flore de France*. Vol. 2, part 1. J.-B. Baillière, Paris, 392 p. https://bibdigital.rjb.csic.es/idurl/1/10271
GREUTER W. 1998. — The early botanical exploration of Greece, *in* TSEKOS I. & MOUSTAKAS M. (eds), Proceedings Progress in Botanical Research: Proceedings of the 1st Balkan Botanical Congress. Kluwer Academic Publishers, Dordrecht: 9-20.
GUBANOV I. A., BAGDASAROVA T. V. & BALANDINA T. P. 1998. — *Scientific Heritage of Outstanding Russian Florists G. S. Karelin and I. P. Kirilov*. Russian Academy of Sciences, Moscow, 95 p.
GUREYEVA I. I. & BALASHOVA V. F. 2004. — Type specimens of the flowering plants from the G.S. Karelin and I.P. Kirilov collection kept in Krylov Herbarium (TK) of Tomsk State University. *Animadversiones Systematicae ex herbario Kryloviano universitatis Tomskensis / Sistematicheskie Zametki* 94: 17-31.
HALACSY E. V. 1902. — Theodor von Heldreich. Ein Nachruf. *Magyar botanikai Lapok* 1: 325-336. https://www.biodiversitylibrary.org/page/50326309
HANCE H. F. 1866. — Adversaria in stirpes imprimis Asiae orientalis. *Annales des Sciences naturelles*, *Botanique,* sér. 5, 5: 202-261. https://www.biodiversitylibrary.org/page/41623040
HÄRLE A. 1932. — Die Arten und Formen der *Veronica*-Sektion *Pseudolysimachia* Koch auf Grund systematischer und experimenteller Untersuchungen. *Bibliotheca Botanica* 26 (104): 1-86.
HAYATA B. 1916. — Père Urbain Faurie. *Shokubutsugaku Zasshi* 30 (356): 267-273. https://www.biodiversitylibrary.org/page/5435017
HEADS M. J. 1994. — A biogeographic review of *Parahebe* (Scrophulariaceae). *Botanical Journal of the Linnean Society* 115: 65-89.
HEMSLEY W. B. 1916. — Gustav Mann. *Gardeners' Chronicle* 60: 176. https://www.biodiversitylibrary.org/page/25919180
HERVIER J. 1905. — Excursions botaniques de M. Élisée Reverchon dans le massif de la La Sagra, et à Velez-Rubio (Espagne). *Bulletin de l'Académie internationale de géographie botanique* 15: 1-169. https://www.biodiversitylibrary.org/page/4538644
HEUFFEL J. 1835. — Plantarum Hungariae novarum vel non rite cognitarum decas II. *Flora* 18: 241-256.
HILL J. R. 1899. — Obituary notice of the late James Edward Tierney Aitchison, M.D., C.I.E., F.R.S., Surgeon-Major Bengal Army. *Transactions of the Botanical Society of Edinburgh* 21 (3): 224-229. https://doi.org/10.1080/03746609909469097
HOLDICH T. H. 1908. — Obituary: General Sir Richard Strachey, G. C. S. I., F. R. S., LL. D. *The Geographical Journal* 31 (3): 342-344.
HOLUB J. & POUZAR Z. 1967. — A nomenclatural analysis of the generic names of phanerogams proposed by F. M. Opiz in his Seznam Rostlin Kveteny Ceske. *Folia Geobotanica et Phytotaxonomica* 2 (4): 397-428. https://www.jstor.org/stable/4179470
HONG D.-Y. 1996. — Notes on some Scrophulariaceae from China. *Novon* 6: 22-24. https://doi.org/10.2307/3392207
HONG D.-Y. & FISCHER M. A. 1998. — *Veronica*, *in* WU Z.-Y. & RAVEN P. H. (eds), *Flora of China*. Vol. 18. Science Press, Missouri Botanical Garden, St. Louis: 65-80.

HOOKER J. D. 1845-7. — *The Botany of the Antarctic Voyage. 1. Flora Antarctica*. Lovell Reeve, London, 574 p. https://doi.org/10.5962/bhl.title.16029
HOOKER J. D. 1853. — *The Botany of the Antarctic Voyage. 2. Flora Novae-Zelandiae*. Lovell Reeve, London, 378 p. https://doi.org/10.5962/bhl.title.16029
HOOKER J. D. 1862. — On the vegetation of Clarence Peak, Fernando Po. *Journal of the Proceedings of the Linnean Society* 6: 1-23. https://doi.org/10.1111/j.1095-8312.1861.tb01210.x
HOOKER J. D. 1864. — On the plants of the temperate regions of the Cameroon mountains and islands in the bight of Benin. *Journal of the Proceedings of the Linnean Society - Botany* 7: 171-240. https://www.biodiversitylibrary.org/page/166599
HOOKER J. D. 1885. — *The flora of British India*. Vol. 4. L. Reeve & Co., London, 780 p. https://www.biodiversitylibrary.org/page/388531
HOOKER J. D. 1890. — Mr. John Ball, F.R.S. *Proceedings of the Royal Geographical Society and Monthly Record of Geography* 12: 99-105.
HOOKER W. J. 1854. — James Edward Winterbottom. *Journal of Botany* 6: 307-308.
HOSSEINNEJAD AZAD G., MEHREGAN I., NEJADSATTARI T. & ALBACH D. C. 2020. — The relationship analysis of taxonomical, phylogeographical, variation and genetical structure between *Veronica anagallis-aquatica* L. populations in Iran. *Archives of Pharmacy Practice* 22: 54-61.
HOSSEINNEJAD AZAD G., MEHREGAN I. & ALBACH D. C. 2021. — Morphometric analysis for the evaluation of diversity within and among *Veronica anagallis-aquatica* L. populations in Iran. *The Iranian Journal of Botany* 27 (2): 130-145.
HUMBOLDT A. V., BONPLAND A. & KUNTH C. S. 1817. — *Nova genera et species plantarum*. Vol. 2. Librariae Graeco-Latino-Germanicae, Paris, 324 p.
IWATSUKI K., YAMAZAKI T. & D. E. BOUFFORD H. O. 1993. — *Flora of Japan*. Kadansha Ltd., Tokyo, 327-328, 344-357 p.
JACOB M. G. 2000. — Michael Pakenham Edgeworth (1812–81) Pioneer Irish photographer. *History of Photography* 24 (2): 169-174.
JASPRICA N. & KOVAČIĆ S. 2001. — Botaničar Lujo Adamović (1864-1935). *Prirodoslovlje* 1 (1): 45-62.
JESSOP J. P. & TOELKEN H. R. 1986. — *Flora of South Australia. Part III. Polemoniaceae-Compositae*. South Australian Government Printing Division, Adelaide, 574 p.
JUNGE P. 1912. — *Veronica aquatica* Bernh. im Gebiete der Unterelbe und Schleswig-Holstein. *Verhandlungen des botanischen Vereins der Provinz Brandenburg* 53: 42-49. https://www.biodiversitylibrary.org/page/33722595
JUSSIEU A. L. DE 1789. — *Genera plantarum: secundum ordines naturales disposita, juxta methodum in Horto regio parisiensi exaratam, anno M.DCC.LXXIV*. Herissant et Theophilum Barrois, Paris, 526 p. https://doi.org/10.5962/bhl.title.284
KARELIN G. & KIRILOW J. 1841. — Enumeratio plantarum anno 1840 in regionibus altaicis et confinibus collectarum. *Bulletin de la Société impériale des naturalistes de Moscou* 14: 703-870. https://www.biodiversitylibrary.org/page/44036460
KARELIN G. & KIRILOW J. 1842. — Enumeratio plantarum in desertis Songoriae orientalis et in jugo summarum alpium Alatau anno 1841 collectarum. *Bulletin de la Société impériale des naturalistes de Moscou* 15: 321-453. https://www.biodiversitylibrary.org/page/44035094
KHAN G., MAYLAND-QUELLHORST E., KOSACHEV P. A., MANDÁKOVÁ T., LYSAK M. A. & ALBACH D. C. 2024. — Altai Mountains – cradle of hybrids and introgressants: A case study in *Veronica* subg. *Pseudolysimachium* (Plantaginaceae). *Taxon* 73 (2): 530-546. https://doi.org/10.1002/tax.13176
KHASSANOV F. O., CHERNEVA O. V., TURDIBOEV O. A., TURDIBOEV SH A. & TOJIBAEV K. S. 2022. — Prominent botanists of Central Asia: Vvedensky Aleksey Ivanovich (1898–1972). *Plant Diversity of Central Asia* 2: 1-25. https://doi.org/10.54981/PDCA/vol1_iss2/a1
KICKX J. 1861. — Prologue consacré à la mémoire d'Alexandre-Louis-Simon Lejeune. *Belgique horticole* 11: 5-12. https://www.biodiversitylibrary.org/page/43012943
KNAPP J. A. 1877a. — Zur Verbreitung der *Veronica grandis* Fisch. *Österreichische Botanische Zeitschrift* 27: 362-366. https://www.biodiversitylibrary.org/page/28791713
KNAPP J. A. 1877b. — Baron Ferdinand von Mueller: eine biographische Skizze. *Zeitschrift des Allgemeinen Österreichischen Apotheker-Vereines* 15: 597-617.
KNAPP J. A. 1881. — Dr. Vincenz von Borbás. *Österreichische Botanische Zeitschrift* 31: 209-214. https://www.biodiversitylibrary.org/page/28850716
KOCH K. 1843. — Catalogue Plantarum, quas in itinere per caucasum, georgiam armeniamque annis MDCCCXXXVI et MDCCCXXXVII. *Linnaea* 17: 273-314. https://www.biodiversitylibrary.org/page/107066
KOCH K. 1849. — Beiträge zu einer Flora des Orientes. *Linnaea* 22: 177-338, 597-752. https://www.biodiversitylibrary.org/page/35384540, https://www.biodiversitylibrary.org/page/35384960
KOSACHEV P. A. 2011. — Typification of names of some species of *Veronica* L. and *Linaria* Mill. (Plantaginaceae) described from Siberia. *Novosti sistematiki vysshikh rastenii* 43: 132-143.
KOSACHEV P. A., MAYLAND-QUELLHORST E. & ALBACH D. C. 2019. — Hybridization among the species of *Veronica* subg. *Pseudolysimachium* from the Altai detected by SRAP markers. *Nordic Journal of Botany* 37: e02209. https://doi.org/10.1111/njb.02209
KOSACHEV P. A., BEHÇET L., MAYLAND-QUELLHORST E. & ALBACH D. C. 2016. — Analyzing reticulate relationships using cpDNA and pyrosequenced ITS1 as exemplified by *Veronica* subgen. *Pseudolysimachium* (Plantaginaceae). *Systematic Botany* 41 (1): 105-119. https://doi.org/10.1600/036364416X690697
KOVTONYUK N. & BELYAEVA I. 2015. — Nomenclatural and taxonomic notes on the names published by MG Popov in *Salix* L. and *Populus* L. (Salicaceae). *Skvortsovia* 2 (2): 126-140.
KŘIVKA P. & HOLUBEC V. 2010. — The Balkan collections in the main Czech herbaria. *Phytologia Balcanica* 16 (2): 215-220.
KRYLOV P. N. 1939. — *Flora Zapadnoi Sibiri* [= *Flora Sibiriae occidentalis*]. Vol. 10. Tomskoe Otdelenie Russkogo Botaničeskogo Obščestva, Tomsk, 237 p.
KUNTH C. S. 1823. — *Synopsis plantarum, quas in itinere ad plagam aequinoctialem orbis novi collegerunt Al. de Humboldt et Am. Bonpland*. Vol. 2. FG Levrault, Paris, 526 p. https://gallica.bnf.fr/ark:/12148/bpt6k9807525g
LACK H. W. 2009. — *Alexander von Humboldt und die botanische Erforschung Amerikas*. Prestel, Munich, 278 p.
LACK H. W. 2020. — Theodor Kotschy in Iran, 1841–1843. Botanical collections and an early printed vegetation profile. *Candollea* 75 (1): 31-43, 13. https://doi.org/10.15553/c2020v751a3
LACK H. W. & BARINA Z. 2020. — The early botanical exploration of Albania (1839-1945). *Willdenowia* 50 (3): 519-558. https://doi.org/10.3372/wi.50.50304
LAMARCK J. B. 1778. — *Flore françoise*. Imprimerie royale, Paris, 684 p. https://doi.org/10.5962/bhl.title.9461
LAMARCK J. B. 1791. — *Tableau encyclopédique et méthodique des trois règnes de la nature*. Panckoucke, Paris, 440 p. https://doi.org/10.5962/bhl.title.218
LAMARCK J. B. 1795. — *Flore françoise, ou description succinte de toutes les plantes qui croissent naturellement en France*. Vol. 2. H. Agasse, Paris, 674 p.
LAMARCK J. B. & POIRET J.-L.-M. 1783. — *Encyclopédie méthodique. Botanique*. Panckoucke, Paris, 752 p. https://doi.org/10.5962/bhl.title.824
LAMARCK J. B. & CANDOLLE A. P. DE 1805. — *Flore française*. Ed. 3, Vol. 3. H. Agasse, Paris, 731 p. https://bibdigital.rjb.csic.es/idurl/1/9876
LAMARCK J. B. & CANDOLLE A. P. DE 1815. — *Flore française*. Ed. 3, reissue, Vol. 3. Desray, Paris, 731 p. https://doi.org/10.5962/bhl.title.112968

