

The Lviv collection of wood samples gathered by Yevstakhiy Voloshchak (1835–1918)

Lwowska kolekcja próbek drewna zgromadzona
przez Eustachego Wołoszczaka (1835–1918)

MYROSLAVA SOROKA, LEONID OSADCHUK,
ANATOLIY SHOVGAN

Department of Botany, Wood Science and Non-Wood Forest Products,
Ukrainian National Forestry University

Кафедра ботаніки, деревинознавства та недеревних ресурсів лісу,
Національний лісотехнічний університет України

вул. Генерала Чупринки 103, 79057 Львів, Україна/Ukraine

E-mail: myroslava_soroka@yahoo.com

Received: 29 May 2017, Accepted: 7 June 2017

ABSTRACT: Yevstakhiy Voloshchak (Євстахій Волощак, Eustachy Wołoszczak – in Ukrainian and Polish respectively), a botanist of Ukrainian heritage who was born in 1835 in Jaworów near Przemyśl and died in 1918 in Vienna, was an outstanding researcher of the flora and phytogeography of the Carpathians and was also a taxonomist, an expert on genera *Hieracium*, *Rosa* and *Salix*. Initially (from 1873 to 1884) he worked in Vienna, moving to the polytechnic in Lviv where he was put in charge of the botany department and, later, the botany, zoology and commodity sciences. The Lviv period of his scientific work was particularly fruitful. At this time Voloshchak published the results of his most important research and set up a small botanical garden at the Lviv Polytechnic where he built up a large herbarium and a collection of several thousand wood samples from trees and shrubs from all over the world. When he retired from academia in 1909 he divided the latter collection between three institutions – the Shevchenko Scientific Society in Lviv, the Academy of Learning in Kraków and the Natural History Museum in Vienna. The Lviv section is believed to be the only part to have survived until today and is housed in the Department of Botany, Wood Science and Non-Wood Forest Products at the Ukrainian National Forestry University. It comprises more than 2800 samples, representing nearly 600 species; the work provides a full list of this collection. The Departmental team is looking for the remaining two parts of the collection or perhaps some surviving fragments thereof.

Key words: dendrology, forestry, history of botany, Lviv Polytechnic, Ukrainian National Forestry University

Introduction

The most valuable scientific collection in the Department of Botany, Wood Science and Non-Wood Forest Products at the Ukrainian National Forestry University is a collection of wood samples of plants from around the world, chiefly trees and shrubs, assembled at the turn of the 19th and 20th centuries by a professor at Lviv Polytechnic, Yevstakhiy Voloshchak (Євстахій Волощак, Eustachy Wołoszczak – in Ukrainian and Polish respectively) an outstanding botanist of Ukrainian origin – a taxonomist and phytogeographer, founder of the Lviv botanical school at the turn of the 19th and 20th centuries.

Outline biography

Yevstakhiy¹ Voloshchak was born on 1st October 1835 in Jaworów near Przemyśl, the son of a shoemaker, Stepan Voloshchak and Anna Jakubovych (Archiwum Państwowe... zesp. 142/0). After completing middle school in Lviv and

¹ Ukrainian literature on the subject gave Voloshchak the incorrect first name “Ostap” (Мельник 1932, Берко 1969, Кобів 1991, Осадчук, Сорока 2015, Крицька, Шевера 2017), instead of the correct one “Yevstakhiy” (moreover widely in use in that region), an exact translation of Latin “Eustachius”, which appears on 1st October 1835 in the Greco-catholic parish records in Jaworów (fig. 1) (Editor’s note).

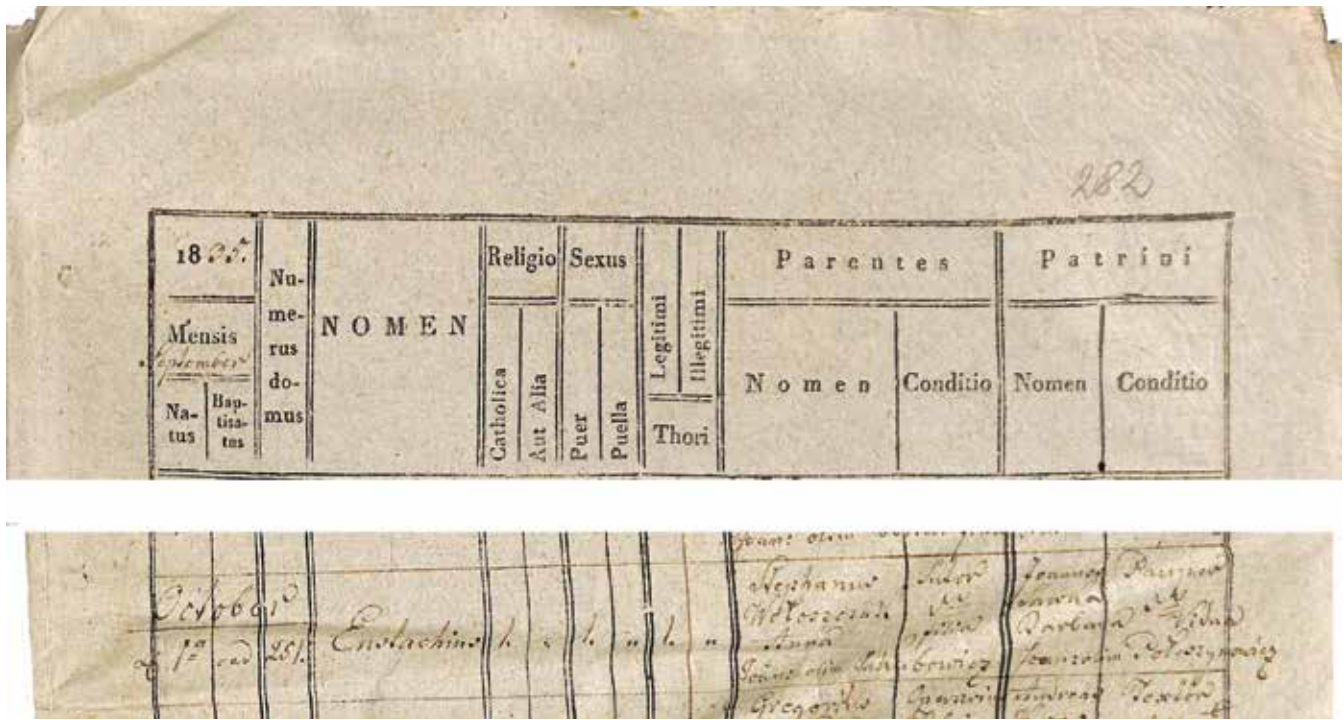


Fig. 1. Yevstakhiy Voloshchak's birth certificate in the Greco-catholic *Copia Libri Natorum...* from Jaworów, 1835. (Archiwum Państwowe w Przemyślu, zesp. 142/0, sygn. 7017).

gaining his high school diploma (in Košice), he first studied at the school for surgeons in Lviv (1856–1858), moving onto law at university in Budapest (1858–1862) from where, in 1862, he graduated as a Doctor of Law and launching immediately into a year of advocacy practice in Vienna. However, his calling quickly took him to university in Vienna, where he studied natural sciences and medicine (1863–1868). In 1868 he founded the Ukrainian student society “Sich” (in Ukrainian: “Січ”); later on, as a scholar of Lviv Polytechnic, he took care of another Ukrainian student organisation called “Osнова” (in Ukrainian: “Основа”). Between 1868–1873 he conducted numerous scientific field trips in the mountains of Germany, Switzerland and Italy, conducting research on vegetation. The famous Viennese botanist, Anton Joseph Kerner was supervisor of his doctoral thesis, which he defended in 1873. From 1873 to 1884 Voloshchak worked at the Vienna Botanical Garden as an assistant, lecturing in botany, soil science and meteorology at the Vienna School of Gardening. From 1872 he was an active member of the Viennese Zoological-Botanical Society (Zoologisch-Botanische Gesellschaft in Wien), and from 1877 also of the Physiographic Commission at the Academy of Learning in Kraków (Brzozowski 1987, Осадчук, Сорока 2015, Крицька, Шевера 2017).

