

Adventive dendrotaxa of Hungary

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Introduction

Present study presents the adventive tree and shrub species occurring in Hungary. Those taxa are considered ‘adventive’, which are non-indigenous, that is they don’t occur in a given area naturally. Escaped cultivated plants (*hemerophytes* = *ergasiophytes*) and introduced species (*xenophytes*) are included in the category ‘adventive’. There is no unintentionally introduced tree or shrub species in Hungary. Species escaped can be classified into four categories on the basis of the occupied area, the speed of the spontaneous expansion, the number of individuals and the rate of growth in numbers of individuals:

1. Very frequently run wild (invasive) taxon inclined to spread in a very aggressive manner. The taxon is likely to occur en masse at several spots, and it can invade large areas within a short period of time.
2. Frequently run wild taxon occurring at several spots. However, it is not able to reproduce en masse and spread so rapidly (invasion) as the previous category.
3. Sporadically run wild taxon occurring in a limited number. It is not able for mass reproduction.
4. Very rarely run wild taxon (of transitional appearance in several instances) occurring at one or few spots.

Following features of each taxon are displayed in the list:

- grades of the adventive quality
- first documented date of the Hungarian occurrence (PRISZTER, 1997)
- generative and vegetative spreading opportunities of the taxa

Abbreviations

Expansion method:

S = by seed or fruit

R = by root sucker or rooting of shoots

Time of establishment in Hungary:

arch = archeophytes (run wild and established before 1800) (after PRISZTER /1997/)

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Appendix

Tab. 1. – Very frequently, frequently and sporadically run wild dendrotaxa of Hungary

Taxon	Grades of the adventive quality	First documented date of the Hungarian occurrence	Kind of the generative and vegetative spreading
<i>Abies alba</i> MILL.	3		S
<i>Acer negundo</i> L.	1	1872	S
<i>Aesculus hippocastanum</i> L.	3		S
<i>Ailanthus altissima</i> (MILL.) SWINGLE	1	1841	S, R
<i>Amorpha fruticosa</i> L.	1	1907	S
<i>Amygdalus communis</i> L. ¹	3		S
<i>Armeniaca vulgaris</i> LAM.	3		S
<i>Buddleia davidii</i> FRANCH.	3	1960	S
<i>Celtis occidentalis</i> L.	2	1870	S
<i>Cerasus vulgaris</i> MILL. subsp. <i>acida</i> (DUM.) DOSTÁL	2		S, R
<i>Cydonia oblonga</i> MILL.	3		S, R
<i>Elaeagnus angustifolia</i> L.	3	1900	S
<i>Fraxinus pennsylvanica</i> MARSH.	1	1950	S
<i>Hedera hibernica</i> (KIRCHNER) BEAN	3		S
<i>Juglans regia</i> L.	3		S

Taxon	Grades of the adventive quality	First documented date of the Hungarian occurrence	Kind of the generative and vegetative spreading
<i>Koelreuteria paniculata</i> LAXM.	3	1940	S
<i>Laburnum anagyroides</i> MEDIK.	3		S
<i>Larix decidua</i> MILL.	3		S
<i>Lycium barbarum</i> L.	2	arch	S, R
<i>Mahonia aquifolium</i> (PURSH) NUTT. ²	2	1915	S
<i>Malus domestica</i> BORKH.	2		S
<i>Mespilus germanica</i> L.	3		S
<i>Morus alba</i> L.	2	arch	S
<i>Padus serotina</i> (EHRH.) BORKH.	1	1949	S
<i>Parthenocissus inserta</i> FRITSCH ³	2	arch	S, R
<i>Persica vulgaris</i> MILL.	3	arch	S
<i>Picea abies</i> (L.) KARST.	3		S
<i>Pinus nigra</i> ARN.	3		S
<i>Populus x euramericana</i> GUINIER	3	1938	S
<i>Prunus cerasifera</i> EHRH. ⁴	2	arch	S
<i>Prunus domestica</i> L.	3	arch	S, R

Taxon	Grades of the adventive quality	First documented date of the Hungarian occurrence	Kind of the generative and vegetative spreading
<i>Ptelea trifoliata</i> L.	2	1904	S, R
<i>Pyracantha coccinea</i> ROEM.	3		S
<i>Pyrus communis</i> L. ⁵	3		S
<i>Quercus rubra</i> L.	3		S
<i>Ribes aureum</i> PURSH	2	1872	S, R
<i>Robinia pseudoacacia</i> L.	2	1750-60	(S), R
<i>Sarothamnus scoparius</i> (L.) WIMM.	2		S
<i>Syringa vulgaris</i> L.	3	arch	(S), R
<i>Thuja orientalis</i> L.	3	1942	S
<i>Vitis riparia</i> MICHX.	1	1939	S
<i>Vitis rupestris</i> SCHEELE	3	1939	S
<i>Vitis vinifera</i> L. ⁶	3		S

Notes:

1 – escaped within the region of cultivation

2 – mainly hybrids formed with *M. repens* (LINDL.) G. DON and *M. pinnata* (LAG.) FEDDE

3 – also hybrids created with *P. quinquaefolia* (L.) PLANCH.

4 – incl. *P. divaricata* LED.

5 – = *P. amphigena* DOM.