Lamarck J. B., Monet P. A. de & Poiret J.-L.-M. d. 1810. — *Encyclopédie méthodique. Botanique. Supplément*. Vol. 1. Agasse, Paris, 752 p. https://doi.org/10.5962/bhl.title.826
Lapeyrouse P. P. de 1818. — *Supplément à l'histoire abrégée des plantes des Pyrénées*. Bellegarigue, Toulouse, 158 p. https://gallica.bnf.fr/ark:/12148/bpt6k98080022
Le Bras G., Pignal M., Jeanson M. L., Muller S., Aupic C., Carré B., Flament G., Gaudeul M., Gonçalves C., Invernón V. R., Jabbour F., Lerat E., Lowry P. P., Offroy B., Pimparé E. P., Poncy O., Rouhan G. & Haevermans T. 2017. — The French Muséum national d'histoire naturelle vascular plant herbarium collection dataset. *Scientific Data* 4 (1): 170016. https://doi.org/https:/doi.org/10.1038/sdata.2017.16
Le Grand A. 1899. — Quatrième notice sur quelques plantes critiques ou peu connues de France. *Bulletin de l'Association Française de Botanique* 2: 60-80.
Ledebour C. F. 1829. — *Flora Altaica*. G. Reimer, Berlin, 440 p. https://doi.org/10.5962/bhl.title.6618
Lefèvre W. 2001. — *Jean Baptiste Lamarck, Darwin & Co.: eine Geschichte der Biologie in Porträts.* Vol. 1. C. H. Beck, Munich: 176-201.
Lehmann E. B. J. 1906. — Wanderung und Verbreitung von *Veronica tournefortii* Gm. *Abhandlungen der naturwissenschaftlichen Gesellschaft ISIS* 2: 93-107.
Lehmann E. B. J. 1908. — Geschichte und Geographie der *Veronica*-Gruppe *Agrestis*. *Bulletin de l'herbier Boissier* 8: 229-660. https://www.biodiversitylibrary.org/page/33632969
Lehmann E. B. J. 1942. — Die Einbürgerung von *Veronica filiformis* Sm. in Westeuropa und ein Vergleich ihres Verhaltens mit dem der *V. tournefortii* Gm. *Gartenbauwissenschaften* 16: 428-489. https://www.jstor.org/stable/24135469
Lejeune A. L. S. 1811. — *Flore des environs de Spa*. Vol. 1. Duvivier, Liège, 254 p.
Lejeune A. L. S. 1813. — *Flore des environs de Spa*. Vol. 2. Duvivier, Liège, 350 p.
Lejeune A. L. S. 1824. — *Revue de la flore des environs de Spa*. V. Duvivier, Liège, 263 p. https://www.biodiversitylibrary.org/page/63016456
Léveillé H. 1911. — Planta novae sandwicenses. *Repertorium specierum novarum regni vegetabilis* 10: 120-124. https://www.biodiversitylibrary.org/page/181775
Lignereux Y. 2004. — Philibert Commerson, médecin-naturaliste du roi (1727-1773) ou la traversée inachevée. *Bulletin du Centre d'Étude d'Histoire de la Médecine* 47: 7-51.
Link H. F., Schwägrichen A. F. & Dietrich A. 1831. — *Species plantarum, exhibentes plantas rite cognitas ad genera relatas cum differentiis specificis, nominibus trivialibus, synonymis selectis, locis natalibus secundum systema sexuale digestas.* 6, aucta et continuata ab H.F. Link. Fr. Schwägrichen and A. Dietrich, Vol. t. 1. G.C. Nauck. https://www.biodiversitylibrary.org/item/30587
Linnaeus C. von 1753. — *Species Plantarum*. L. Salvius, Holm, 560 p. https://doi.org/10.5962/bhl.title.669
Litardière R. de & Maire R. 1924. — Contributions à l'étude de la flore du Grand Atlas. *Mémoires de la société des sciences naturelles du Maroc* 4: 3-31. https://bibdigital.rjb.csic.es/idurl/1/12458
Litardière R. de & Maire R. 1930. — Contributions à l'étude de la flore du Maroc, fasc. II. *Mémoires de la société des sciences naturelles du Maroc* 6: 1-56. https://gallica.bnf.fr/ark:/12148/bpt6k7061597d
Lobin W. 1999. — Die von Eduard Rüppell in Ägypten und Abyssinien sowie auf der Sinai-Halbinsel gesammelten Pflanzen (Phanerogamae). *Courier Forschungsinstitut Senckenberg* 217: 5-28.
Lyall A. 2010. — David Lyall (1817-1895): Botanical Explorer of Antarctica, New Zealand, the Arctic and North America. *The Linnean* 26 (2): 25-48.
Maire R. 1929. — Contributions à l'étude de la flore de l'Afrique du Nord. *Bulletin de la Société d'Histoire naturelle de l'Afrique du Nord* 20: 12-42. https://bibdigital.rjb.csic.es/idurl/1/11132
Maire R. 1937. — Contributions à l'étude de la flore de l'Afrique du nord. *Bulletin de la société d'histoire naturelle de l'Afrique du Nord* 28: 332-388. https://bibdigital.rjb.csic.es/idurl/1/15281
Maire R. 1940. — Contributions à l'étude de la flore de l'Afrique du Nord. *Bulletin de la société d'histoire naturelle de l'Afrique du Nord* 31: 7-49. https://bibdigital.rjb.csic.es/idurl/1/15284
Maire R. & Petitmengin M. 1908. — Étude des plantes vasculaires récoltées en Grèce. *Matériaux pour servir à l'étude de la flore et de la géographie botanique de l'Orient* 4: 1-239.
Malý K. 1908. — Beiträge zur Kenntnis der illyrischen Flora. *Magyar botanikai Lapok* 7: 203-240. https://www.biodiversitylibrary.org/page/50306533
Martinez-Ortega M. M. & Rico E. 2000. — Algunas tipificaciones y combinaciones nuevas en las *Veronica* L. (Scrophulariaceae) perennes. *Anales del Jardin Botanico Madrid* 57: 477-479.
Martinez-Ortega M. M. & Rico E. 2001a. — Typification of 10 specific names in *Veronica* L. (Scrophulariaceae, Veroniceae). *Taxon* 50 (2): 543-550. https://doi.org/10.2307/1223900
Martinez-Ortega M. M. & Rico E. 2001b. — Taxonomy of *Veronica* subsect. *Serpyllifolia* (Scrophulariaceae). *Botanical Journal of the Linnean Society* 135 (2): 179-194. https://doi.org/10.1111/j.1095-8339.2001.tb01090.x
Martínez-Ortega M. M. & Albach D. C. 2003. — Proposal to conserve the name *Veronica cinerea* Boiss. & Balansa against *Veronica cinerea* Raf. (Scrophulariaceae). *Taxon* 52: 375-376. https://doi.org/10.2307/3647424
Martínez Ortega M. M., Delgado L., Albach D. C., Elena-Rosselló J. A. & Rico E. 2004. — Species boundaries and phylogeography of *Veronica* subsect. *Pentasepalae* (Scrophulariaceae) in the Western Mediterranean inferred from AFLP markers. *Systematic Botany* 29: 965-986. https://doi.org/10.1600/0363644042451071
Matzke-Hajek G. 2005. — Philipp Wirtgen (1806-1870) Taxonom und Pflanzengeograph. *Decheniana (Bonn)* 158: 31-12.
Maublanc A. 1941. — *Veronica acinifolia* f. *gracilis*. *Société française d'Échanges de Plantes no. 403*.
Mazzola P., Geraci A. & Castiglia A. 1997. — Collections and collectors in the Herbarium Siculum of Palermo. *Bocconea* 5 (2): 417-424. http://www.herbmedit.org/bocconea/5-417.pdf
Meyer C. A. 1831. — *Verzeichnis der Pflanzen*. Kaiserl. Akademie der Wissenschaften, St. Petersburg, 241 p. https://gallica.bnf.fr/ark:/12148/bpt6k96836g
Miégeville J. 1867. — Explanatio analytica quarundam plantarum pyrenaearum. *Bulletin de la Société botanique de France* 14: 144-146. https://www.biodiversitylibrary.org/page/253786
Monjuschko V. A. 1924. — Fragmenta ad floram Veronicarum asiaticarum. *Botanicheskie materialy Gerbariya glavnogo botaniczeskogo Sada R. S. F. S. R.* 5: 114-123.
Mouterde P. & Fischer M. A. 1984. — *Veronica*, *in* Mouterde P. (ed.), *Nouvelle Flore du Liban et de la Syrie*. Vol. 3 (Atlas). Dar el-Machreq SARL, Beyrouth: 130-133.
Muñoz-Centeno L. M., Albach D. C., Sánchez-Agudo J. Á. & Martinez-Ortega M. M. 2006. — Systematic significance of seed morphology in *Veronica* (Plantaginaceae). A phylogenetic perspective. *Annals of Botany* 98: 335-350. https://doi.org/10.1093/aob/mcl120
Murbeck S. S. 1923. — Contributions à la connaissance de la Flore du Maroc II. Géraniacées – Composées. *Lunds Universitets Arsskrift Ny Följd* 19: 1-68.
Musgrave T., Gardner C. & Musgrave W. 1998. — *The Plant Hunters: two Hundred Years of Adventure and Discovery Around the World*. Cassell Illustrated, London, 224 p.
Nakai T. 1915. — Plantæ novæ Japonicæ et Koreanæ IV. *Botanical Magazine Tokyo* 29: 1-13. https://www.biodiversitylibrary.org/page/41638719
Nakai T. 1943. — Notulae ad plantas Asiae orientalis (XXV). *Journal of Japanese Botany* 19 (6): 155-165.
Noltie H. & Watson M. 2021. — The Collectors of the Wallich (or East India Company) Herbarium, *in* RBGE Personal &Project Stories. https://stories.rbge.org.uk/archives/34728

NYÁRÁDY E. G. 1926. — Adnotatiuni la flora Romaniei. II. *Buletinul Grădinii Botanice şi al Muzeului Botanic dela Universitatea din Cluj* 6: 126-131.

NYMAN C. F. 1881. — *Conspectus Florae Europaeae*. Vol. 3. Bohliniana, Örebro, 185 p. https://bibdigital.rjb.csic.es/idurl/1/9912

OHASHI H. 2015. — Variation in *Veronicastrum sibiricum* (Plantaginaceae). *Journal of Japanese Botany* 90 (3): 179-191.

OLIVER W. R. B. 1944. — The *Veronica*-like species of New Zealand. *Records of the Dominion Museum* 1: 228-231.

OSSENBACH C. 2023. — Orchids of the Southern Cone (1830-2000) – Part II. The Philippi dynasty: Plantarum Novarum Chilensium and Catalogus Plantarum Chilensium. *Lankesteriana: International Journal on Orchidology*: 11-33. https://doi.org/10.15517/lank.v23i1.54405

PADILLA-GARCÍA N., ROJAS-ANDRÉS B. M., LÓPEZ-GONZÁLEZ N., CASTRO M., CASTRO S., LOUREIRO J., ALBACH D. C., MACHON N. & MARTÍNEZ-ORTEGA M. M. 2018. — The challenge of species delimitation in the diploid-polyploid complex *Veronica* subsection *Pentasepalae*. *Molecular Phylogenetics and Evolution* 119: 196-209. https://doi.org/10.1016/j.ympev.2017.11.007

PARSA A. 1948. — New species and varieties of the Persian flora: II. *Kew Bulletin* 1948: 191-228. https://doi.org/10.2307/4119762

PAU C. 1907. — Formas nuevas de plantas. *Boletin de la Sociedad Aragonesa de Ciencias Naturales* 6: 23-30. https://www.biodiversitylibrary.org/page/46135882

PENNELL F. W. 1919. — Scrophulariaceae of the local flora, III. *Torreya* 19: 161-171. https://doi.org/10.5962/bhl.title.59558

PENNELL F. W. 1921. — "*Veronica*" in North and South America. *Rhodora* 23: 1-41. https://www.jstor.org/stable/23297887

PENNELL F. W. 1935a. — Elias Durand and his association with the Academy of Natural Sciences of Philadelphia. *Bartonia* 17: 33-39. https://www.jstor.org/stable/41609596

PENNELL F. W. 1935b. — Scrophulariaceae of eastern temperate North America. *Monographs of the Academy of Natural Sciences of Philadelphia* 1: 320-378.