In 1884 Voloshchak moved to Lviv where at the polytechnic (it was then called the “Polytechnic School”; in Polish: “Szkoła Politechniczna”) he was appointed Assistant Professor of Botany (1884–1891) and later Professor of Botany, Zoology and Commodity Sciences (1891–1908; fig. 2). Here in 1891 he set up a small botanical garden (fig. 3), created a natural history museum and amassed a rich dendrological collection and a substantial herbarium.

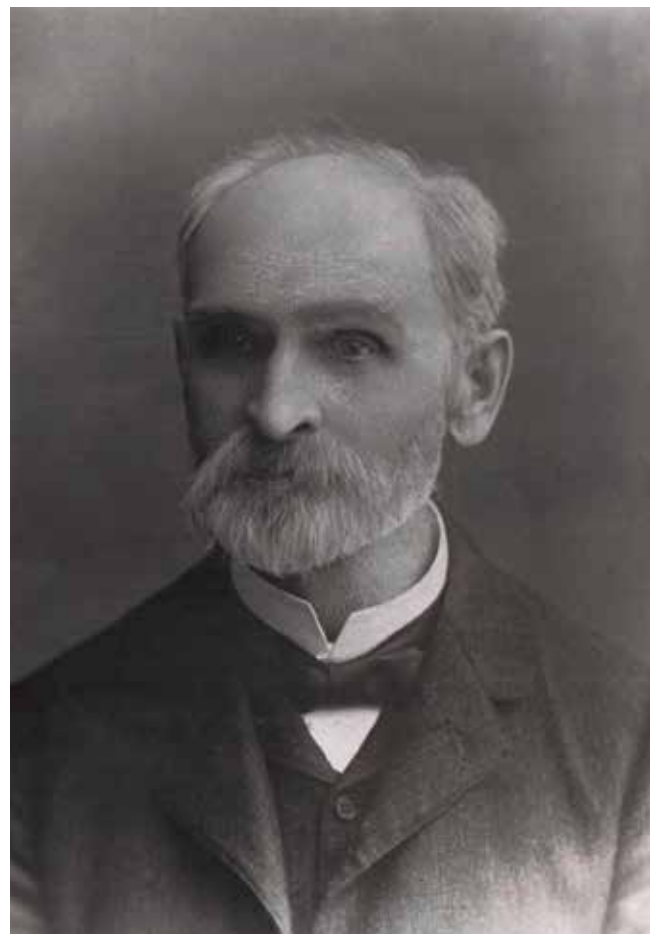


Fig. 2. Professor Yevstakhiy Voloshchak (from Hryniewiecki 1931).

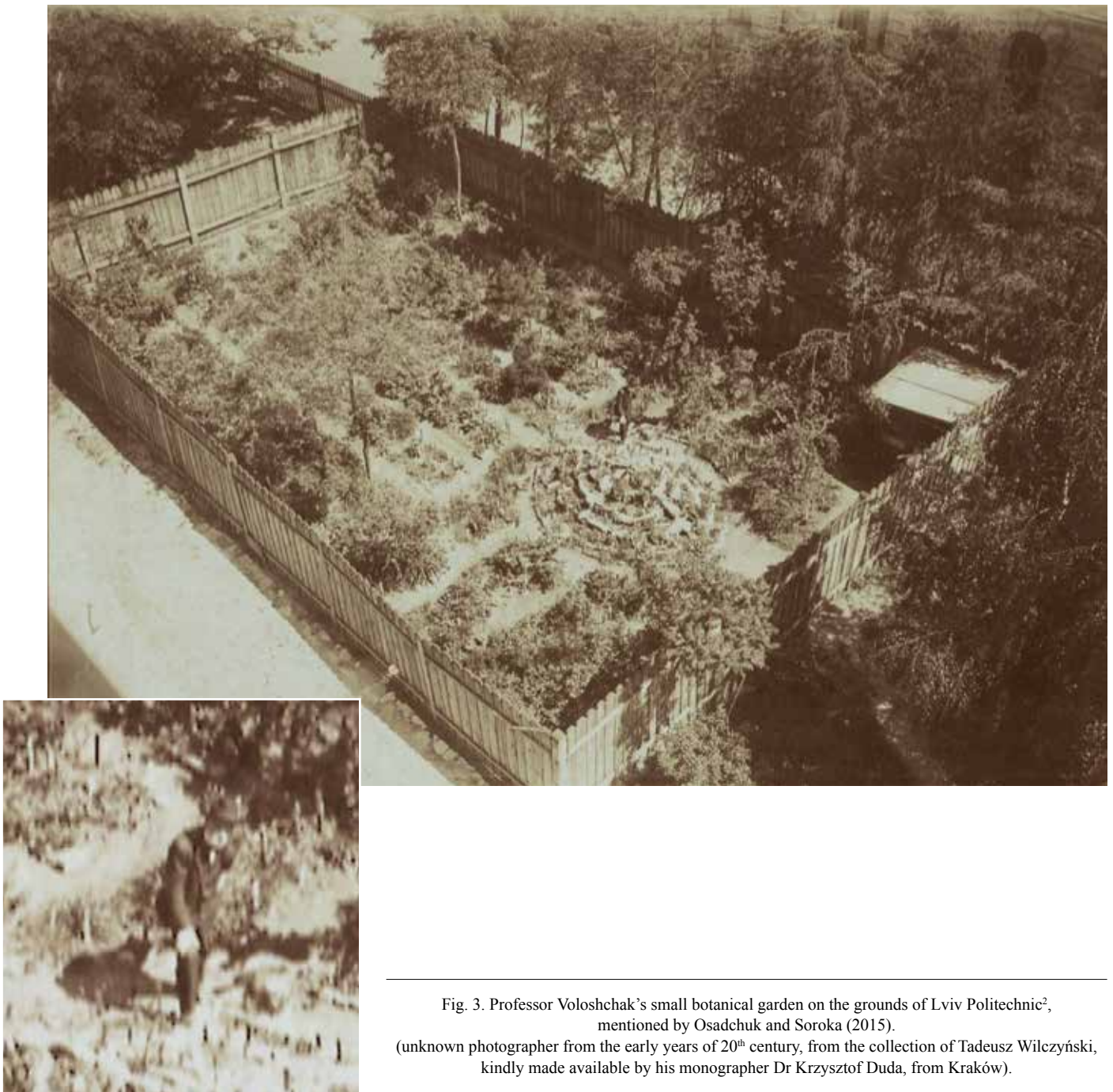


Fig. 3. Professor Voloshchak's small botanical garden on the grounds of Lviv Politechnic², mentioned by Osadchuk and Soroka (2015). (unknown photographer from the early years of 20th century, from the collection of Tadeusz Wilczyński, kindly made available by his monographer Dr Krzysztof Duda, from Kraków).

