

UNIVERSITY OF WEST HUNGARY / WESTUNGARISCHE UNIVERSITÄT
DEPARTMENT OF BOTANY / LEHRSTUHL FÜR BOTANIK

TILIA

Editor / Herausgeber:

BARTHA, DÉNES

Vol. VII. Supplementum

**DENDROLOGICAL STUDIES /
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Compiled by / Zusammengestellt von:

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Bewertung der Dendroflora Europas auf Grund der Lebensformen

DÉNES BARTHA

Einleitung

Seit langem befassen sich die Forscher mit der Gruppierung der Pflanzen auf Grund ihres Erscheinungsbildes. Im Laufe dieser Arbeit spielen neben den rein morphologischen Kennzeichen auch die phänologischen und ökologischen Kriterien eine wichtige Rolle. Die Lebensform ist nichts anderes als eine Gruppe von Pflanzen mit ähnlicher morphologischer Ausprägung und ähnlichem Lebensrhythmus, welche sich an gewisse besondere Lebensbedingungen angepaßt haben (RAUNKIAER, 1907/1937).

Schon die alten Griechen haben sich mit diesem Thema befaßt, z. B. THEOPHRAST in seiner Pflanzenkunde (GAMS, 1918). Als Begründer der eigentlichen Lebensformlehre kann jedoch kein Geringer als A. von HUMBOLDT betrachtet werden (DU RIETZ, 1931), der in seinem Werk (*Ideen zu einer Physiognomik der Gewächse*), das im Jahre 1806 erschien, 16 Hauptformen unterscheidet (z. B. Kaktus-, Bananen-, Palmenform, Farne, Gräser, usw.). Seit der Tätigkeit von HUMBOLDT wurden zur Gruppierung der Pflanzenarten zahlreiche Versuche unternommen. Von diesen ist das System des dänischen Botanikers RAUNKIAER am bedeutendsten, welches in der Pflanzensoziologie bis zum heutigen Tag angewendet wird. Als Grundlage des Systems von RAUNKIAER dient die Anordnung und der Schutz der Überdauerungsorgane in der ungünstigen Jahreszeit (Trockenzeit oder Winter). Die zu erforschende Frage bezieht sich also darauf, wie sich die Pflanzen an die rhythmischen Erscheinungen des Makroklimas anpassen. Das RAUNKIAER'sche Grundprinzip hat allen späteren Lebensformsystemen als Grundlage

gedient (z. B. BARKMANN 1979, 1988; BRAUN-BLANQUET, 1964; ELLENBERG, 1956). Seitdem ist das RAUNKIAER'sche System in bedeutendem Maße weiterentwickelt und differenziert worden. In diesem Bereich muß die wissenschaftliche Tätigkeit von ELLENBERG und MUELLER-DOMBOIS (1967) hervorgehoben werden, deren System sich auf alle Pflanzenarten der Erde erstreckt, – natürlicherweise mit Anwendung grober Kategorien. In den jüngsten Jahren hat DIERSCHKE (1994) ein Lebensformsystem für die mitteleuropäische Flora erschaffen. Darauf basierend wurde versucht, für die europäische Dendroflora ein Lebensformsystem zusammenzustellen, dessen Grundlagen und Kriterien hiermit dargelegt sind.

Grundlagen des Lebensform-Systems der Dendroflora Europas

Die Anordnungsprinzipien der Lebensformen zeigt die Tabelle 1. Die beiden ersten Anordnungsprinzipien des Systems beziehen sich auf die Sproßachse. Auf diese Weise können die Pflanzenarten je nach dem unterschieden werden, ob ihre Sproßachse vollständig, bis zur Zweigende oder bloß teilweise, nur am Grund verholzt. Je nach der Weise und der Richtung der Verzweigung ist es ebenfalls möglich, verschiedene Gruppen zusammenzustellen. Die folgenden zwei Anordnungsprinzipien beziehen sich auf die Blätter. Auf Grund der Blattausdauer sowie des Blatt-typs kann man je drei Gruppen ausgestalten. Zuletzt müssen im Laufe der Klassifizierung die Möglichkeiten der vegetativen Vermehrung untersucht werden.

Tabelle 1. Hierarchische Anordnungsprinzipien der Lebensformen

1. VERHOLZUNGSGRAD DER SPROSSACHSEN		
<i>frut</i>	– frutescentia	– vollverholzt
<i>suff</i>	– suffrutescentia	– teilverholzt
2. VERZWEIGUNG UND AUSRICHTUNG DER SPROSSACHSEN		
<i>scap</i>	– scaposa	– baumartig
<i>caesp</i>	– caespitosa	– strauchartig
<i>scand</i>	– scandentia	– lianenartig
<i>ep</i>	– epiphyta	– epifitenartig
<i>rep</i>	– repentia / reptantia	– spalierartig
3. BLATTAUSDAUER		
<i>semp</i>	– sempervirentia	– immergrün
<i>aest</i>	– aestivalia	– sommergrün
<i>hib</i>	– hibernalia	– überwinternd grün
4. BLATT-TYP		
<i>ace</i>	– acerosa	– nadelartig
<i>fron</i>	– frondosa	– laubartig
<i>cor</i>	– coriacea	– hartlaubartig
5. VEGETATIVE VERMEHRUNG DURCH WURZELAUSCHLAG		
<i>sob</i>	– sobolifera	– wurzelausschlagfähig

Die holzigen Pflanzen sind in zwei große RAUNKIER'sche Gruppen einreihbar, und zwar in die Gruppe der Phanerophyten und in diejenige der Chamaephyten. Zu den Phanerophyten gehören die Arten, deren Größe in vollentwickeltem Zustand etwa 50 cm übersteigt, und ihre Erneuerungsknospen deshalb in beträchtlicher Höhe über der Bodenoberfläche vorhanden sind. (Die Überdauerungsorgane befinden sich weit über dem Boden an langlebigen, negativ geotropen Sprossachsen (DIERSCHKE, 1994).)