PENNELL F. W. 1936. — Botanical results of the Archbold expedition No. 7. *Brittonia* 2 (3): 177-188.

PENNELL F. W. 1943. — *The Scrophulariaceae of the western Himalayas*. Academy of Natural Sciences of Philadelphia, Philadelphia, 163 p. (Monographs No. 5).

PENNELL F. W. 1944. — How Durand acquired Rafinesque's herbarium. *Bartonia* (23): 43-46. https://www.jstor.org/stable/41609647

PERSOON C. H. 1805. — *Synopsis plantarum*. Vol. 1. C. F. Cramer, Paris, 546 p. https://doi.org/10.5962/bhl.title.638

PHILIPPI R. A. 1857. — Plantarum novarum Chilensium Centuriae sextae pars. *Linnaea* 29: 96-110.

PLUCHET R. 2014. — *L'extraordinaire voyage d'un botaniste en Perse. André Michaux 1782-1785*. Éditions Privat, 240 p.

POIRET J. L. M. 1808. — *Encyclopédie méthodique*. *Botanique*. Vol. 8. Pancoucke, Paris, 879 p. https://doi.org/10.5962/bhl.title.824

POIRET J. L. M. 1817. — *Encyclopédie méthodique*. *Botanique*. Suppl. 5. Pancoucke, Paris, 780 p. https://doi.org/10.5962/bhl.title.824

POISSON M. 1876. — Notice nécrologique sur M. Grenier. *Bulletin de la Société botanique de France* 23: 168-175. https://www.biodiversitylibrary.org/page/310584

POPOV M. G. 1922. — Sur la végétation des monts Sary-Taou et des lieux voisins en Fergana. *Trudy Turkestanskogo Gosudarstvennogo Universiteta* 4: 1-68.

RAFINESQUE C. S. 1832. — New plants from Bartram's Botanic Garden. *Atlantic Journal* 1: 79-80. https://www.biodiversitylibrary.org/page/54260876

RAFINESQUE C. S. 1838. — *New Flora and Botany of North America*. Vol. 4. C. S. Rafinesque, Philadelphia, 112 p. https://doi.org/10.5962/bhl.title.6139

RAOUL E. 1846. — *Choix des plantes de la Nouvelle-Zélande*. Fortin, Masson et Companie, Leipzig, 53 p.

REICH D., GUTERMANN W., BARDY K., RAINER H., RAUS T., SONNLEITNER M., TAN K. & LACHMAYER M. 2021. — The type specimens in Eugen von Halácsy' s Herbarium Graecum. *Phytotaxa* 493 (1): 1–156-151–156. https://doi.org/10.11646/phytotaxa.493.1.1

REICHENBACH L. 1833 (1830-2). — *Flora Germanica excursoria*. Karl Knobloch, Leipzig, 878 p. https://doi.org/10.5962/bhl.title.309

REYNIER A. 1902. — Diverses récoltes en Provence et annotations. *Bulletin de l'Académie internationale de géographie botanique* 11: 289-292. https://www.biodiversitylibrary.org/page/4532020

REYNIER A. 1905. — No. 342. – *Veronica filiformis* Sm., var. *subabortiva* Reynier. *Bulletin de l'association pyrénéenne pour l'échange des plantes* 15: 17-18.

RICE A., GLICK L., ABADI S., EINHORN M., KOPELMAN N. M., SALMAN-MINKOV A., MAYZEL J., CHAY O. & MAYROSE I. 2015. — The Chromosome Counts Database (CCDB) – a community resource of plant chromosome numbers. *New Phytologist* 206 (1): 19-26. https://doi.org/10.1111/nph.13191

RICHARD A. 1832. — Essai d'une flore de la Nouvelle-Zelande, *in* LESSON A. & RICHARD A. (eds), *Voyage de découvertes de l'Astrolabe. Botanique.* J. Tastu, Paris: 1-376.

RICHARD A. 1847. — *Tentamen florae Abyssinicae*. Vol. 1. Arthus Bertrand, Paris, 472 p. https://doi.org/10.5962/bhl.title.334

RICHARD A. 1851. — *Tentamen florae Abyssinicae*. Vol. 2. Arthus Bertrand, Paris, 518 p. https://doi.org/10.5962/bhl.title.334

RIEK R. 1935. — Systematische und pflanzengeographische Untersuchungen in der *Veronica*-Sektion *Chamaedrys* Griseb. *Repertorium specierum novarum regni vegetabilis, Beihefte* 79: 1-68.

ROJAS-ANDRÉS B. M. & MARTINEZ-ORTEGA M. M. 2016. — Taxonomic revision of *Veronica* subsection *Pentasepalae* (*Veronica*, Plantaginaceae sensu APG III). *Phytotaxa* 285 (1): 1-100. https://doi.org/10.11646/phytotaxa.285.1.1

ROJAS-ANDRÉS B. M., ALBACH D. C. & MARTÍNEZ-ORTEGA M. M. 2015. — Exploring the intricate evolutionary history of the diploid–polyploid complex *Veronica* subsection *Pentasepalae* (Plantaginaceae). *Botanical Journal of the Linnean Society* 179 (4): 670-692. https://doi.org/10.1111/boj.12345

ROJAS-ANDRÉS B. M., RICO E. & MARTÍNEZ-ORTEGA M. M. 2016. — A nomenclatural treatment for *Veronica* subsect. *Pentasepalae* (Plantaginaceae sensu APG III) and typification of several names. *Taxon* 65 (3): 617-627. https://doi.org/10.12705/653.14

RÖMPP H. 1928. — Die Verwandtschaftsverhältnisse in der Gattung *Veronica*. *Repertorium specierum novarum regni vegetabilis, Beihefte* 50: 1-171.

ROUY G. 1909. — *Flore de France*. Vol. 11. Fils d'Émile Deyrolle, Paris, 429 p. https://bibdigital.rjb.csic.es/idurl/1/10260

ROXBURGH W. & WALLICH N. 1820. — *Flora Indica*. Vol. 1. Mission Press, Serampore, 493 p. https://doi.org/10.5962/bhl.title.589

SAMPAIO G. 1901. — Plantas novas para a flora de Portugal. *Annaes de sciencias naturaes (Porto)* 7: 109-118. https://www.biodiversitylibrary.org/page/6655331

SÁNCHEZ AGUDO J. Á., MARTÍNEZ-ORTEGA M. M., CAFFERTY S. & RICO E. 2012. — A contribution toward clarifying the nomenclature of *Veronica* L. (Plantaginaceae). *Taxon* 61 (4): 867-870. https://doi.org/10.1002/tax.614013

SANDER H. & MEIKAR T. 2011. — Botanical garden of the University of Tartu (Dorpat) and the botanical network in the first half of the 19th century. *Baltic Journal of European Studies* 1 (1): 230-256.

SCALONE R. & ALBACH D. C. 2012. — Degradation of sexual reproduction in *Veronica filiformis* after introduction to Europe. *BMC Evolutionary Biology* 12 (1): 233. https://doi.org/10.1186/1471-2148-12-233

SCHMID R. 2004. — Reviews and Notices of Publications. *Taxon* 53 (4): 1117-1126. https://doi.org/10.1002/tax.534003

SCHULTES J. A. 1822. — *Mantissa in Volumen primum systematis vegetabilium Caroli a Linné*. J. G. Cottae, Stuttgart, 386 p. https://doi.org/10.5962/bhl.title.552

SCHUR F. 1866. — *Enumeratio plantarum transsilvaniae*. W. Braumüller, Wien, 984 p. https://doi.org/10.5962/bhl.title.9958

Sellers R. F. 1983. —Morpho-geographical analysis of *Veronica* section *Beccabunga*. PhD thesis, University of Oklahoma, 158 p.
Sennen F. 1930. — Plantes d'Espagne. Diagnoses et commentaires. *Boletin de la Sociedad Ibérica de Ciencias Naturales* 29 (12): 74-89.
Simpson M. J. A. 1976. — E.F.L. and E.F.A. Raoul. *New Zealand Journal of Botany* 14 (2): 199-202. https://doi.org/10.1080/0028825X.1976.10428896
Sojak J. 1983a. — Fragmenta phytotaxonomica et nomenclatorica (4.). *Časopis Národního Musea, Oddíl přírodovědný* 152 (1): 12-25.
Sojak J. 1983b. — Einige Bemerkungen zur Flora der UdSSR. *Sborník Národního Muzea v Prazě, Rada B: Prírodni vědy* 39: 53-59.
Sonibare M., Armagan M., Özgökce F., Yaprak A. E., Mayland-Quellhorst E. & Albach D. C. 2014. — Analysis of taxonomic and geographic patterns of Turkish *Veronica orientalis* using nuclear and plastid DNA and morphological data. *Plant Systematics and Evolution* 300 (4): 645-664. https://doi.org/10.1007/s00606-013-0909-4
Speta F. 1994. — Leben und Werk von Ferdinand Schur. *Stapfia* 32: 1-334.
Sprengel K. 1821. — Species Plantarum minus cognitae. *Neue Entdeckungen im ganzen Umfang der Pflanzenkunde* 2: 95-175. https://www.biodiversitylibrary.org/page/14338229
Stafleu F. A. 1970. — Boissier's diagnoses. *Taxon* 19 (5): 803-805. https://doi.org/10.2307/1219299
Stafleu F. A. & Cowan R. S. 1976. — *Taxonomic Literature: a Selective Guide to Botanical Publications and Collections with Dates, Commentaries and Types, A-G*. Bohn, Scheltema & Holkema, Utrecht, 1136 p. (Regnum Vegetabile: 94). https://doi.org/10.5962/bhl.title.48631. https://www.biodiversitylibrary.org/page/33120144
Stafleu F. A. & Cowan R. S. 1979. — *Taxonomic Literature: a Selective Guide to Botanical Publications and Collections with Dates, Commentaries and Types, H-Le*. Bohn, Scheltema & Holkema, Utrecht, 981 p. (Regnum Vegetabile: 98). https://www.biodiversitylibrary.org/page/33068227
Stafleu F. A. & Cowan R. S. 1981. — *Taxonomic Literature: a Selective Guide to Botanical Publications and Collections with Dates, Commentaries and Types, Lh-O*. Bohn, Scheltema & Holkema, Utrecht, 980 p. (Regnum Vegetabile: 105). https://www.biodiversitylibrary.org/page/33355136
Stafleu F. A. & Cowan R. S. 1983. — *Taxonomic Literature: a Selective Guide to Botanical Publications and Collections with Dates, Commentaries and Types, P-Sak*. Bohn, Scheltema & Holkema, Utrecht, 1214 p. (Regnum Vegetabile: 110). https://www.biodiversitylibrary.org/page/33189522
Stafleu F. A. & Cowan R. S. 1985. — *Taxonomic Literature: a Selective Guide to Botanical Publications and Collections with Dates, Commentaries and Types, Sal-Ste*. Bohn, Scheltema & Holkema, Utrecht, 1066 p. (Regnum Vegetabile: 112). https://www.biodiversitylibrary.org/page/33333186
Stafleu F. A. & Cowan R. S. 1986. — *Taxonomic Literature: a Selective Guide to Botanical Publications and Collections with Dates, Commentaries and Types, Sti-Vuy*. Bohn, Scheltema & Holkema, Utrecht, 926 p. (Regnum Vegetabile: 115). https://www.biodiversitylibrary.org/page/33212097
Stafleu F. A. & Cowan R. S. 1988. — *Taxonomic Literature: a Selective Guide to Botanical Publications and Collections with Dates, Commentaries and Types, W-Z*. Bohn, Scheltema & Holkema, Utrecht, 653 p. (Regnum Vegetabile: 116). https://www.biodiversitylibrary.org/page/33066345
Stafleu F. A. & Mennega E. A. 1992. — *Taxonomic Literature: a Selective Guide to Botanical Publications and Collections with Dates, Commentaries and Types, Supplement I A-Ba*. Koeltz Scientific Books, Königstein, 543 p. (Regnum Vegetabile: 125). https://www.biodiversitylibrary.org/page/33264780
Stafleu F. A. & Mennega E. A. 1993. — *Taxonomic Literature: a Selective Guide to Botanical Publications and Collections with Dates, Commentaries and Types, Supplement II, Be-Bo*. Koeltz Scientific Books, Königstein, 493 p. (Regnum Vegetabile: 130). https://www.biodiversitylibrary.org/page/33265194
Stafleu F. A. & Mennega E. A. 2000. — *Taxonomic Literature: a Selective Guide to Botanical Publications and Collections with Dates, Commentaries and Types, Supplement VI, Do-E*. Koeltz Scientific Books, Königstein, 518 p. (Regnum Vegetabile: 137). https://www.biodiversitylibrary.org/page/33259985
Stapf O. 1909. — The Herbarium Savatier. *Bulletin of Miscellaneous Information (Royal Botanic Gardens, Kew)* 1909 (3): 148-150. https://doi.org/10.2307/4111527
Stearn W. T. 1938. — Dates of Publication of Some Floras of North-West Africa: Desfontaines' "Flora Atlantica," Cosson's "Compendium," Cosson and Baratte's "Illustrationes", Battandier and Trabut's "Flore". *Journal of the Society for the Bibliography of Natural History* 1 (5): 145-150. https://doi.org/10.3366/jsbnh.1938.1.5.145
Steetz J. 1855. — Fried. D. L. von Fischer. *Bonplandia* 3: 18-21. https://www.biodiversitylibrary.org/page/28141252
Stern F. C. 1944. — Papers on the exploration of China. 3. The discoveries of the great French missionaries in central and western China. *Proceedings of the Linnean Society of London* 156: 16-20.
Steudel E. 1841. — *Nomenclator botanicus*. J. G. Cottae, Stuttgart and Tübingen, 810 p. https://doi.org/10.5962/bhl.title.655
Strachey R. S. & Duthie J. F. 1906. — *Catalogue of the Plants of Kumaon and of the Adjacent Portions Garhwal and Tibet, based on the Collections made by Strachey and Winterbottom during the Years 1846 to 1849 and on the Catalogue Originally Prepared in 1852*. L. Reeve & Co., Ltd, London, 206 p. https://doi.org/10.5962/bhl.title.11063
Strid A. 2000. — New taxa described in Grisebach's "Spicilegium Florae Rumelicae et Bithynicae" (1843-46). *Preslia* 72: 241-321.
Strid A. 2024. — *The Greek Plants of Theodor von Heldreich*. Schweizerbart Science Publishers, Stuttgart, 267 p. (Bibliotheca Botanica: 164).
Stroh G. 1942. — Die Gattung *Veronica* L. Versuch einer systematischen Kodifizierung der Arten (mit Ausnahme der endemischen Arten von Neuseeland). *Beihefte zum Botanischen Centralblatt, Abteilung B* 61: 384-451.
Stuckey R. L. 1971a. — The first public auction of an American herbarium including an account of the fate of the Baldwin, Collins, and Rafinesque herbaria. *Taxon* 20 (4): 443-459. https://doi.org/10.2307/1218245
Stuckey R. L. 1971b. — CS Rafinesque's North American vascular plants at the Academy of Natural Sciences of Philadelphia. *Brittonia* 23: 191-208. https://doi.org/10.2307/2805435
Stuckey R. L. 1986. — Opinions of Rafinesque expressed by his American botanical contemporaries. *Bartonia* 52: 26-41. https://www.jstor.org/stable/41601890
Takhtajan A. L. 1987. — *Flora Armenii: Verbenaceae – Lentibulariaceae*. Publishing house of the Academy of Sciences of the Armenian SSR, Yerevan, 419 p.
Terré M. L. A. J. 1953. — Rapport sur les botanistes du département de l'Aveyron, au cours de la réception à la Mairie de Millau. *Bulletin de la Société botanique de France* 100 (10): 6-8. https://doi.org/10.1080/00378941.1953.10833237
Terrot C. H. 1856. — Opening address. *Proceedings of the Royal Society of Edinburgh* 3: 398-412.
Thiers B. (continuously updated). — Index Herbariorum: A global directory of public herbaria and associated staff. New York Botanical Garden, New York. http://sweetgum.nybg.org/science/ih/
Thuillier M. 1790. — *Flore des environs de Paris*. V. Desaint, Paris, 550 p. https://gallica.bnf.fr/ark:/12148/bpt6k62388r
Tineo V. 1846. — *Plantarum rariorum Siciliae*. Vol. 3. Barravecchiae, Palermo, 16 p. https://bibdigital.rjb.csic.es/idurl/1/12356