6 – in wine-districts

Tab. 2. – Very rarely run wilde dendrotaxa of Hungary

Taxon	Grades of the adventive quality
<i>Abies nordmanniana</i> (STEV.) SPACH.	4
<i>Acer saccharinum</i> L.	4
<i>Amelanchier canadensis</i> (L.) MEDIK.	4
<i>Aucuba japonica</i> THUNB.	4
<i>Berberis julianae</i> SCHNEID.	4
<i>Berberis thunbergii</i> DC.	4
<i>Broussonetia papyrifera</i> (L.) L'HÉRIT.	4
<i>Buxus sempervirens</i> L.	4
<i>Campsis radicans</i> (L.) SEEMANN	4
<i>Caragana arborescens</i> LAM.	4
<i>Catalpa bignonioides</i> WALTER	4
<i>Celastrus scandens</i> L.	4
<i>Celtis australis</i> L.	4
<i>Cercis siliquastrum</i> L.	4
<i>Chamaecyparis lawsoniana</i> PARL.	4
<i>Clematis viticella</i> L.	4
<i>Colutea orientalis</i> MILL.	4
<i>Cornus alba</i> L.	4
<i>Corylus colurna</i> L.	4

Taxon	Grades of the adventive quality
<i>Corylus maxima</i> MILL.	4
<i>Cotoneaster divaricatus</i> REHD. ex WILS.	4
<i>Cotoneaster horizontalis</i> DCNE.	4
<i>Crataegus flabellata</i> (BOSC) K. KOCH	4
<i>Deutzia scabra</i> THUNB.	4
<i>Diospyros lotus</i> L.	4
<i>Elaeagnus commutata</i> BERNH.	4
<i>Euodia hupehensis</i> DODE	4
<i>Evodia daniellii</i> (BENN.) HEMSL.	4
<i>Ficus carica</i> L.	4
<i>Fraxinus americana</i> L.	4
<i>Ginkgo biloba</i> L.	4
<i>Gleditsia triacanthos</i> L.	4
<i>Gymnocladus dioicus</i> L.	4
<i>Halimodendron halodendron</i> (L.) VOSS	4
<i>Hibiscus syriacus</i> L.	4
<i>Ilex aquifolium</i> L.	4
<i>Jasminum fruticans</i> L.	4
<i>Juglans nigra</i> L.	4
<i>Juniperus chinensis</i> L.	4

Taxon	Grades of the adventive quality
<i>Juniperus virginiana</i> L.	4
<i>Kerria japonica</i> (L.) DC.	4
<i>Laurocerasus officinalis</i> ROEM.	4
<i>Ligustrum ovalifolium</i> HASSKARL	4
<i>Lonicera pileata</i> OLIV.	4
<i>Lonicera tatarica</i> L.	4
<i>Lonicera</i> x <i>purpusii</i> REHD.	4
<i>Lycium chinense</i> MILL.	4
<i>Maclura pomifera</i> (RAF.) SCHNEID.	4
<i>Paliurus spina-christi</i> MILL.	4
<i>Parthenocissus tricuspidata</i> PLANCH.	4
<i>Paulownia tomentosa</i> (THUNB.) S. et Z.	4
<i>Periploca graeca</i> L.	4
<i>Philadelphus coronarius</i> L.	4
<i>Physocarpus opulifolius</i> (L.) MAXIM.	4
<i>Platanus</i> x <i>hispanica</i> MUENCHH.	4
<i>Poncirus trifoliata</i> (L.) RAF.	4
<i>Populus simonii</i> CARR.	4
<i>Pseudotsuga menziesii</i> (MIRB.) FRANCO	4
<i>Reynoutria aubertii</i> (HENRY) MOLDENKE	4

Taxon	Grades of the adventive quality
<i>Rhodotypus scandens</i> (THUNB.) MAK.	4
<i>Rhus hirta</i> (L.) SUDWORTH	4
<i>Rhus toxicodendron</i> L.	4
<i>Rosa majalis</i> HERRM.	4
<i>Rosa multiflora</i> THUNB.	4
<i>Rosa rugosa</i> THUNB.	4
<i>Rubus phoenicolasius</i> MAXIM.	4
<i>Smilax aspera</i> L.	4
<i>Sophora japonica</i> L.	4
<i>Sorbaria sorbifolia</i> (L.) A. BR.	4
<i>Sorbus x intermedia</i> (EHRH.) PERS.	4
<i>Symphoricarpus albus</i> BLAKE	4
<i>Tamarix tetrandra</i> PALL.	4
<i>Thuja plicata</i> D. DON	4
<i>Ulmus pumila</i> L.	4
<i>Viburnum rhytidophyllum</i> HEMSL.	4
<i>Vitis labrusca</i> L.	4
<i>Wisteria sinensis</i> (SIMS.) SWEET	4
<i>Yucca filamentosa</i> L.	4

Tab. 3. – Tree and shrub taxa whose indigenous nature is still under dispute

Abies alba MILL.
Castanea sativa MILL.
Juglans regia L.*
Laburnum anagyroides MEDIK.
Larix decidua MILL.*
Picea abies (L.) KARST.
Pinus nigra ARN.*
Quercus frainetto TEN.*
Ribes rubrum L. agg.
Sarothamnus scoparius WIMM.

* – to all probability non-indigenous in Hungary

Tab. 4. – Taxa which are indigenous in Hungary, but, as run wild taxa, they also occur outside their natural habitat

Castanea sativa MILL.
Cerasus avium (L.) MOENCH
Cerasus mahaleb (L.) MILL.
Cotinus coggygria SCOP.
Fraxinus ornus L.
Hippophaë rhamnoides L.
Lonicera caprifolium L.
Pinus sylvestris L.
Quercus cerris L.
Ribes nigrum L.
Ribes rubrum L. agg.
Ribes uva-crispa L.
Sorbus aucuparia L.
Sorbus domestica L.
Taxus baccata L.
Tilia tomentosa MÖNCH