In 1886 he started his lengthy studies into the flora of the Carpathians. He published more than 25 papers in this field, including seminal works on the flora of Pokuttya or establishing the range of the flora of the Eastern and Western Carpathians (along the Lupkowska Pass). He described the Carpathian endemic species, such as *Dianthus carpaticus* Woł., *Euphorbia carpatica* Woł., *Hieracium pojoritense* Woł., *Melampyrum herbichii* Woł. or *Tozzia carpatica* Woł. as well as numerous hybrids, e.g. *Salix* × *scrobiger*a Woł. or *Galium* × *jarynae* Woł. He had outstanding knowledge of the taxonomy of several “difficult” genera – *Hieracium* (in 1880–1911 either alone or with Karl Hermann Zahn he described 33 new taxa of this genus from Eastern Carpathians, including 24 at species rank) as well as *Rosa* and *Salix*. He published the results of his research in more than 50 papers (Малиновський 2005, Szelağ 2007, Самотий 2008).

² The caption on the original photograph speaks of “the professorial gardens” at the Polytechnic, and the detail of the ground floor of a building, visible in the background on the photograph, does in fact match the detail of the elevation of the Polytechnic building. The length and angle of the shadow cast by Voloshchak shows that the photograph was taken around midday – so the garden must therefore have been located between the western frontage of the Polytechnic and Zachariewicz Street; the photo was taken from an upper floor window of the neighbouring middle school building (on the corner of Zachariewicz and Leon Sapieha streets). It is worth looking closely at the photograph in order to notice several details – all the plants have large labels, most likely with plant names; the gate in the high and very effective fence is on the shorter boundary of the garden, from Sapieha Street, and the Professor is standing at the base of a circular rock garden, located just beyond the gate (see enlarged fragment of the photograph). This is perhaps the only known photograph of this site? It is interesting to wonder if the successor at the department of botany and commodity sciences, the equally erudite, although in another sphere – i.e. research on the origin of plant food – Professor Adam Maurizio, went on to look after this small botanical garden? (Editor's note).



Fig. 4. Wood sample from *Melaleuca leucadendra* (L.) L. (photo L. Osadchuk).

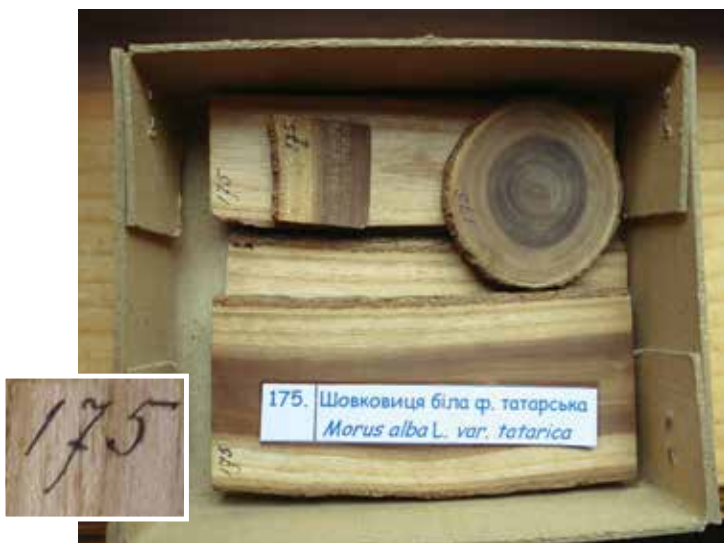


Fig. 5. A box of wood samples from *Morus alba* var. *tatarica* (L.) L. and the number given to these samples (photo L. Osadchuk).

He was not only a member of the Vienna Academy of Sciences and the Kraków Academy of Learning, but also an active member of the Section of mathematics, natural history and medicine of the Shevchenko Scientific Society in Lviv. Yevstakhiy Voloshchak died on 10th June 1918, in Vienna.

Collection of wood samples

Yevstakhiy Voloshchak's legacy, which has by some miracle survived, is the Lviv collection of wood samples, comprising 2808 exhibits (522 species, 25 subspecies and forms, and a few samples, designated only for genus). The origin of the samples remains unknown, perhaps in part they came to Voloshchak's department by way of exchange with many scientific centres around the world; one can come to this conclusion through an analogy – numerous herbarium specimens arrived here this way, and survive to this day. Currently the collection is housed in the "Museum of Wood" at the Department of Botany, Wood Science and Non-Wood Forest Products at the Ukrainian National Forestry University. It is just one of three parts of the collection made by Voloshchak, which he himself divided evenly in 1909 between the three scientific institutions close to his heart – the Shevchenko Scientific Society in Lviv, the Natural Sciences Museum in Vienna and the Academy of Learning in Kraków. Professor Voloshchak's other collections (herbaria), are held at the Ukrainian National Forestry University, the Ivan Franko National University of Lviv, at the State Natural History Museum of the National Academy of Sciences of Ukraine in Lviv and in several European scientific institutions (Самотий 2008).

The wood samples of the majority of the species come from trunks or branches, as cross-sections (in the form of discs), radial or tangential sections (in the form of planks), with bark preserved, all 7–8 mm thick (figs. 4, 5). Among the exhibits are both samples from secondary wood of trees as well as a few samples of sclerenchymatic tissue from mono- and dicotyledons.

On the reverse of some samples the old labels have been preserved, maybe from the time when Voloshchak was creating his wood collection (Fig. 6).



Fig. 6. An old label, perhaps dating to the creation of the collection by Yevstakhiy Voloshchak (photo M. Soroka).

For many decades the collection was looked after by employees of the department, who transcribed and updated the list of contents. The vast majority of the work was done by assistant professors Bokhdan Tsybyk, Ivan Vintoniv and Oleksandr Bozhok; shorter papers on the collection were also published (Сорока et al. 2003, Осадчук, Сорока 2015, Осадчук, Сорока 2016).

Collection Catalogue

In square brackets the original catalogue numbers relating to the labels glued to the exhibits, sometimes with the Latin names of the plants, now treated only as synonymous, both taken from the original catalogue prepared by Voloshchak (this catalogue sadly hasn't survived), transcribed in the mid 1980s by B. Tsybyk. The labels also show the Ukrainian names, added by B. Tsybyk, but these are not included in this list. The names have been updated in accordance with “The International Plant Names Index” (2017) and “The Plant List...” (2017); a question mark “?” indicates ambiguity in reading the original name as well as doubts about classification or nomenclature.