TSOONG P. C. & YANG H. P. 1979. — *Flora Reipublicae Popularis Sinicae: Scrophulariaceae* (1) (Vol. 67/2). Science Press.
TOURNEFORT J. P. DE 1700. —*Institutiones rei herbariae*. Vol. 1. Typographia Regia, Paris, 697 p. https://doi.org/10.5962/bhl.title.713
TOWNSEND M. 1878. — Sur une nouvelle espèce de *Veronica*. *Bulletin de la Société botanique de France* 25: 15-21. https://www.biodiversitylibrary.org/page/259486
TRÁVNÍČEK B. 1998. — Notes on the taxonomy of *Pseudolysimachion* sect. *Pseudolysimachion* (Scrophulariaceae) in Europe. I. *P. incanum* and *P. spicatum*. *Preslia* 70 (3): 193-223.
TURCZANINOW N. 1838. — Catalogus plantarum in regionibus Baicalenibus, et in Dahuria sponte crescentium. *Bulletin de la Société impériale des naturalistes de Moscou* 11: 85-107. https://www.biodiversitylibrary.org/page/41342075
TURCZANINOW N. 1851. — Flora Baicalensi-dahurica. *Bulletin de la Société impériale des naturalistes de Moscou* 24 (2): 297-408. https://www.biodiversitylibrary.org/page/44112049
TURLAND N. J., WIERSEMA J. H., BARRIE F. R., GREUTER W., HAWKSWORTH D. L., HERENDEEN P. S., KNAPP S., KUSBER W. H., LI D. Z., MARHOLD K., MAY T. W. M. J., MONRO A. M., PRADO J., PRICE M. J. & SMITH G. F. 2018. — *International Code of Nomenclature for algae, fungi, and plants (Shenzhen Code) adopted by the Nineteenth International Botanical Congress Shenzhen, China, July 2017* Koeltz Botanical Book, Glashütten, 254 p. (Regnum vegetabile: 159). https://doi.org/10.12705/Code.2018
TUZSON J. 1912. — Borbás Vincze herbáriuma. *Botanikai Közlemenyek* 11: 205-207. https://www.biodiversitylibrary.org/page/5147894
VAHL M. 1790. — *Symbolae Botanicae*. N. Müller, Copenhagen, 81 p. https://doi.org/10.5962/bhl.title.57641
VAHL M. 1804. — *Enumeratio plantarum*. J. H. Schubothe, Copenhagen, 52 p. https://doi.org/10.5962/bhl.title.7564
VAILLANT S., AUBRIET C., BOERHAAVE H., VERBEEK H., VERBEEK J. & WANDELAAR J. 1727. — *Botanicon parisiense, ou, Dénombrement par ordre alphabétique des plantes, qui se trouvent aux environs de Paris*. J. & H. Verbeek, Leiden & Amsterdam, 205 p. https://doi.org/10.5962/bhl.title.738
VAN ROYEN P. & EHRENDORFER F. 1970. — New combinations in *Parahebe* (Scrophulariaceae). *Taxon* 19 (3): 483. https://doi.org/10.2307/1219089
VELENOVSKY J. 1894. — Dritter Nachtrag zur Flora von Bulgarien. *Sitzungsberichte der koeniglich-Boehmischen Gesellschaft der Wissenschaften, mathematisch-naturwissenschaftliche Classe* 37: 8-72.
VELENOVSKY J. 1898. — *Flora bulgarica. Supplementum*. Fr. Rivnac, Prag, 404 p. https://doi.org/10.5962/bhl.title.9876
VEREECKE P. 2022. — Frère Sennen's Names. *Patrick Vereecke's Blog*. International Oak Society, Mercer Island [retrieved from https://www.internationaloaksociety.org/content/fr%C3%A8re-sennens-names].
VERLOOVE F. 2017. — Typification and identity of species of *Veronica* subgenus *Pseudolysimachium* (Plantaginaceae) described from Belgium by ALS Lejeune. *Phytotaxa* 329 (3): 296-298. https://doi.org/10.11646/phytotaxa.329.3.14
VIENNOT-BOURGIN G. 1958. — André Maublanc (1880–1958). *Bulletin de la Société botanique de France* 105 (suppl. 1): 86-89. https://doi.org/10.1080/00378941.1958.10837903
VLAHAKIS G. N. & ECONOMOU-AMILLI A. 2012. — Botany in Greece during the 19th Century: A periphery at the Center. *Osmanlı Bilimi Araştırmaları* 13 (2): 1-21.
VOGT R., LACK H. W. & RAUS T. 2018. — The herbarium of Ignaz Dörfler in Berlin. *Willdenowia* 48 (1): 57-92. https://doi.org/10.3372/wi.48.48105
VON MUELLER F. 1852. — Diagnoses et descriptiones plantarum novarum, quas in Nova Hollandia australi praecipue in regionibus interioribus. *Linnaea* 25: 367-445. https://www.biodiversitylibrary.org/page/112746
VON MUELLER F. 1863. — Observations on some hitherto undescribed plants from New Zealand. *Transactions and Proceedings of the botanical society of Edinburgh* 7: 153-155.
VON MUELLER F. 1889. — Records of observations on Sir William MacGregor's highland plants from New Guinea. *Transactions of the Royal Society of Victoria* 1 (2): 1-45. https://www.biodiversitylibrary.org/page/36890866
VON TRAUTVETTER E. R. 1865. — F. E. L. von Fischer und seine Schriften. *Bulletin de la Société impériale des naturalistes de Moscou* 38 (1-2): 585-595. https://www.biodiversitylibrary.org/page/40279415
VUKOJIČIĆ S., LAKUŠIĆ D., JOVANOVIĆ S., MARIN P. D., TOMOVIĆ G., SABOVLJEVIĆ M., SINZAR-SEKULIĆ J., CVIJAN M., BLAZENCIĆ J. & STEFANOVIĆ V. 2011. — University of Belgrade Herbarium–treasury of data and challenges for future research on the occasion of the 150th anniversary of University of Belgrade Herbarium. *Botanica serbica* 35: 163-178.
VVEDENSKY A. I. 1925. — Schedae ad Herbarium florae Asiae mediae. *Bulletin de l'Université de l'Asie centrale* 11: suppl. 1-26.
VVEDENSKY A. I. 1961. — *Flora Uzbekistana*. Vol. 5. Academiae Scientiarum UzSSR, Taschkent, 668 p.
WAGENITZ G. 1960. — Joseph Bornmüller 1862-1948. *Willdenowia* 1960 (2): 343-360. https://www.jstor.org/stable/3995275
WALLICH N. 1828. — *Numerical List of Dried Specimens of Plants in the Museum of the Honourable East India Company*. Unpublished, London, 300 p.
WALPERS W. G. 1844-45. — *Repertorium botanices systematicae*. F. Hofmeister, Leipzig, 1002 p. https://doi.org/10.5962/bhl.title.7553
WARBURG O. 1897. — Ferdinand von Müller. *Berichte der Deutschen Botanischen Gesellschaft* 15: 56-70. https://www.biodiversitylibrary.org/page/5001815
WARREN L. 2014. — *Constantine Samuel Rafinesque: a voice in the American wilderness*. University Press of Kentucky, Lexington, 272 p.
WATSON S. 1888. — Contributions to American Botany. *Proceedings of the American Academy of Arts and Sciences* 23: 249-287. https://www.biodiversitylibrary.org/page/3106075
WATZL B. 1910. — *Veronica prostrata* L., *V. teucrium* L. und *V. austriaca* L. nebst einem Anhang über deren nächste Verwandte. *Abhandlungen der zoologisch-botanischen Gesellschaft Wien* 5 (5): 1-94.
WIESBAUR J. 1887. — Verbreitung der *Veronica agrestis* in Österreich. *Deutsche Botanische Monatsschrift* 5: 137-146, 166-171. https://www.biodiversitylibrary.org/page/43781651, https://www.biodiversitylibrary.org/page/43781680
WILLKOMM M. 1896. — *Grundzüge der Pflanzenverbreitung auf der iberischen Halbinsel*. W. Engelmann, Leipzig, 395 p. https://doi.org/10.5962/bhl.title.30021
WIRTGEN F. P. 1862. — *Herbarium Planta selecta critica hybrida Flora rhenana*.
WOOD J. R. 2012. — 727. *Strobilanthes lachenensis*. *Curtis's Botanical Magazine* 29 (1): 34-43. https://doi.org/10.1111/j.1467-8748.2012.01769.x
WÖRZ A. 2017. — Aktien für die Botanik–der Esslinger Botanische Reiseverein 1825–1845. *Schwäbische Heimat* 68 (2): 193-200. https://doi.org/10.53458/sh.v68i2.1641
YAMAZAKI T. 1952. — Notulae ad Scrophulariaceae Asiae orientalis (2). *Journal of Japanese Botany* 27: 61-67.

Submitted on 14 August 2024;
accepted on 18 October 2024;
published on 10 April 2025.

APPENDIX 1. — Overview over the type material in the herbarium P, including origin from subherbarium, collection year and publication year of the taxon name. Previously published by: ⁺, Sanchez Agudo *et al.* 2012; ⁺⁺, Andrés Sanchez *et al.* 2009; *, Bayly *et al.* 2000; **, Doostmohamadi *et al.* 2022; ***, Verloove 2017.

				Types											
	Taxon name	Author	Collector	holo-	iso-	lecto-	isolecto-	epi-	isoepi-	neo-	isoneo-	syn-	Herbarium	A	Coll. year	Publi. year
1	*V. ocymifolia*	Thuill.	Vaillant	–	–	1	–	–	–	–	–	–	Vaillant	original herbaria	?	1790
2	*V. squamosa* var. *vaillantii*	Rchb.	Vaillant	–	–	–	–	1	–	–	–	–	Vaillant	original herbaria	?	1830
3	*V. gentianoides*	Vahl	Tournefort	–	–	–	?	–	–	–	–	–	Tournefort	original herbaria	?	1790
4	*V. telephiifolia*	Vahl	Tournefort	–	–	–	?	–	–	–	–	–	Tournefort	original herbaria	?	1804
5	*V. constantinopolitana*	Tourn. Ex Riek	Tournefort	–	–	?	–	–	–	–	–	–	Tournefort	original herbarium	?	1935
6	*Hebe magellanica*	Juss.	Commerson	–	–	1	3	–	–	–	–	–	Antoine Laurent de Jussieu, Poiret in Moquin-Tandon in Cosson, general ×2	original herbaria	1767	1791
7	*V. nudicaulis*	Lam.	Lamarck	–	–	1	–	–	–	–	–	–	Lamarck	original herbaria	?	1791
8	*V. subacaulits*	Lam.	Lamarck	–	–	1	–	–	–	–	–	–	Lamarck	original herbaria	?	1791
9	*V. laevis*	Lam.	Lamarck	–	–	–	–	–	–	–	–	–	–	original herbaria	?	1778
10	*V. arvensis* var. *nana*	DC. in Lam. & DC.	De Candolle	–	–	1	–	–	–	–	–	–	Lamarck	original herbaria	?	1805
11	*V. michauxii*	Lam.	Michaux	–	–	1	–	–	–	–	–	–	Lamarck	original herbaria	1782	1791
12	*V. nitida*	Poir.	Jardin Bot.	–	–	–	–	–	–	1	–	–	Poiret in Moquin-Tandon in Cosson	Jardin de Plantes	?	1817
13	*V. persica*	Poir.	Jardin Bot.	–	–	–	–	–	–	–	1⁺	–	Lamarck	Jardin de Plantes	?	1808
14	*V. excelsa*	Desf.	Jardin Bot.	–	–	–	2	–	–	–	–	–	Poiret in Moquin-Tandon in Cosson	Jardin de Plantes	?	1829
15	*V. prasifolia*	Desf.	Jardin Bot.	–	–	–	–	–	–	–	–	–	–	Jardin de Plantes	?	1829
16	*V. xalapensis*	H.B.K.	Humboldt & Bonpland	–	–	1	–	–	–	–	–	–	Humboldt & Bonpland	French explorers	1802	1817
17	*V. chillensis*	H.B.K.	Humboldt & Bonpland	–	–	1	1	–	–	–	–	–	Bonpland, Humboldt & Bonpland	French explorers	1802	1817
18	*V. herniarioides*	Pourr. ex Lapeyr.	Pourret	–	–	–	–	–	–	1	–	–	Puel	French explorers	?	1818
19	*V. sparsiflora*	Raf.	Rafinesque	–	–	–	–	–	–	1	1	–	general ×2	French explorers	1831?	1832
20	*V. capensis*	Fenzl	Drège	–	–	?	–	–	–	–	–	–	general	French explorers	1826	1843
21	*V. chamaedryoides*	Bory & Chaub.	Bory & Chaubard	–	–	1	–	–	–	–	–	–	Drake	French explorers	1827?	1832
22	*V. chaubardii*	Boiss. & Reut.	Bory & Chaubard	–	–	–	–	–	–	–	–	2	Chaubard in Puel ×2	French explorers	1827?	1856
23	*V. friesii*	Chaub.	–	–	–	–	–	–	–	–	–	–	–	French explorers	1827?	1853
24	*V. hawaiiensis*	H.Lev.	Faurie	–	–	1	1	–	–	–	–	–	Léveillé in herb. Caen, general	French explorers	1909	1911
25	*V. rotunda*	Nakai	Faurie	–	–	–	1	–	–	–	–	–	general	French explorers	1906	1915
26	*V. villosula*	Nakai	Faurie	–	–	–	?	–	–	–	–	–	general	French explorers	1906	1915
27	*V. sachalinensis*	Boriss.	Faurie	–	1	–	–	–	–	–	–	–	general	French explorers	1908	1955
28	*V. macrostemon*	Bunge ex Ledeb.	Bunge	–	–	–	1	–	–	–	–	–	Bunge in Cosson	Cosson	1826	1829
29	*V. sessiliflora*	Bunge ex Ledeb.	Bunge	–	–	–	1	–	–	–	–	–	Bunge in Cosson	Cosson	1826	1829
30	*V. siaretensis*	E.B.J.Lehm.	Bunge	–	–	–	4?	–	–	–	–	–	Bunge in Cosson	Cosson	1857-1859	1908
31	*V. bungei*	Boiss.	Bunge	–	–	–	–	–	–	–	–	–	–	Cosson	1857-1859	1879
32	*V. maritima* var. *condensata*	Rchb.	Freyer	–	–	–	2	–	–	1	–	–	Bunge in Cosson	Cosson	?	1830
33	*V. teucrium* subsp. *altaica*	Watzl	Ledebour	–	–	–	–	–	–	–	–	1	general	Cosson	1826	1910
34	*V. spicata* var. *viscosissima*	Kar. & Kir.	Karelin & Kiriloff	–	–	–	2	–	–	–	–	–	Bunge in Cosson, general	Cosson	1840	1841
35	*V. nudicaulis*	Kar. & Kir.	Karelin & Kiriloff	–	–	–	2	–	–	–	–	–	Bunge in Cosson, general	Cosson	1841?	1842
36	*V. laeta*	Kar. & Kir.	Karelin & Kiriloff	–	–	–	2	–	–	–	–	–	Drake, general	Cosson	1841	1842
37	*Diplophyllum cardiocarpum*	Kar. & Kir.	Karelin & Kiriloff	–	–	–	–	–	–	–	–	–	Bunge in Cosson, general	Cosson	1841	1844

Appendix 1. — Continuation.

	Taxon name	Author	Collector	Types								Herbarium	A	Coll. year	Publi. year
				holo-	iso-	lecto-	isolecto-	epi-	isoepi-	neo-	isoneo-	syn-				
38	*V. ceratocarpa*	C.A.Mey.	Meyer	–	–	–	?	–	–	–	–	–	Maire in Cosson	Cosson	?	1831
39	*V. minuta*	C.A.Mey.	Meyer	–	–	–	1	–	–	–	–	–	Bunge in Cosson	Cosson	?	1831
40	*V. tubiflora*	Turcz. ex Fisch. & C.A.Mey.	Turczaninow	–	–	–	3?	–	–	–	–	–	Bunge in Cosson, ×2 general	Cosson	?	1835
41	*V. crassifolia*	Wierzb. ex Heuff.	Wierzbicki	–	–	–	–	–	–	–	–	1	Cosson	Cosson	1833	1835
42	*V. cariensis*	Boiss.	Boissier	–	–	–	5	–	–	–	–	–	Lenormand, Grenier, Cosson, Bunge in Cosson, general	Cosson	1842	1844
43	*V. caespitosa*	Boiss.	Boissier	–	–	–	4	–	–	–	–	–	Bunge in Cosson, Cosson, Grenier, general	Cosson	1842	1844
43	*V. caespitosa*	Boiss.	Aucher-Éloy	–	–	–	–	–	–	–	–	2	Cosson, general	Cosson	1834	1844
44	*V. divaricata*	–	Balansa	–	–	–	3	–	–	–	–	–	Cosson, Drake, general	Cosson	1855	1856
45	*V. ixodes*	–	Balansa	–	–	–	2	–	–	–	–	–	Cosson, general	Cosson	1855	1856
46	*V. surculosa*	–	Balansa	–	–	–	2	–	–	–	–	–	Cosson, general	Cosson	1855	1856
47	*V. glaberrima*	–	Balansa	–	–	–	5	–	–	–	–	–	Cosson ×2, Drake, general ×2	Cosson	1855	1856
48	*V. cinerea*	–	Balansa	–	–	–	1	–	–	–	–	–	general	Cosson	1856	1859
49	*V. microtheca*	–	Balansa	–	–	–	8	–	–	–	–	–	Parceval-Grandmaison/Moquin-Tandon in Cosson, Cosson, Drake ×2, general ×4	Cosson	1857	1859
50	*V. anagallis-aquatica* var. *balansae*	Bonati	Balansa	–	–	1	–	–	–	–	–	–	general	Cosson	1888	1927
51	*V. polifolia*	Benth.	Aucher-Éloy	–	–	–	3	–	–	–	–	–	Cosson, general	Cosson	1834	1846
52	*V. kurdica*	Benth.	Aucher-Éloy	–	–	–	2	–	–	–	–	–	Cosson, general	Cosson	1837	1846
53	*V. anagallis-aquatica* var. *pubescens*	Benth.	Aucher-Éloy	–	–	–	2	–	–	–	–	–	Cosson, general	Cosson	1837	1846
54	*V. thessalica*	Benth.	Aucher-Éloy	–	–	–	2	–	–	–	–	–	Cosson, general	Cosson	1836	1846
55	*V. macropoda*	Boiss.	Aucher-Éloy	–	–	–	2	–	–	–	–	–	Cosson, general	Cosson	1837	1844
56	*V. microcarpa*	Boiss.	Aucher-Éloy	–	–	–	2	–	–	–	–	2	Cosson ×2, general ×2	Cosson	1837	1844
57	*V. aucheri*	Boiss.	Aucher-Éloy	–	–	–	4	–	–	–	–	–	Cosson, general ×3	Cosson	1837	1844
58	*V. paederotae*	Boiss.	Aucher-Éloy	–	–	–	–	–	–	–	–	–	–	Cosson	1837	1844
59	*V. anisophylla*	K.Koch	Aucher-Éloy	–	–	–	–	–	–	–	–	–	–	Cosson	1836	1843
60	*V. benthamii*	K.Koch	Aucher-Éloy	–	–	–	–	–	–	–	–	–	–	–	1836	1849
61	*V. hispidula*	Boiss. & A.Huet	Huet du Pavillon	–	–	–	3	–	–	–	–	–	Lenormand, Cosson, general	Cosson	1853	1856
62	*V. armena*	Boiss. & A.Huet	Huet du Pavillon	–	–	–	4	–	–	–	–	–	Lenormand, Simon ×2, Cosson	Cosson	1853	1856
63	*V. teucrioides*	Boiss. & Heldr.	Heldreich	–	–	–	1	–	–	–	–	–	general	Cosson	1851	1856
64	*V. sartoriana*	Boiss. & Heldr.	Heldreich	–	–	–	–	–	–	–	3	–	general, Cosson, Drake	Cosson	1856?	1856
65	*V. amoena*	Heldr. ex Nyman	Heldreich	–	–	–	2?	–	–	–	–	–	Cosson, Drake	Cosson	1854	1881
66	*V. peloponnesiaca*	Boiss. & Orph.	Orphanides	–	–	–	2	–	–	–	–	–	Cosson, Drake	Cosson	1857	1879
67	*V. galactites*	Hance	Sampson	–	–	–	–	–	–	–	–	2	general, Cosson	Cosson	1864	1866
68	*V. arvensis* var. *acinoides*	Schur	Schur	–	–	1	–	–	–	–	–	–	Cosson	Cosson	?	1866
69	*V. anagallis-aquatica* var. *glandulosa*	Schur	Schur	–	–	?	–	–	–	–	–	–	Cosson	Cosson	1847	1866
70	*V. spicata* var. *subcanescens*	Schur	Schur	–	–	?	–	–	–	–	–	–	Cosson	Cosson	?	1866

Appendix 1. — Continuation.