- Abies alba* Mill. [30]
Acacia dodonaeifolia (Pers.) Balb. [332]
Acacia extensa Lindl. [333]
Acacia heterophylla (Lam.) Willd. [336]
Acacia longifolia (Andrews) Willd. [334]
Acacia melanoxylon R.Br. [331]
Acacia verticillata (L'Hér.) Willd. [335]
Acer campestre L. [421]
Acer negundo L. [414]
Acer opalus subsp. *obtusatum* (Waldst. et Kit. ex Willd.) Gams [418]
Acer pensylvanicum L. [420]
Acer pentapomicum Stewart ex Brandis [= *A. regelii* Pax, 423]
Acer platanoides L. [417]
Acer pseudoplatanus L. [415]
Acer rubrum L. [416]
Acer saccharinum L. [419]
Acer spicatum Lam. [= *A. parviflorum* Ehrh., 424]
Acer tataricum L. [422]
Aeschynomene elaphroxylon (Gouill. et Perr.) Taub. [= *Herminiera elaphroxylon* Gouill. et Perr., 381]
Aesculus flava Sol. [427]
Aesculus glabra Willd. [428]
Aesculus hippocastanum L. [425]
Aesculus parviflora Walter [429]
Aesculus pavia L. [426]
Agathis australis (D.Don) Lindl. [6]
Agave americana L. [61a]
Ailanthus altissima (Mill.) Swingle [390]
Allocasuarina verticillata (Lam.) L.A.S.Johnson [= *Casuarina quadrivalvis* Labill., 62]
Alnus alnobetula (Ehrh.) K.Koch [= *A. viridis* (Chaix) DC., 151]
Alnus glutinosa (L.) Gaertn. [152]
Alnus incana (L.) Moench [153]
Alsophila sp. [1, 1a]
Amelanchier canadensis (L.) Medik. [272]
Amelanchier ovalis Medik. [271]
Amorpha fruticosa L. [371]
Ampelopsis cordata Michx. [447]
Angelica sp. [„angelique à papier” ?, 602]
Angophora floribunda (Sm.) Sweet [= *Acmena floribunda* (Sm.) A.Cunn. ex DC., 483]
Anthospermum aethiopicum L. [579]
Aphelandra pulcherrima (Jacq.) Kunth [575]
Araucaria araucana (Molina) K.Koch [7]
Arctostaphylos uva-ursi (L.) Spreng. [502]
Arctous alpina (L.) Nied. [= *Arctostaphylos alpina* (L.) Spreng., 503]
Aristolochia macrophylla Lam. [193]
Aristolochia tomentosa Sims [194]
Artemisia abrotanum L. [600]
Artemisia scoparia Waldst. et Kit. [601]
Artocarpus integer (Thunb.) Merr. (= *A. integrifolius* L.f., 179)
Arundo donax L. [56]
Atraphaxis spinosa L. [196]
Atriplex canescens (Pursh) Nutt. [= *A. canescens* James?, 200]
Atriplex halimus L. [199]
Aucuba japonica Thunb. [495]
Baccharis halimifolia L. [597]
Banksia integrifolia L.f. [188]
Banksia procera hort. [?, 189]
Benzoin aestivale Nees [?, 222]
Benzoin odoriferum Nees [?, 221]
Berberis aquifolium Pursh [= *Mahonia aquifolium* (Pursh) Nutt., 211; also as *M. diversifolia* Sweet?, 212]
Berberis poiretii C.K.Schneid. [214]
Berberis vulgaris L. [213]
Betula dalecarlica L.f. [?, 146]
Betula humilis Schrank [150]
Betula obscura Kotula [147]
Betula papyrifera Marshall [148]
Betula pendula Roth [145]
Betula pubescens Ehrh. [149]
Borreria ligustifolia hort. vindebon. [?, 580]
Brosimum gaudichaudii Trécul [180]
Broussonetia papyrifera (L.) L'Hér. ex Vent. [178]
Buddleja saligna Willd. [539]
Bunchosia polystachia (Andrews) DC. [394]
Buxus sempervirens L. [397]
Callicarpa candicans (Burm.f.) Hochr. [548]
Callistemon citrinus (Curtis) Skeels [482]
Callistemon lanceolatus (Sm.) Sweet [481]
Calluna vulgaris (L.) Hill [506]
Calocedrus decurrens (Torr.) Florin [= *Libocedrus decurrens* Torr., 34]
Calophyllum inophyllum L. [460]
Calycanthus floridus L. [217]
Camellia japonica L. [459]
Campsis radicans (L.) Seem. [574]
Caragana arborescens Lam. [376]
Caragana frutex (L.) K.Koch [378]
Caragana fruticosa (Pall.) Besser [377]
Caragana microphylla Lam. [379]