	Taxon name	Author	Collector	Types								Herbarium	A	Coll. year	Publi. year
				holo-	iso-	lecto-	isolecto-	epi-	isoepi-	neo-	isoneo-	syn-				
71	*V. bachofenii* var. *angustifolia*	Schur	Schur	–	–	?	–	–	–	–	–	–	Cosson	Cosson	1846	1866
72	*V. austriaca* var. *glandulifera*	Schur	Schur	–	–	?	–	–	–	–	–	–	Cosson	Cosson	1845	1866
73	*V. cuneifolia* subsp. *atlantica*	Ball	Ball	–	–	1	–	–	–	–	–	1	Cosson	Cosson	1871	1875
74	*V. sibthorpioides*	–	–	–	–	–	1	–	–	–	–	–	Cosson	Cosson	1901	1905
75	*Pseudolysimachion* × *sapiehae*	Holub	Blocki	–	–	–	–	–	–	–	–	–	Cosson, Giraudias	Cosson	1884	1967
76	*Pseudolysimachion* × *blockianum*	Travnicek	Blocki	–	1	–	–	–	–	–	–	–	Cosson	Cosson	1884	1998
77	*V. grandis*	Fisch. ex Spreng.	unknown	–	–	–	–	–	–	–	–	3?	Richard in Drake, general ×2	Drake	?	1821
78	*V. angustifolia*	A.Rich.	Dumont-d'Urville	–	–	2*	2*	–	–	–	–	–	Drake ×2, general	Drake	1827	1832
79	*V. kotschyana*	Benth.	Kotschy	–	–	–	2	–	–	–	–	–	Steudel in Drake, general	Drake	1836	1846
80	*V. syriaca* var. *pusilla*	Benth.	Kotschy	–	–	–	–	–	–	–	–	7	Cosson ×3, Drake, general ×3	Drake	1836	1846
81	*V. oxycarpa*	Boiss.	Kotschy	–	–	–	6	–	–	–	–	–	Bunge in Cosson, Cosson, Drake, Steudel in Drake, Lenormand in Caen, general	Drake	1842	1845
82	*V. montioides*	Boiss.	Kotschy	–	–	–	2	–	–	–	–	–	Bunge in Cosson, general	Drake	1842	1846
83	*V. cordata*	Celak.	Kotschy	–	–	–	5	–	–	–	–	–	Bunge in Cosson, Drake ×2, Steudel in Drake, general	Drake	1842	1877
84	*V. pusilla*	Kotschy	Kotschy	–	–	–	3	–	–	–	–	–	Cosson, Drake, general	Drake	1842	1845
85	*V. perpusilla*	Boiss. ex Benth.	Kotschy	–	–	–	–	–	–	–	–	1	Drake	Drake	1842	1844
86	*V. rubrifolia*	Boiss.	Kotschy	–	–	–	–	–	–	–	–	2	Bunge in Cosson, general	Drake	1843	1853
87	*V. bombycina*	Boiss. & Kotschy	Kotschy	–	–	–	4	–	–	–	–	–	Cosson, Drake, Lenormand in Caen, general	Drake	1855	1856
88	*V. gorumsensis*	Boiss. & Kotschy ex M.A.Fisch.	Kotschy	–	–	–	1	–	–	–	–	–	Drake	Drake	1859	1972
89	*V. campylopoda*	Boiss.	Schimper	–	–	–	6	–	–	–	–	–	Cosson ×2, Drake ×2, general, Hennecart	Drake	1835	1844
89	*V. campylopoda*	Boiss.	Aucher-Éloy	–	–	–	–	–	–	–	–	4	Cosson ×2, general ×2	Cosson	1837	1844
89	*V. campylopoda*	Boiss.	Kotschy	–	–	–	–	–	–	–	–	5	Cosson ×2, Drake ×2, general	Drake	1835	1844
90	*V. abyssinica*	Fresen.	Schimper	–	–	–	–	–	2	–	–	–	general ×2	Drake	1852	1844
91	*V. glandulosa*	Hochst. ex Bentham	Schimper	–	–	–	2	–	–	–	–	–	Drake, Steudel in Drake	Drake	1838	1846
92	*V. violifolia*	Hochst. ex Bentham	Schimper	–	–	–	2	–	–	–	–	–	Drake, general	Drake	1838	1846
93	*V. wogerensis*	Hochst. ex A. Rich.	Schimper	–	–	1	1	–	–	–	–	–	Drake, general	Drake	1840	1851
94	*V. beccabunga* f. *minima*	Engl.	Schimper	–	–	1	–	–	–	–	–	–	general	Drake	1840	1892
95	*V. petitiana*	A.Rich.	Petit	–	–	1	2	–	–	–	–	–	Drake ×3	Drake	1840-1843	1851
96	*V. lavaudiana*	Raoul	Raoul	–	–	–	1	–	–	–	–	–	Drake	Drake	1840-1842	1846
97	*V. fonkii*	Phil.	Fonk	–	–	–	2	–	–	–	–	–	Drake, general	Drake	1857	1857
98	*V. anagallis-aquatica* f. *anagalliformis*	Boreau	Boreau	–	–	–	–	–	–	–	–	–	–	Drake	1853	1857
99	*V. onoei*	Franch. & Sav.	Savatier	–	–	1	–	–	–	–	–	–	Drake	Drake	1867-1876	1878

Appendix 1. — Continuation.

	Taxon name	Author	Collector	Types									Herbarium	A	Coll. year	Publi. year
				holo-	iso-	lecto-	isolecto-	epi-	isoepi-	neo-	isoneo-	syn-				
100	*V. yedoensis*	Franch. & Sav.	Savatier	–	–	1	–	–	–	–	–	–	Drake	Drake	1867-1876	1878
101	*V. ornata*	Monjuschko	Savatier	–	–	–	2	–	–	–	–	–	Drake ×2	Drake	1866-1871	1924
102	*V. fargesii*	Franch.	Farges	–	–	1	3	–	–	–	–	–	Bonati, general ×3	Drake	1892	1900
103	*V. sutchuensis*	Franch.	Farges	–	–	1	–	–	–	–	–	–	general	Drake	?	1900
104	*V. laxissima*	D.Y.Hong	Farges	–	3	–	–	–	–	–	–	–	Drake ×3	Drake	?	1996
105	*V. piroliformis*	Franch.	Delavay	–	–	1	2	–	–	–	–	3	Drake ×2, general ×4	Drake	1884	1900
106	*V. mexicana*	Pringle	Pringle	–	–	–	–	–	–	–	–	–	Cosson, Drake	Drake	1887	1888
107	*V. thracica*	Velen.	Stríbrny	–	–	–	2	–	–	–	–	–	Drake, general	Drake	1893	1894
108	*V. velenovskyi* var. *subintegrifolia*	Borbás	Borbás & Richter	–	–	–	1	–	–	–	–	–	Drake	Drake	1894	1898
109	*V. saturejoides* subsp. *munellensis*	M.A.Fisch.	Baldacci	–	2	–	–	–	–	–	–	–	Drake, general	Drake	1897	1970
110	*V. hederifolia* var. *minuta*	Warion	Le Grand	–	–	1	1	–	–	–	–	–	Drake, general	Drake	1870	1899
111	*V. undulata*	Wall.	W. Jack	–	–	–	–	–	–	–	–	–	–	British connection	1825	1820
112	*V. himalensis*	D.Don	Wallich	–	–	–	1	–	–	–	–	–	general	British connection	1821	1825
113	*V. benthamii*	Hook.f.	J.D.Hooker	–	–	–	1	–	–	–	–	–	general	british connection	1840	1845
114	*V. lyallii*	Hook.f.	Lyall	–	–	–	1	–	–	–	–	–	general	British connection	1847-1849	1853
115	*V. mannii*	Hook.f.	Mann	–	–	–	–	–	–	–	–	–	–	British connection	1860	1862
116	*V. africana*	Hook.f.	Mann	–	–	–	1	–	–	–	–	–	general	British connection	1862	1864
117	*V. rupestris*	Aitch. & Hemsl.	Collett	–	–	–	–	–	–	–	–	1	general	British connection	?	1882
118	*V. umbelliformis*	Pennell	Strachey & Winterbottom	–	1	–	–	–	–	–	–	–	general	British connection	1848	1943
119	*V. capitata* var. *sikkimensis*	Hook.f.	J.D.Hooker & Thomson	–	–	–	–	–	–	–	–	–	–	British connection	1849	1885
120	*V. maddeni*	Edgew. ex Hook.f.	Edgeworth	–	–	–	–	–	–	–	–	–	–	British connection	1840	1885
121	*V. forrestii*	Diels	Forrest	–	–	–	1	–	–	–	–	–	general	British connection	1906	1912
122	*V. verna* f. *brevistyla*	G.Froel.	Froelich	–	–	1	–	–	–	–	–	–	Giraudias	Giraudias	1885	1885
123	*V. hederifolia* var. *gracilis*	F.Gerard	Gerard	–	–	1	3	–	–	–	–	–	Camus, Giraudias, Rotereau in herb. Caen, general ×2	Giraudias	1888	1890
124	*V. agrestis* var. *glabrescens*	Wiesb.	Wiesbaur	–	–	1	–	–	–	–	–	–	Giraudias	Giraudias	1884	1887
125	*V. agrestis* var. *albida*	Wiesb.	Wiesbaur	–	–	1	–	–	–	–	–	–	Giraudias	Giraudias	1884	1887
126	*V. demissa*	Samp.	Sampaio	–	–	–	1	–	–	–	–	–	Giraudias	Giraudias	1901	1901
127	*V. agrestis* var. *subabortiva*	A.Reyn.	Reynier	–	–	1	1	–	–	–	–	–	Giraudias, Guétrot	Giraudias	1901	1902
128	*V. surculosa* var. *macedonica*	Adamovic	Kindl/Adamovic	–	–	1	–	–	–	–	–	–	Giraudias	Giraudias	1904	1905
129	*V. palmatiloba*	Miegev.	Miegeville	–	–	1	–	–	–	–	–	–	Grenier	Grenier	1863	1867
130	*V. anagallis-aquatica* var. *pseudoanagalloides*	Gren.	Michalet	–	–	1	1	–	–	–	–	–	Grenier in Camus, general	Grenier	1855	1869
131	*V. paludosa*	Lej.	Lejeune	–	–	–	–	–	–	–	1	–	Reichenbach in general	others	?	1811

Appendix 1. — Continuation.

	Taxon name	Author	Collector	Types								Herbarium	A	Coll. year	Publi. year
				holo-	iso-	lecto-	isolecto-	epi-	isoepi-	neo-	isoneo-	syn-				
132	*V. alternifolia*	Lej.	Lejeune	–	–	–	–	–	–	–	1	–	Reichenbach in general	others	?	1813
133	*V. limosa*	Lej.	Lejeune	–	–	–	–	–	–	–	–	1	Lejeune	others	?	1824
134	*V. laxiflora*	Lej.	Lejeune	–	–	–	–	–	–	–	2***	–	Reichenbach in Giraudias, Reichenbach in general	others	?	1824
135	*V. pseudoarvensis*	Tineo	Tineo	–	–	–	?	–	–	–	–	–	Adrien De Jussieu	others	1835	1846
136	*V. decorosa*	F.Muell.	von Mueller	–	–	–	–	–	–	–	–	2	Drake, Müller	others	1851	1852
137	*V. notabilis*	F.Muell.	von Mueller	–	–	–	–	–	–	–	–	–	–	others	1853	1869
138	*V. hulkeana*	F.Muell.	von Mueller	–	–	–	2	–	–	–	–	–	Melbourne, Melbourne in Cosson	others	1866	1863
139	*V. lendenfeldii*	F.Muell.	MacGregor	–	–	–	2	–	–	–	–	–	Melbourne ×2	others	1889	1889
140	*V. spicata* var. *ciliata*	Wirtg.	Wirtgen	–	–	1	2	–	–	–	–	–	Camus, Univ. Cath. Paris, Drake	others	1862	1862
141	*V. lilacina*	F.Towns.	Townsend	–	–	–	–	–	–	–	–	4	Camus, Delacour, general ×2	others	1877	1878
142	*V. pectinata* var. *mardinensis*	Bornm.	Sintenis	–	–	–	1	–	–	–	–	–	general	others	1889	1910
143	*V. sumilensis*	Freyn & Sint.	Sintenis	–	–	–	–	–	–	–	–	1	Drake	others	1889	1896
144	*V. debilis*	Freyn	Sintenis	–	–	–	–	–	–	–	–	1	Chevallier	others	1892	1896
145	*V. schizocalyx*	Freyn & Sint.	Sintenis	–	–	–	1	–	–	–	–	–	general	others	1892	1894
146	*V. fuhsii*	Freyn & Sint.	Sintenis	–	–	–	1	–	–	–	–	–	general	others	1892	1894
147	*V. bartsiifolia*	Freyn	Sintenis	–	–	–	–	–	–	–	–	1	Cosson	others	1894	1896
148	*V. sintenisiana*	Gand.	Sintenis	–	–	–	–	–	–	–	–	1	Cosson	others	1894	1919
149	*V. sintenisii*	Hausskn. ex Bornm.	Sintenis	–	–	–	3	–	–	–	–	–	Chevallier, Cosson, general	others	1894	1912
150	*V. gentianoides* var. *pontica*	Bornm.	Bornmüller	–	–	–	2	–	–	–	–	–	Delacour, general	others	1890	1905
151	*V. biloba* var. *glandulosissima*	Bornm.	Bornmüller	–	–	–	1	–	–	–	–	–	general	others	1892	1907
152	*V. pseudodivaricata*	Parsa	Bornmüller	–	–	–	1	–	–	–	–	–	general	others	1897	1948
153	*V. intercedens*	Bornm.	Bornmüller	–	–	–	1	–	–	–	–	–	general	others	1893	1907
154	*V. aleppica* var. *schizostegia*	Bornm.	Bornmüller	–	–	–	2**	–	–	–	–	–	Drake, general	others	1893	1910
155	*V. glaberrima* var. *glanduligera*	Bornm.	Bornmüller	–	–	–	3	–	–	–	–	–	Cosson, Drake, general	others	1897	1898
156	*V. pectinata* var. *villosa*	Bornm.	Bornmüller	–	–	–	2	–	–	–	–	1	general	others	1899	1909
157	*V. pectinata* var. *glandulosa*	Riek ex M.A.Fisch.	Bornmüller	–	2	–	–	–	–	–	–	–	Cosson, general	others	1899	1977
158	*V. kurdica* f. *major*	Bornm.	Bornmüller	–	–	1	–	–	–	–	–	–	general	others	1902	1907
159	*V. kurdica* f. *inciso-crenata*	Bornm.	Bornmüller	–	–	1	–	–	–	–	–	–	general	others	1902	1907
160	*V. chionantha*	Bornm.	Bornmüller	–	–	–	1	–	–	–	–	–	general	others	1902	1907
161	*V. prostrata* var. *sennenii*	Pau	Sennen & Elias	–	–	–	1	–	–	–	–	–	general	others	1906	1907
162	*V. polita* var. *dentata*	Sennen & Pau	Sennen	–	–	–	2	–	–	–	–	–	Herb. Caen, Abbé Toussaint	others	1906	1907
163	*V. teucrium* var. *catalaunica*	Sennen & Pau	Sennen	–	–	–	2	–	–	–	–	–	Giraudias, herb. Caen	others	1907	1910
164	*V. bianoris*	Sennen	Bianor	–	–	–	2	–	–	–	–	–	Guétrot, general	others	1917	1930
165	*V. maresii*	Sennen	Bianor	–	–	–	1	–	–	–	–	–	general	others	1917	1930
166	*V. ferganica*	Popov	Popov & Vvedensky	–	–	–	–	–	–	–	–	–	–	others	1920	1922
167	*V. stylophora*	Popov ex Vved.	Popov	–	1	–	–	–	–	–	–	–	general	others	1925	1925

Appendix 1. — Continuation.

	Taxon name	Author	Collector	Types									Herbarium	A	Coll. year	Publi. year
				holo-	iso-	lecto-	isolecto-	epi-	isoepi-	neo-	isoneo-	syn-				
168	*V. crinita* f. *viridis*	Nyár.	Bujorean	–	–	–	–	–	–	–	–	1	Cluj	others	1922	1926
169	*V. repens* var. *cyanea*	Litard. & Maire	Maire	–	–	–	1	–	–	–	–	–	Herbier de l'Afrique du Nord	others	1923	1924
170	*V. chartonii*	Litard. & Maire	Litardière & Maire	–	–	–	1	–	–	–	–	–	Herbier de l'Afrique du Nord	others	1926	1930
171	*V. rosea* var. *virgata*	Emb. & Maire	Maire	–	–	–	–	–	–	–	–	1	Herbier de l'Afrique du Nord	others	1927	1930
172	*V. rosea* var. *pallida*	Emb. & Maire	Maire	–	–	–	1	–	–	–	–	–	Herbier de l'Afrique du Nord	others	1927	1929
173	*V. rosea* var. *glabrescens*	Emb. & Maire	Maire	–	–	–	1^{++}	–	–	–	–	3	Herbier de l'Afrique du Nord ×3, Algier	others	1936	1937
174	*V. rosea* f. *ciliatisepala*	Maire	Maire	–	–	–	–	–	–	–	–	1	Herbier de l'Afrique du Nord	others	1936	1940
175	*V. anagallis-aquatica* f. *minuta*	Maire	Maire & Weiller	–	–	–	–	–	–	–	–	–	Herbier de l'Afrique du Nord	others	1939	1940
176	*V. hederifolia* var. *brevipes*	Pomel	Pomel	–	–	–	1	–	–	–	–	–	Herbier de l'Afrique du Nord	others	?	1890
177	*V. acinifolia* f. *gracilis*	Maubl.	Maublanc	–	–	1	4	–	–	–	–	–	Arènes, de Retz, Segret in Paris, general Univ. Cath.	others	1941	1941
			Previous types from P	**0**	**0**	**1**	**6**	**0**	**0**	**1**	**2**	**0**	**Total = 10**			
			Types designated in this study	**0**	**11**	**34**	–	**1**	**2**	**4**	**6**	**52**	**Total = 235**			

Appendix 2. — Taxonomic overview over the names discussed in the text with the currently accepted name and subgenus of the name, as well as reference to the part of the discussion under which the name is discussed.

	Name	Accepted species	Subgenus	Discussed under collector
1	*V. ocymifolia*	*V. praecox*	*V.* subg. *Pellidosperma*	Vaillant
2	*V. squamosa* var. *vaillantii*	*V. spicata*	*V.* subg. *Pseudolysimachium*	Vaillant
3	*V. gentianoides*	*V. gentianoides*	*V.* subg. *Beccabunga*	Tournefort
4	*V. telephiifolia*	*V. telephiifolia*	*V.* subg. *Beccabunga*	Tournefort
5	*V. constantinopolitana*	*V. pectinata*	*V.* subg. *Pentasepalae*	Tournefort
6	*H. magellanica*	*V. elliptica*	*V.* subg. *Pseudoveronica*	Commerson
7	*V. nudicaulis*	*V. aphylla*	*V.* subg. *Veronica*	Lamarck
8	*V. subacaulis*	*V. aphylla*	*V.* subg. *Veronica*	Lamarck
9	*V. laevis*	*V. acinifolia*	*V.* subg. *Beccabunga*	Lamarck
10	*V. arvensis* var. *nana*	*V. arvensis*	*V.* subg. *Chamaedrys*	Lamarck
11	*V. michauxii*	*V. anagallis-aquatica*	*V.* subg. *Beccabunga*	Michaux
12	*V. nitida*	*V. satureiifolia*?	*V.* subg. *Pentasepalae*	Poiret
13	*V. persica*	*V. persica*	*V.* subg. *Pocilla*	Poiret
14	*V. excelsa*	*V. longifolia*	*V.* subg. *Pseudolysimachium*	Desfontaines
15	*V. prasifolia*	*V.* × *media*	*V.* subg. *Pseudolysimachium*	Desfontaines
16	*V. xalapensis*	*V. peregrina*	*V.* subg. *Beccabunga*	Humboldt, Bonpland, Kunth
17	*V. chillensis*	*V. peregrina*	*V.* subg. *Beccabunga*	Humboldt, Bonpland, Kunth
18	*V. herniarioides*	*V. nummularia*	*V.* subg. *Stenocarpon*	Pourret
19	*V. sparsiflora*	*V. gentianoides*	*V.* subg. *Beccabunga*	Rafinesque
20	*V. capensis*	*V. anagallis-aquatica*	*V.* subg. *Beccabunga*	Drege
21	*V. chamaedryoides*	*V. chamaedrys*	*V.* subg. *Chamaedrys*	Bory de Saint-Vincent
22	*V. chaubardii*	*V. glauca*	*V.* subg. *Pellidosperma*	Bory de Saint-Vincent
23	*V. friesii*	*V. agrestis*	*V.* subg. *Pocilla*	Bory de Saint-Vincent
24	*V. hawaiensis*	*V. arvensis*	*V.* subg. *Chamaedrys*	Faurie
25	*V. rotunda*	*V. rotunda*	*V.* subg. *Pseudolysimachium*	Faurie
26	*V. villosula*	*V. kiusiana*	*V.* subg. *Pseudolysimachium*	Faurie
27	*V. sachalinensis*	*Veronicastrum sibiricum*	*Veronicastrum*	Faurie
28	*V. macrostemon*	*V. macrostemon*	*V.* subg. *Stenocarpon*	Bunge
29	*V. sessiliflora*	*V.* × *sessiliflora*	*V.* subg. *Pseudolysimachium*	Bunge
30	*V. siaretensis*	*V. siaretensis*	*V.* subg. *Pocilla*	Bunge
31	*V. bungei*	*V. bungei*	*V.* subg. *Pocilla*	Bunge
32	*V. maritima* var. *condensata*	*V. longifolia*	*V.* subg. *Pseudolysimachium*	Reichenbach
33	*V. teucrium* subsp. *altaica*	*V. krylovii*	*V.* subg. *Pentasepalae*	Ledebour
34	*V. spicata* var. *viscosissima*	*V. porphyriana*	*V.* subg. *Pseudolysimachium*	Karelin
35	*V. nudicaulis*	*V. hispidula*	*V.* subg. *Beccabunga*	Karelin
36	*V. laeta*	*V. laeta*	*V.* subg. *Pseudolysimachium*	Karelin
37	*Diplophyllum cardiocarpa*	*V. cardiocarpa*	*V.* subg. *Pocilla*	Karelin
38	*V. ceratocarpa*	*V. ceratocarpa*	*V.* subg. *Pocilla*	Meyer
39	*V. minuta*	*V. minuta*	*V.* subg. *Pentasepalae*	Meyer
40	*V. tubiflora*	*Veronicastrum tubiflorum*	*Veronicastrum*	Meyer
41	*V. crassifolia*	*V. barrelieri*	*V.* subg. *Pseudolysimachium*	Heuffel
42	*V. cariensis*	*V. cuneifolia*	*V.* subg. *Pentasepalae*	Boissier
43	*V. caespitosa*	*V. caespitosa*	*V.* subg. *Pentasepalae*	Boissier
44	*V. divaricata*	*V. balansae*	*V.* subg. *Beccabunga*	Balansa
45	*V. ixodes*	*V. hispidula*	*V.* subg. *Beccabunga*	Balansa
46	*V. surculosa*	*V. surculosa*	*V.* subg. *Pentasepalae*	Balansa
47	*V. glaberrima*	*V. pusilla*	*V.* subg. *Beccabunga*	Balansa
48	*V. cinerea*	*V. cinerea*	*V.* subg. *Pentasepalae*	Balansa
49	*V. microtheca*	*V. campylopoda*	*V.* subg. *Pocilla*	Balansa
50	*V. anagallis-aquatica* var. *balansae*	*V. undulata*	*V.* subg. *Beccabunga*	Balansa
51	*V. polifolia*	*V. polifolia*	*V.* subg. *Pentasepalae*	Aucher-Éloy
52	*V. kurdica*	*V. kurdica*	*V.* subg. *Pentasepalae*	Aucher-Éloy
53	*V. anagallis-aquatica* var. *pubescens*	*V. anagallis-aquatica*	*V.* subg. *Beccabunga*	Aucher-Éloy
54	*V. thessalica*	*V. thessalica*	*V.* subg. *Stenocarpon*	Aucher-Éloy
55	*V. macropoda*	*V. macrostemon*	*V.* subg. *Pocilla*	Aucher-Éloy
56	*V. microcarpa*	*V. microcarpa*	*V.* subg. *Pentasepalae*	Aucher-Éloy
57	*V. aucheri*	*V. aucheri*	*V.* subg. *Pentasepalae*	Aucher-Éloy
58	*V. paederotae*	*V. paederotae*	*V.* subg. *Pentasepalae*	Aucher-Éloy
59	*V. anisophylla*	*V. orientalis*	*V.* subg. *Pentasepalae*	Aucher-Éloy
60	*V. benthamii*	*V. peduncularis*	*V.* subg. *Pentasepalae*	Aucher-Éloy
61	*V. hispidula*	*V. hispidula*	*V.* subg. *Beccabunga*	Huet du Pavillon
62	*V. armena*	*V. armena*	*V.* subg. *Pentasepalae*	Huet du Pavillon
63	*V. teucrioides*	*V. teucrioides*	*V.* subg. *Pentasepalae*	Heldreich
64	*V. sartoriana*	*V. sartoriana*	*V.* subg. *Chamaedrys*	Heldreich
65	*V. amoena*	*V. amoena*	*V.* subg. *Pocilla*	Heldreich
66	*V. peloponnesiaca*	*V. glauca*	*V.* subg. *Pellidosperma*	Heldreich
67	*V. galactites*	*V. linariifolia*	*V.* subg. *Pseudolysimachium*	Sampson

Appendix 2. — Continuation.