- Carpinus betulus* L. [138]
Carpinus orientalis Mill. [139]
Carya ovata (Mill.) K.Koch [137]
Castanea sativa Mill. [156]
Casuarina cunninghamiana Miq. [63]
Catalpa ovata G.Don [573]
Cedrus deodara (Roxb. ex G.Don) D.Don [22]
Cedrus libani A.Rich. [21]
Celastrus scandens L. [411a]
Celtis australis L. [169]
Celtis occidentalis L. [170; also as *C. crassifolia* Lam., 171]
Ceratonia siliqua L. [341]
Cercis canadensis L. [340]
Cercis siliquastrum L. [338, 339]
Cestrum alternifolium (Jacq.) O.E.Schulz [565, 567]
Cestrum auriculatum L'Hér. [563, 566]
Chaenomeles sinensis (Dum.Cours.) Koehne [= *Cydonia sinensis* (Dum.Cours.) Thouin, 250]
Chamaecyparis lawsoniana (A.Murray bis) Parl. [= *Cupressus lawsoniana* Murr., 40]
Chamaecyparis nootkatensis Lindl. et Gord. [41]
Chamaecyparis thyoides (L.) Britton, Sterns et Poggenb. [= *Ch. sphaeroidea* Spach, 42]
Chrysanthemum indicum L. [598]
Cinnamomum camphora (L.) J.Presl [220]
Cinnamomum tamala (Buch.–Ham.) T.Nees et Eberm. [= *C. albiflorum* Nees, 219]
Cinnamomum zeylanicum Nees [?, 218]
Citharexylum spinosum L. [547]
Citrus medica L. [388]
Clusia flava Jacq. [461]
Cladrastis kentukea (Dum.Cours.) Rudd [= *C. lutea* (Michx.) K.Koch, 349]
Clavija ornata D.Don [508]
Clematis alpina (L.) Mill. [= *Atragene alpina* L., 210]
Clematis vitalba L. [209]
Clerodendrum umbellatum Poir. [553]
Coccoloba diversifolia Jacq. [= *C. punctata* L., 197]
Coffea arabica L. [578]
Colutea arborescens L. [375]
Cordia sp. [544]
Cornus amomum subsp. *obliqua* (Raf.) J.S.Wilson [494]
Cornus mas L. [492]
Cornus sanguinea L. 493]
Corylus avellana L. [142]
Corylus colurna L. [144]
Corylus maxima Mill. [143]
Cotinus coggygria Scop. [400]
Cotoneaster integerrimus Medik. [245]
Cotoneaster melanocarpus G.Lodd. [?, 246]
Cotoneaster nebrodensis (Guss.) K.Koch [= *C. tomentosus* (Aiton) Lindl., 247]
Cotoneaster rotundifolius Wall. ex Lindl. [248]
Crataegus crus-galli L. [285]
Crataegus laevigata (Poir.) DC. [= *C. oxyacantha* L., 275]
Crataegus × *macrocarpa* Hegetschw. [276]
Crataegus mollis (Torr. et A.Gray) Scheele [= *C. subvillosa* H.Vind., 277]
Crataegus monogyna Jacq. [278]
Crataegus monogyna f. *pteridifolia* (Lodd. ex Loudon) Rehder [279]
Crataegus nigra Waldst. et Kit. [283]
Crataegus orientalis Pall. ex M.Bieb. [281; also as *C. tournefortii* Griseb., 282]
Crataegus pentagyna Waldst. et Kit. ex Willd. [280]
Crataegus persimilis Sarg. 'Splendens' [286]
Crataegus uniflora Münchh. [284]
× *Crataemespilus grandiflora* (Sm.) F.G.Camus [= *Mespilus germanica* var. *grandiflora* Sm., 272, 274]
Cryptomeria japonica (Thunb. ex L.f.) D.Don [32]
Cryptomeria japonica (Thunb. ex L.f.) D.Don 'Elegans' [= *Cryptomeria elegans* Veitch, 33]
Cycas revoluta Thunb. [2]
Cycas thouarsii R.Br. [3]
Cydonia oblonga Mill. [249]
Cynometra ramiflora L. [337]
Cytisus austriacus L. [368]
Cytisus austriacus var. *rochelii* (Wierzb.) Cristof. [369]
Cytisus elongatus Waldst. et Kit. [363]
Cytisus hirsutus L. [= *C. ciliatus* Wahlenb., 364]
Cytisus podolicus Błocki [365]
Cytisus procumbens (Willd.) Spreng. [= *Genista procumbens* Waldst. et Kit., 353]
Cytisus ratisbonensis Schaeff. [367]
Cytisus ruthenicus Woł. [= *C. ruthenicus* Fisch., 366]
Cytisus scoparius (L.) Link [= *Sarothamnus scoparius* (L.) Wimm., 361]
Dalbergia melanoxylon Gouill. et Perr. [382]
Daphne alpina L. [471]
Daphne laureola L. [470]
Daphne mezereum L. [469]
Dasiphora fruticosa (L.) Rydb. [289]
Datura sp. [568]
Deutzia scabra Thunb. [227]
Diospyros lotus L. [511]
Diospyros virginiana L. [512]
Diospyros whyteana (Hiem) P.White [= *Royena lucida* L., 510]
Dorema ammoniacum D.Don [491]
Dorycnium decumbens Jord. [?, 370]
Dracaena draco (L.) L. [60]
Dracaena fragrans (L.) Ker Gawl. [61]
Echium giganteum L.f. [545]
Echium strictum L.f. [546]
Einodia hastata (R.Br.) A.J.Scott [= *Rhagodia hastata* R.Br., 198]
Elaeagnus angustifolia L. [474]
Elaeagnus rhamnoides (L.) A.Nelson [= *Hippophaë rhamnoides* L., 472]
Elaeagnus sp. [475]
Embothrium coccineum J.R.Forst. et G.Forst. [187]
Empetrum nigrum L. [398]
Ephedra altissima Desf. [53]
Ephedra distachya L. [= *E. vulgaris* Rich., 52]
Ephedra major subsp. *procera* (C.A.Mey.) Born. [= *E. procera* C.A.Mey., 51]
Erica herbacea L. [507]
Erigeron trilobus (Decne.) Boiss. [= *Chrysoma aurea* DC., 596]

- Eucalyptus globulus* Labill. [480]
Eucalyptus leucoxylon F.Muell. [479]
Eugenia uniflora L. [= *E. Novae Zeelandia* F.Muell.?, 478]
Euonymus americanus L. [408]
Euonymus europaeus L. [406]
Euonymus japonicus Thunb. [409]
Euonymus latifolius (L.) Mill. [407]
Euonymus nanus M.Bieb. [411]
Euonymus verrucosus Scop. [410]
Fagus sylvatica L. [154]
Ficus carica L. [184]
Ficus elastica Roxb. ex Hornem. [181]
Ficus pallida Vahl [= *F. ligustrina* Kunth et C.D.Bouché, 183]
Ficus religiosa L. [182]
Fhueggea suffruticosa (Pall.) Baill. [= *Securinega suffruticosa* (Pall.) Rehder, 395]
Fontanesia phillyreoides Labill. [514]
Frangula alnus Mill. [444]
Fraxinus americana L. [518, 523]
Fraxinus angustifolia subsp. *oxycarpa* (Willd.) Franco et Rocha Alfonso [517]
Fraxinus excelsior L. [515]
Fraxinus excelsior f. *diversifolia* (Aiton) Lingelsh. [= *F. heterophylla* L.?, 516]
Fraxinus nigra Marshall [522]
Fraxinus ornus L. [525]
Fraxinus pannosa Vent. ex Spreng. [?, 520]
Fraxinus pennsylvanica Marshall [= *F. elliptica* Bosc, 519; also as *F. richardii* Bosc, 521, and *F. rubicunda* Bosc, 524]
Genista florida L. [352]
Genista germanica L. [355]
Genista pilosa L. [356]
Genista radiata (L.) Scop. [351]
Genista tinctoria L. [354]
Ginkgo biloba L. [4]
Gleditsia aquatica Marshall [344]
Gleditsia caspia Desf. [346]
Gleditsia macracantha Desf. [345]
Gleditsia sinensis Lam. [343]
Gleditsia triacanthos L. [342]
Grevillea robusta A.Cunn. ex R.Br. [186]
Guapira fragrans (Dum.Cours.) Little [= *Pisonia fragrans* Dum.Cours., 204]
Gymnocladus dioica (L.) K.Koch [= *G. canadensis* Lam., 347]
Halesia carolina L. [513]
Handroanthus chrysotrichus (Mart. ex DC.) Mattos [= *Tecoma grandis* Kraenzl., 549]
Hedera helix L. [489]
Hibiscus syriacus L. [457]
Hippocrepis emeroideis (Boiss. et Spruner) Lassen [= *Coronilla emeroideis* Boiss. et Spruner, 380]
Hippomane mancinella L. [396]
Hydrangea paniculata Siebold [228]
Hylocereus trigonus (Haw.) Saff. [= *Cereus napoleonis* Graham, 466]
Hyssopus officinalis L. [558]
Ilex aquifolium L. [405]
Jacaranda brasiliana (Lam.) Pers. [571]
Jacaranda rosa Poir. [?, 572]
Jasminum fruticans L. [537]
Jasminum humile L. [538]
Juglans nigra L. [136]
Juglans regia L. [135]
Juniperus communis L. [44]
Juniperus communis subsp. *nana* (Willd.) Syme [= *J. sibirica* Burgsd., 45]
Juniperus excelsa M.Bieb. [49]
Juniperus oxycedrus L. [45a]
Juniperus phoenicea L. [47]
Juniperus sabina L. [50]
Juniperus thurifera L. [46]
Juniperus virginiana L. [48]
Justicia adhatoda L. [= *Adhatoda vasica* Nees, 576]
Kiggelaria africana L. [465]
Koelreuteria paniculata Laxm. [432]
Krascheninnikovia ceratoides (L.) Gueldenst. [= *Eurotia ceratoides* (L.) C.A.Mey., 201]
Laburnum alpinum (Mill.) Bercht. et J.Presl [359]
Laburnum alschingeri (Vis.) C.Koch [358]
Laburnum anagyroides Medik. [357]
Larix decidua Mill. [23]
Larix sibirica Ledeb. [24]
Laurus nobilis L. [223]
Lavandula angustifolia subsp. *pyrenaica* (DC.) Guinea [= *L. vera* DC., 554]
Lecythis sp. [477]
Ledum palustre L. [496]
Lembotropis nigricans (L.) Griseb. [= *Cytisus nigricans* L., 362]
Lidbeckia pectinata P.J.Bergius [599]
Ligustrum ovalifolium Hassk. [536a]
Ligustrum vulgare L. [536]
Liriodendron tulipifera L. [216]
Lonicera caerulea L. [594]
Lonicera caerulea subsp. *altaica* (Pall.) Gladkova [593]
Lonicera caprifolium L. [588]
Lonicera fragrantissima Lindl. et J.Paxton [595]
Lonicera iberica M.Bieb. [?, 592]
Lonicera nigra L. [591]
Lonicera tatarica L. [590]
Lonicera xylosteum L. [589]
Loranthus europaeus Jacq. [190]
Lycium afrum L. [562]
Lycium barbarum L. [560]
Lycium chinense Mill. [561]
Machaerium sp. [384]
Maclura pomifera (Raf.) C.K.Schneid. [= *M. aurantiaca* Nutt., 177]
Magnolia acuminata (L.) L. [215]
Malpighia glabra L. [393]
Malus baccata (L.) Borkh. [260]
Malus dasyphylla Borkh. [259]
Malus rotundifolia Moench [?, 261]
Malus sylvestris (L.) Mill. [258]
Malva canariensis M.F.Ray [= *Lavatera acerifolia* Cav., 454]
Malvaviscus arboreus Cav. [456]
Manilkara elata (Allemão ex Miq.) Monach. [= *Mimusops elata* Allemão ex Miq., 509]
Melaleuca armillaris (Sol. ex Gaertn.) Sm. [485]