	Name	Accepted species	Subgenus	Discussed under collector
68	*V. arvensis* var. *acinoides*	*V. arvensis*	*V.* subg. *Chamaedrys*	Schur
69	*V. anagallis-aquatica* var. *glandulosa*	? *V. anagallis-aquatica*	*V.* subg. *Beccabunga*	Schur
70	*V. spicata* var. *subcanescens*	*V. spicata*	*V.* subg. *Pseudolysimachium*	Schur
71	*V. bachofenii* var. *angustifolia*	*V. bachofenii*	*V.* subg. *Pseudolysimachium*	Schur
72	*V. austriaca* var. *glandulifera*	*V. austriaca*	*V.* subg. *Pentasepalae*	Schur
73	*V. cuneifolia* subsp. *atlantica*	*V. rosea*	*V.* subg. *Pentasepalae*	Ball
74	*V. sibthorpioides*	*V. sibthorpioides*	*V.* subg. *Cochlidiosperma*	Reverchon
75	*Pseudolysimachion* × *sapiehae*	*V.* × *sapiehae*	*V.* subg. *Pseudolysimachium*	Blocki
76	*Pseudolysimachion* × *blockianum*	*V.* × *blockiana* comb. nov.	*V.* subg. *Pseudolysimachium*	Blocki
77	*V. grandis*	*V. daurica*	*V.* subg. *Pseudolysimachium*	Fischer
78	*V. angustifolia*	*V. stenophylla*	*V.* subg. *Pseudoveronica*	Richard
79	*V. kotschyana*	*V. kotschyana*	*V.* subg. *Pentasepalae*	Kotschy
80	*V. syriaca* var. *pusilla*	*V. debilis*	*V.* subg. *Beccabunga*	Kotschy
81	*V. oxycarpa*	*V. anagallis-aquatica*	*V.* subg. *Beccabunga*	Kotschy
82	*V. montioides*	*V. anagallis-aquatica*	*V.* subg. *Beccabunga*	Kotschy
83	*V. cordata*	*V. anagalloides*	*V.* subg. *Beccabunga*	Kotschy
84	*V. pusilla*	*V. pusilla*	*V.* subg. *Beccabunga*	Kotschy
85	*V. perpusilla*	*V. pusilla*	*V.* subg. *Beccabunga*	Kotschy
86	*V. rubrifolia*	*V. rubrifolia*	*V.* subg. *Pocilla*	Kotschy
87	*V. bombycina*	*V. bombycina*	*V.* subg. *Pentasepalae*	Kotschy
88	*V. gorumsensis*	*V. balansae*	*V.* subg. *Beccabunga*	Kotschy
89	*V. campylopoda*	*V. campylopoda*	*V.* subg. *Pocilla*	Schimper
90	*V. abyssinica*	*V. abyssinica*	*V.* subg. *Veronica*	Schimper
91	*V. glandulosa*	*V. glandulosa*	*V.* subg. *Veronica*	Schimper
92	*V. violifolia*	*V. violifolia*	*V.* subg. *Pocilla*	Schimper
93	*V. wogerensis*	*V. javanica*	*Veronica incertae sedis*	Schimper
94	*V. beccabunga* f. *minima*	*V. beccabunga*	*V.* subg. *Beccabunga*	Schimper
95	*V. petitiana*	*V. abyssinica*	*V.* subg. *Veronica*	Petit
96	*V. lavaudiana*	*V. lavaudiana*	*V.* subg. *Pseudoveronica*	Raoul
97	*V. fonkii*	*V. salicifolia*	*V.* subg. *Pseudoveronica*	Fonk
98	*V. anagallis-aquatica* f. *anagalliformis*	*V. anagallis-aquatica*	*V.* subg. *Beccabunga*	Boreau
99	*V. onoei*	*V. onoei*	*V.* subg. *Veronica*	Savatier
100	*V. yedoensis*	? *V. peregrina*	*V.* subg. *Beccabunga*	Savatier
101	*V. ornata*	*V. ornata*	*V.* subg. *Pseudolysimachium*	Savatier
102	*V. fargesii*	*V. fargesii*	*V.* subg. *Veronica*	Farges
103	*V. sutchuensis*	*V. sutchuensis*	*V.* subg. *Veronica*	Farges
104	*V. laxissima*	*V. laxissima*	*V.* subg. *Veronica*	Farges
105	*V. piroliformis*	*V. piroliformis*	*V.* subg. *Veronica*	Delavay
106	*V. mexicana*	*V. mexicana*	*V.* subg. *Stenocarpon*	Watson
107	*V. thracica*	*V. thracica*	*V.* subg. *Pentasepalae*	Stříbrný
108	*V. velenovyskyi* var. *subintegrifolia*	*V. scardica*	*V.* subg. *Beccabunga*	Borbás
109	*V. saturejoides* subsp. *munellensis*	*V. saturejoides*	*V.* subg. *Stenocarpon*	Baldacci
110	*V. hederifolia* var. *minuta*	? *V. sublobata*	*V.* subg. *Cochlidiosperma*	LeGrand
111	*V. undulata*	*V. undulata*	*V.* subg. *Beccabunga*	Wallich
112	*V. himalensis*	*V. himalensis*	*V.* subg. *Stenocarpon*	Wallich
113	*V. benthamii*	*V. benthamii*	*V.* subg. *Pseudoveronica*	Hooker
114	*V. lyalii*	*V. lyalii*	*V.* subg. *Pseudoveronica*	Lyall
115	*V. mannii*	*V. glandulosa*	*V.* subg. *Veronica*	Mann
116	*V. africana*	*V. abyssinica*	*V.* subg. *Veronica*	Mann
117	*V. rupestris*	*V. lanosa*	*V.* subg. *Stenocarpon*	Aitchison
118	*V. umbelliformis*	*V. szechuanica*	*V.* subg. *Veronica*	Strachey
119	*V. capitata* var. *sikkimensis*	*V. szechuanica*	*V.* subg. *Veronica*	Strachey
120	*V. maddeni*	*V. javanica*	*Veronica incertae sedis*	Strachey
121	*V. forrestii*	*V. forrestii*	*V.* subg. *Veronica*	Forrest
122	*V. verna* f. *brevistyla*	*V. verna*	*V.* subg. *Chamaedrys*	Froelich
123	*V. hederifolia* var. *gracilis*	*V. sublobata*	*V.* subg. *Cochlidiosperma*	Gerard
124	*V. agrestis* var. *glabrescens*	*V. agrestis*	*V.* subg. *Pocilla*	Wiesbaur
125	*V. agrestis* var. *glbida*	*V. agrestis*	*V.* subg. *Pocilla*	Wiesbaur
126	*V. demissa*	*V. arvensis*	*V.* subg. *Chamaedrys*	Sampaio
127	*V. agrestis* var. *subabortiva*	*V. filiformis*	*V.* subg. *Pocilla*	Reynier
128	*V. surculosa* var. *macedonica*	*V. teucrioides*	*V.* subg. *Pentasepalae*	Adamovic

Appendix 2. — Continuation.

	Name	Accepted species	Subgenus	Discussed under collector
129	*V. palmatiloba*	*V. verna*	*V.* subg. *Chamaedrys*	Miégeville
130	*V. anagallis-aquatica* var. *pseudoanagalloides*	*V. anagallis-aquatica*	*V.* subg. *Beccabunga*	Grenier
131	*V. paludosa*	*V. longifolia*	*V.* subg. *Pseudolysimachium*	Lejeune
132	*V. alternifolia*	*V. longifolia*	*V.* subg. *Pseudolysimachium*	Lejeune
133	*V. limosa*	*V. beccabunga*	*V.* subg. *Beccabunga*	Lejeune
134	*V. laxiflora*	*V. longifolia*	*V.* subg. *Pseudolysimachium*	Lejeune
135	*V. pseudoarvensis*	*V. arvensis*	*V.* subg. *Chamaedrys*	Tineo
136	*V. decorosa*	*V. decorosa*	*V.* subg. *Pseudoveronica*	von Mueller
137	*V. notabilis*	*V. notabilis*	*V.* subg. *Pseudoveronica*	von Mueller
138	*V. hulkeana*	*V. hulkeana*	*V.* subg. *Pseudoveronica*	von Mueller
139	*V. lendenfeldii*	*V. lendenfeldii*	*V.* subg. *Pseudoveronica*	von Mueller
140	*V. spicata* var. *ciliata*	*V. spicata*	*V.* subg. *Pseudolysimachium*	Wirtgen
141	*V. lilacina*	*V. bellidioides*	*V.* subg. *Veronica*	Townsend
142	*V. pectinata* var. *mardinensis*	*V. macrostachya*	*V.* subg. *Pentasepalae*	Sintenis
143	*V. sumilensis*	*V. gentianoides*	*V.* subg. *Beccabunga*	Sintenis
144	*V. debilis*	*V. debilis*	*V.* subg. *Beccabunga*	Sintenis
145	*V. schizocalyx*	*V. pectinata*	*V.* subg. *Pentasepalae*	Sintenis
146	*V. fuhsii*	*V. fuhsii*	*V.* subg. *Pentasepalae*	Sintenis
147	*V. bartsiifolia*	*V. argute-serrata*	*V.* subg. *Pocilla*	Sintenis
148	*V. sintenisiana*	*V. argute-serrata*	*V.* subg. *Pocilla*	Sintenis
149	*V. sintenisii*	*V. baranetzkii*	*V.* subg. *Pentasepalae*	Sintenis
150	*V. gentianoides* var. *pontica*	*V. gentianoides*	*V.* subg. *Beccabunga*	Bornmüller
151	*V. biloba* var. *plandulosissima*	*V. argute-serrata*	*V.* subg. *Pocilla*	Bornmüller
152	*V. pseudodivaricata*	*V. rubrifolia*	*V.* subg. *Pocilla*	Bornmüller
153	*V. intercedens*	*V. intercedens*	*V.* subg. *Pocilla*	Bornmüller
154	*V. aleppica* var. *schizostegia*	*V. schizostegia*	*V.* subg. *Pentasepalae*	Bornmüller
155	*V. glaberrima* var. *glanduligera*	*V. hispidula*	*V.* subg. *Beccabunga*	Bornmüller
156	*V. pectinata* var. *villosa*	*V. pectinata*	*V.* subg. *Pentasepalae*	Bornmüller
157	*V. pectinata* var. *glandulosa*	*V. pectinata*	*V.* subg. *Pentasepalae*	Bornmüller
158	*V. kurdica* f. *major*	*V. kurdica*	*V.* subg. *Pentasepalae*	Bornmüller
159	*V. kurdica* f. *inciso-crenata*	*V. kurdica*	*V.* subg. *Pentasepalae*	Bornmüller
160	*V. chionantha*	*V. chionantha*	*V.* subg. *Pentasepalae*	Bornmüller
161	*V. prostrata* var. *sennenii*	*V. sennenii*	*V.* subg. *Pentasepalae*	Sennen
162	*V. polita* var. *dentata*	*V. agrestis*	*V.* subg. *Pocilla*	Sennen
163	*V. teucrium* var. *catalaunica*	*V. orsiniana*	*V.* subg. *Pentasepalae*	Sennen
164	*V. bianoris*	*V. anagalloides*	*V.* subg. *Beccabunga*	Sennen
165	*V. maresii*	*V. anagallis-aquatica*	*V.* subg. *Beccabunga*	Sennen
166	*V. ferganica*	*V. ferganica*	*V.* subg. *Pocilla*	Popov
167	*V. stylophora*	*V. stylophora*	*V.* subg. *Pocilla*	Popov
168	*V. crinita* f. *viridis*	*V. crinita*	*V.* subg. *Pentasepalae*	Bujorean
169	*V. repens* var. *cyanea*	*V. serpyllifolia*	*V.* subg. *Beccabunga*	Maire
170	*V. chartonii*	*V. rosea*	*V.* subg. *Pentasepalae*	Maire
171	*V. rosea* var. *virgata*	*V. rosea*	*V.* subg. *Pentasepalae*	Maire
172	*V. rosea* var. *pallida*	*V. rosea*	*V.* subg. *Pentasepalae*	Maire
173	*V. rosea* var. *glabrescens*	*V. rosea*	*V.* subg. *Pentasepalae*	Maire
174	*V. rosea* f. *ciliatisepala*	*V. rosea*	*V.* subg. *Pentasepalae*	Maire
175	*V. anagallis-aquatica* f. *minuta*	*V. anagallis-aquatica*	*V.* subg. *Beccabunga*	Maire
176	*V. hederifolia* var. *brevipes*	*V. sibthorpioides*	*V.* subg. *Cochlidiosperma*	Pomel
177	*V. acinifolia* f. *gracilis*	*V. acinifolia*	*V.* subg. *Beccabunga*	Maublanc