- Melaleuca imbricata* Link [?, 487]
Melaleuca leucadendra (L.) L. [488]
Melaleuca lineariifolia Sm. [486]
Melia azedarach L. [392]
Mesembryanthemum multiflorum Haw. [?, 206]
Mesembryanthemum umbellatum L. [?, 207]
Mespilus germanica L. [273]
Metrosideros albiflora Sol. ex Gaertn. [484]
Micromelum pubescens Blume [?, 389]
Morus alba L. [173; also as *M. alba* var. *hispanica*?, 174, = *M. hispanica* Loudon?]
Morus alba var. *tatarica* (L.) L. [175]
Morus nigra L. [176]
Myoporum crystallinum Kunze [?, 577]
Myricaria germanica (L.) Desv. [464]
Nerium oleander L. [542]
Nicotiana glauca Graham [569]
Nothofagus antarctica (G.Forst.) Oerst. [= *Fagus antarctica* G.Forst., 155]
Olea capensis L. [534]
Olea europaea L. [533]
Olea europaea subsp. *cuspidata* (Wall. et G.Don) Cif. [535]
Opuntia engelmannii Salm-Dyck ex Engelm. [468]
Ostrya carpinifolia Scop. [140]
Ostrya virginiana (Mill.) K.Koch [141]
Ottonia glaucescens (Jacq.) Endl. [65]
Ottonia plantaginea (Lam.) Endl. [64]
Paliurus spina-christi Mill. [433]
Pandanus utilis Bory [54]
Paronychia canariensis (L.f.) Link [= *P. canariensis* Juss.?, 208]
Parthenocissus quinquefolia (L.) Planch. [448]
Paulownia tomentosa Steud. [570]
Pavonia sepium A.St.-Hil. [455]
Periploca graeca L. [543]
Petteria ramentacea (Sieber) C.Presl [360]
Phellodendron amurense Rupr. [387]
Philadelphus coronarius L. [225]
Philadelphus grandiflorus Willd. [226]
Phillyrea latifolia L. [532]
Physocarpus opulifolius (L.) Maxim. [= *Spiraea opulifolia* L., 241]
Picea abies (L.) H.Karst. [25]
Picea mariana (Mill.) Britton, Sterns et Poggenb. [= *P. nigra* Link, 27]
Picea orientalis (L.) Peterm. [26]
Pilosocereus lanuginosus (L.) Byles et G.D.Rowley [467]
Pinus cembra L. [20]
Pinus halepensis Mill. [17]
Pinus heldreichii H.Christ [13]
Pinus mugo subsp. *rotundata* (Link) Janch. et H. Neumayer [= *P. uliginosa* Neum., 10]
Pinus nigra J.F.Arnold [11]
Pinus nigra subsp. *laricio* Maire [12]
Pinus nigra subsp. *salzmannii* (Dunal) Franco [= *P. pyrenaica* Lapeyr., 15]
Pinus pinaster subsp. *escarena* (Risso) K.Richt. [= *P. hamiltonii* Ten., 16]
Pinus pumila (Pall.) Regel [9]
Pinus serotina Michx. [14]
Pinus strobus L. [19]
Pinus sylvestris L. [8]
Pinus wallichiana A.B.Jacks. [= *P. excelsa* Wall., 18]
Pistacia lentiscus L. [399]
Pistacia vera L. [383]
Pithecolobium sp. [?, 330]
Pittosporum tobira (Thunb.) W.T.Aiton [236]
Platanus occidentalis L. [237]
Platanus orientalis L. [238]
Platycladus orientalis (L.) Franco [= *Biota orientalis* Endl., 38; also as *B. orientalis* var. *tatarica* Lindl. et Gordon, 39]
Plectranthus fruticosus L'Hér. [559]
Pomaderris apetala Labill. [?, 445]
Populus alba L. [66]
Populus balsamifera L. [73]
Populus ×canescens (Aiton) Sm. [67]
Populus deltoides subsp. *monilifera* (Aiton) Eckenw. [= *P. monilifera* Aiton, 72]
Populus nigra L. [70]
Populus nigra L. 'Italica' [= *P. pyramidalis* Rozier, 71]
Populus tremula L. [68]
Populus tremuloides Michx. [69]
Potentilla daurica Don [?, 290]
Prunus armeniaca L. [313]
Prunus avium (L.) L. [322]
Prunus caproniana var. *polonica* Roem. [?, 323]
Prunus cerasifera Ehrh. [= *P. divaricata* Ledeb., 319 and 321]
Prunus cerasifera Ehrh. 'Pissardii' [326]
Prunus cerasus L. [324]
Prunus cocomilia Ten. [317]
Prunus domestica L. [315; also as *P. damascena* Ehrh.?, 316]
Prunus domestica subsp. *insititia* (L.) Bonnier et Layens [318]
Prunus dulcis var. *amara* (DC.) Buchheim [310]
Prunus fruticosa Pall. [325]
Prunus mahaleb L. [329]
Prunus orientalis (Mill.) Koehne [311]
Prunus padus L. [327]
Prunus persica (L.) Batsch [= *P. vulgaris* Mill.?, 314]
Prunus serotina Ehrh. [328]
Prunus spinosa L. [320]
Prunus tenella Batsch [312]
Pseudopanax crassifolius (Sol. ex A.Cunn.) K.Koch [= *Panax crassifolius* (Sol. ex A.Cunn.) Decne. et Planch., 490]
Pseudotsuga menziesii (Mirb.) Franco [30a]
Ptelea trifoliata L. [386]
Pterocarya pterocarpa Kunth ex I.Illjinsk. [= *P. pterocaria* (Michx.) Kunth?, 134]
Pyrus amygdaliformis Vill. [253]
Pyrus michauxii Bosc ex Poir. [254]
Pyrus pyraister (L.) Borkh. [251]
Pyrus salicifolia Pall. [252; and var. *pendula* Jacq., 255]
Pyrus ×salviifolia DC. [257]
Quercus alba L. [161]
Quercus cerris L. [157]
Quercus ilex L. [158]
Quercus muhlenbergii Englem. [= *Q. acuminata* (Michx.) Sarg., 165]
Quercus petraea (Matt.) Liebl. [163]

- Quercus pubescens* Willd. [164]
Quercus robur L. [160]
Quercus ×rosacea Bechst. [= *Q. ×hybrida* Bechst., 162]
Quercus suber L. [159]
Rhamnus alpina L. [443]
Rhamnus cathartica L. [436]
Rhamnus davurica Pall. [440]
Rhamnus infectoria L. [?, 438]
Rhamnus pallasii Fisch. et C.A.Mey. [439]
Rhamnus saxatilis Jacq. [442]
Rhamnus saxatilis subsp. *tinctoria* Nyman [437]
Rhamnus spathulifolia Fisch. et C.A.Mey. [?, 441]
Rhododendron arboreum Sm. [498]
Rhododendron ferrugineum L. [499]
Rhododendron hirsutum L. [500]
Rhododendron luteum Sweet [497]
Rhododendron myrtifolium Schott et Kotschy [501]
Rhodotypos scandens (Thunb.) Makino [288]
Rhus lucida L. [403]
Rhus typhina L. [404]
Rhus viminalis Aiton [?, 402]
Ribes alpinum L. [231]
Ribes aureum Pursh [235]
Ribes multiflorum Kit. ex Schult. [234]
Ribes nigrum L. [230]
Ribes petraeum Wulfen [233]
Ribes rubrum L. [232]
Ribes uva-crispa L. [229]
Robinia hispida L. [374]
Robinia pseudoacacia L. [372]
Robinia viscosa Vent. [373]
Rosa arvensis Huds. [291]
Rosa canina L. [= *R. oblonga* Déségl. et Ripart, 305]
Rosa canina var. *oxyphylla* H.Br. [?, 303]
Rosa comosa Ripart [= *R. rubiginosa* var. *comosa* Ripart?, 298]
Rosa dumalis Bechst. [304]
Rosa gallica L. [293]
Rosa glauca Pourr. [= *R. gutensteinensis* Jacq., 306]
Rosa heriteriana Link [?, 294]
Rosa jundzillii Besser [296]
Rosa laxa Retz. [308]
Rosa majalis L. [307]
Rosa marginata Wallr. [= *R. reticulata* A.Kern., 297]
Rosa polonica Błocki [?, 302]
Rosa rugosa Thunb. [292]
Rosa ×scrabriuscula Winch ex Sm. [= *R. umbelliflora* Sw.?, 300]
Rosa seringeana Godr. [?, 301]
Rosa spinosissima L. [309]
Rosa ×turbinata Aiton [295]
Rosa villosa L. [299]
Rumex lunaria L. [195]
Saccharum officinarum L. [55]
Sageretia thea (Osbeck) M.C.Johnst. [435]
Salacia polyantha Steud. [?, 412]
Salix acutifolia Willd. [109]
Salix alba L. [79]
Salix alpina Scop. [= *S. jacquiniana* Willd., 88]
Salix appendiculata Vill. [= *S. grandifolia* Scop., 105; probably *S. caprea* L.?
Salix arbuscula L. [96]
Salix arenaria L. [?, 91]
Salix attenuata A.Kern. [?, 106]
Salix aurita L. [100]
Salix babylonica L. [80]
Salix bicolor Ehrh. ex Willd. [94; also as *S. schraderiana* Willd., 95]
Salix ×blanda Andersson [= *S. ×elegantissima* K.Koch, 81]
Salix caesia Vill. [127]
Salix caprea L. [101]
Salix cinerea L. [103]
Salix daphnoides Vill. [108; also as *S. jaspidea* hort.?, 110, *S. erdingeri* A.Kern.?, 112, and *S. reuteri* Moretti?, 128]
Salix elaeagnifolia Tausch [?, 123]
Salix eleagnos Scop. [= *S. ×hircina* A.Kern.?, 130; also as *S. incana* Schrank, 132, and *S. incana* var. *angustifolia* Cariot, 133]
Salix ×forbyana Sm. [125]
Salix ×fragilis L. [77; also as *S. russeliana* Sm., 78]
Salix glabra Scop. [98]
Salix gmelinii Pall. [= *S. dasyclados* Wimm., 118; also as *S. stipularis* Sm., 119]
Salix hastata L. [97]
Salix ×heimerlii Heinr. [?, 102]
Salix herbacea L. [86]
Salix hexandra Ehrh. [?, 75]
Salix ×intermedia Host [131]
Salix lapponum L. [107]
Salix myrsinifolia Salisbury [= *S. nigricans* Sm., 92; also as *S. parietariifolia* Host, 93]
Salix nigra Marshall [= *S. purshiana* Sprengel, 76]
Salix pentandra L. [74]
Salix permixta Woł. [?, 120]
Salix phyllicifolia L. [= *S. nitens* Gren. et Gordon?, 115]
Salix purpurea L. [126; also as *S. calliantha* Jos.Kern.?, 111, and *S. dichroa* Döll?, 121]
Salix reticulata L. [87]
Salix retusa L. [84; also as *S. kitaibeliana* Willd., 85]
Salix rosmarinifolia L. [90]
Salix ×rubra Huds. [124]
Salix ×sericans Tausch [?, 116]
Salix seringeana Lecoq et Lamotte [= *S. oleifolia* Vill., 129]
Salix silesiaca Willd. [104]
Salix ×smithiana Willd. [117]
Salix sordida A.Kern [?, 122]
Salix starkeana Willd. [= *S. livida* Wahlenb., 99]
Salix triandra L. [82; also as *S. amygdalina* L., 83]
Salix viminalis L. [113]
Salix ×zedlitziana A.Kern. [?, 114]
Salix sp. [89]
Salvia candidissima Vahl [557]
Salvia microphylla Kunth [556]
Sambucus nigra L. [581]
Sambucus racemosa L. [582]
Sapindus marginatus Willd. [431]
Sequiera americana L. [?, 205]
Sequoiadendron giganteum (Lindl.) J.Buchholz [31]
Serjania larrotteana Cambess. [430]

Shepherdia canadensis (L.) Nutt. [473]
Solanum dulcamara L. [564]
Sonneratia caseolaris (L.) Engl. [476]
Sorbaria sorbifolia (L.) A. Braun [= *Spiraea sorbifolia* L., 244]
 × *Sorbopyrus auricularis* (Knoop) C.K. Schneid. [= *Pyrus*
 × *pollveria* L., 256]
Sorbus aria (L.) Crantz [269]
Sorbus aucuparia L. [264]
Sorbus chamaespilus (L.) Crantz [265]
Sorbus domestica L. [263]
Sorbus graeca (Lodd. ex Spach) Lodd. ex S. Schauer [= *S.*
cretica (Spach) Hedl., 270]
Sorbus × *hostii* (J. Jacq. ex Host) K. Koch [266]
Sorbus latifolia (Lam.) Pers. [268]
Sorbus mougeotii Soy.-Will. et Godr. [267]
Sorbus torminalis (L.) Crantz [262]
Spartium junceum L. [350]
Sphaeralcea abutiloides G. Don [?, 453]
Spiraea bella Sims [243]
Spiraea chamaedryfolia L. [240]
Spiraea media Schmidt [242]
Spiraea prunifolia Siebold et Zucc. [239]
Staphylea pinnata L. [413]
Sterculia diversifolia G. Don [?, 458]
Styphnolobium japonicum (L.) Schott [= *Sophora japo-*
nica L., 348]
Suaeda vermiculata Forssk. ex J.F. Gmel. [= *S. fruticosa*
 Forssk., 202; also as *S. vermiculata* L.?, 203]
Swietenia mahagoni (L.) Jacq. [391a]
Symphoricarpos albus (L.) S.F. Blake [587]
Syringa × *chinensis* Willd. [528]
Syringa emodi Wall. ex Royle [531]
Syringa josikaea J. Jacq. ex Rchb.f. [530]
Syringa × *persica* L. [529]
Syringa vulgaris L. [527]
Tabernaemontana citrifolia L. [541]
Tamarix gallica L. [462]
Tamarix tetrandra Pall. ex M. Bieb. [463]
Taxus baccata L. [5]
Thuja occidentalis L. [35]
Thuja plicata Donn ex D. Don [37; also as *Th. gigantea*
 Don, 36]
Tilia americana L. [451]
Tilia cordata Mill. [449]
Tilia platyphyllos Scop. [450]
Tilia tomentosa Moench [452]
Toona sinensis (Juss.) M. Roem. [= *Cedrela sinensis* Juss., 391]
Toxicodendron pubescens Mill. [= *Rhus toxicodendron* L., 401]
Tsuga canadensis (L.) Carrière [29]
Ulmus glabra Huds. [167]
Ulmus laevis Pall. [168]
Ulmus minor Mill. [166]
Urtica parviflora Roxb. [185]
Vaccinium myrtillus L. [505]
Vaccinium uliginosum L. [506]
Viburnum lantana L. [584]
Viburnum lentago L. [585]
Viburnum opulus L. [586]
Viburnum tinus L. [583]

Viscum album L. [191]
Viscum austriacum Wiesb. [192]
Vitex agnus-castus L. [550]
Vitex lucens Kirk [552]
Vitex negundo L. [551]
Vitis vinifera L. [446]
Wrightia tinctoria R.Br. [= *Allamanda verticillata* Desf.,
 540]
Xanthorrhoea australis R.Br. [59]
Zanthoxylum americanum Mill. [385]
Zelkova carpinifolia (Pall.) K. Koch [172]
Ziziphus jujuba Mill. [434]

The Department of Botany, Wood Science and Non-Wood Forest Products, in its desire to spread the word about Yevstakhiv Voloshchak's work, and out of respect for the work and activities of all of his predecessors at the Department, sincerely asks for any information about possible surviving fragments of this collection.

Acknowledgements

The authors would like to thank Mrs Tetiana Prykladivska from Lviv for translation into Polish and for critical review of the text, Editor Dr Jakub Dolatowski for his research in the State Archive in Przemyśl and for critical review of the catalogue, and Dr Krzysztof Duda from Kraków for access to the photograph of Voloshchak's Lviv botanical garden.

Archive sources

Archiwum Państwowe w Przemyślu, zesp. 142/0, sygn. 7017 – Archiwum Grekokatolickiego Biskupstwa w Przemyślu: Dek. Jaworów, par. Jaworów i filia Górne, Duże Przedmieście 1811–1837: 282. Copia / Libri / Natorum parochiae r. gr. cth. Jaworowiensis / cum suburbio majore Górne ab Anno / 1831 ad ultimam Decembris 1835.

References

- BRZOZOWSKI S. 1987. Wołoszczak Eustachy (1835–1918). In: Słownik biologów polskich. Feliksiak S. (ed.). Państwowe Wydawnictwo Naukowe, Warszawa, p. 588.
- HRYNIEWIECKI B. 1931. Zarys historii botaniki w Polsce. Polskie Towarzystwo Botaniczne, Warszawa.
- SZELAĞ Z. 2007. Typification of the *Hieracium* (Asteraceae) names described by E. Wołoszczak from the Eastern Carpathians. Polish Botanical Journal 52(2): 99–118.
- The International Plant Names Index. 2017. <http://www.ipni.org/ipni/idPlantnameSearch.do>. [Accessed 15.05.2017].
- The Plant List. A working list of all plant species. 2017. <http://www.theplantlist.org/tpl1/search>. [Accessed 15.05.2017].
- БЕРКО Й.М. 1969. Остап Волощак (до 50-річчя від дня смерті). Український ботанічний журнал 26(6): 123.
- КОБІВ Ю.Й. 1991. Дослідник карпатської флори [Остап Волощак (1835–1918) – видатний флорист і ботанік-

- географ]. In: Аксіоми для нащадків [:] укр. імена у світовій науці [:] збірка нарисів (Черняк А.А. ред.). Каменяр, Львів, pp. 212–219.
- КРИЦЬКА Л.І., ШЕВЕРА М.В. 2017. Волощак Остап. Енциклопедія сучасної України. http://esu.com.ua/search_articles.php?id=29582. [Accessed 15.05.2107].
- МАЛИНОВСЬКИЙ К.А. 2005. Історія ботанічних досліджень і бібліографія флори Українських Карпат до 1970 р. НАН України, Держ. природознав. музей, Львів.
- МЕЛЬНИК М. 1932. Д-р Остап Волощак як дослідник Карпатської флори (рістні). Збірник Фізіографічної комісії Наукового товариства імені Т.Г.Шевченка, Львів.
- ОСАДЧУК Л.С., СОРОКА М.І. 2015. Остап Волощак – визначний біолог, дослідник карпатської флори (до 180-річчя з дня народження). Наукові праці Лісівничої академії наук України: збірник наукових праць – Львів 13: 294–295.
- ОСАДЧУК Л.С., СОРОКА М.І. 2016. Історичні колекції в гербарії НЛТУ (LWFU) як важливий чинник в освітньо-науковій діяльності. In: Наукові основи підвищення продуктивності та біологічної стійкості лісових та урбанізованих екосистем. Матеріали 66-ої науково-технічної конференції професорсько-викладацького складу, наукових працівників, докторантів та аспірантів за підсумками наукової діяльності у 2015 році (Миклуш С.І., відп. ред.), Львів 25.10.2016, pp. 87–89.
- САМОТИЙ Р. 2008. Науково-видавничі досягнення українських учених Львівської політехніки: бібліографічний аспект (середина ХІХ – початок ХХ ст.). Вісник Львівського університету [:] Серія книгознавство 3: 209–218.
- СОРОКА М.І., ШОВГАН А.Д., ЛУКАЩУК Г.Б. 2003. Історичні гербарії та анатомічні колекції на кафедрі ботаніки УкрДЛТУ. Вісник Луганського державного педагогічного університету 11(67): 129–132.