Die Bäume besitzen je einen (oder nur wenigen) aufrechten Einzelstamm, dessen Verzweigung sich im Kronenbereich befindet und das Zweigsystem akroton gefördert ist. Die Sträucher sind vorwiegend aufrecht wachsende, vom Grund auf verzweigte Gehölze mit basiton geförderten Verzweigungssystemen und mit mehreren, nebeneinander stehenden, gleichwertigen, aufrechten oder aufsteigenden Stämmen. Die Lianen wachsen auf einer Stütze empor und haben eine basal bis

spitzenwärts geförderten Erneuerungstrieben. Ihre Klassifizierung geschieht in abweichender Weise, in erster Linie auf Grund ihres Haftorgans (WILMANN, 1983). Die Epiphyten wachsen auf anderen Pflanzen bzw. auf irgendwelcher Stütze. (Die Anordnungsprinzipien der Phanerophyten siehe in Tab. 2.)

Die Gruppe der Chamaephyten besteht aus Pflanzenarten mit reichlich verzweigtem Sproßsystem. Bei diesen Arten befinden sich die Erneuerungsknospen an ausdauernden Sproßteilen unmittelbar über der Bodenoberfläche, maximal bis zu einer Höhe von 50 cm. Die kurzgliedrige Sproßachse der Zwergsträucher verholzt vollständig. Diese Pflanzenarten können in zwei Untergruppen aufgeteilt werden, und zwar in die Untergruppe der aufrechten und in diejenige der kriechenden Spalier-Zwergsträucher. Der obere Teil des Sproßsystems der Halbsträucher stirbt in der ungünstigen Jahreszeit ab, bloß der untere, erneuerungsknospentragende Teil verholzt (Die Anordnungsprinzipien der Chamaephyten siehe in Tab. 3.).

Tabelle 2. Anordnungsprinzipien der Phanerophyten

PHANEROPHYTEN

1. Verzweigung und Ausrichtung der Sprossachsen

- | | | | |
|----|--------------|---|-----------|
| a. | <i>scap</i> | – | Bäume |
| b. | <i>caesp</i> | – | Sträucher |
| c. | <i>scand</i> | – | Lianen |
| d. | <i>ep</i> | – | Epiphyten |

2. Blattausdauer

- | | | | |
|----|-------------|---|-------------------------|
| a. | <i>semp</i> | – | immergrün |
| b. | <i>aest</i> | – | sommergrün (winterkahl) |
| c. | <i>hib</i> | – | überwinternd grün |

3. Blatt-typ

- | | | | |
|----|-------------|---|---------------|
| a. | <i>ace</i> | – | Nadelblatt |
| b. | <i>fron</i> | – | Laubblatt |
| c. | <i>cor</i> | – | Hartlaubblatt |

4. Vegetative Vermehrung durch Wurzelausschlag

- | | | | |
|----|------------|---|----------------------|
| a. | <i>sob</i> | – | wurzelausschlagfähig |
|----|------------|---|----------------------|

Tabelle 3. Anordnungsprinzipien der Chamaephyten

CHAMAEPHYTEN

1. Verholzungsgrad der Sprossachsen

- | | | | |
|----|-------------|---|----------------|
| a. | <i>frut</i> | – | Zwergsträucher |
| b. | <i>suff</i> | – | Halbsträucher |

2. Verzweigung und Ausrichtung der Sprossachsen

- | | | | |
|----|--------------|---|-------------------------|
| a. | <i>caesp</i> | – | Aufrechte Chamaephyten |
| b. | <i>rep</i> | – | Spalier-Chamaephyten |
| c. | <i>scand</i> | – | Kletternde Chamaephyten |

3. Blattausdauer

- | | | | |
|----|-------------|---|-------------------|
| a. | <i>semp</i> | – | immergrün |
| b. | <i>aest</i> | – | sommergrün |
| c. | <i>hib</i> | – | überwinternd grün |

4. Vegetative Vermehrung durch Wurzelausschlag

- | | | | |
|----|------------|---|----------------------|
| a. | <i>sob</i> | – | wurzelausschlagfähig |
|----|------------|---|----------------------|

Die Lebensformtypen der Dendroflora Europas

Auf Grund der oben detaillierten Lebensformsystem konnte man die Arten der europäischen Dendroflora einzureihen. Die Nomenklatur folgt nach TUTIN et al. (1964-

1980) und PRISZTER (1983). Die europäische Dendroflora beträgt knapp 1200 Arten, inklusive die zwei Palmenarten, die in das Lebensformsystem nicht eingereiht worden sind. Die Anzahl der Lebensformen zeigt die Tabelle 4., die Einreihung der einzelnen Arten befindet sich in den Anhängen 1 und 2.

Tabelle 4. Abkürzungen und Anteile der Lebensformen der Dendroflora Europas

Abkürzung	Lebensformen	Anzahl
P	Phanerophyten	560
P scap	Bäume	162
P scap semp	Immergrüne Bäume	40
P scap semp ace	<i>Nadelbäume</i>	30
P scap semp cor	<i>Hartlaubbäume</i>	10
P scap aest	Sommergrüne (winterkahle) Bäume	117
P scap aest ace	<i>Nadelbäume</i>	2
P scap aest fron	<i>Laubbäume</i>	115
P scap aest fron	Ohne Ausläufer	107
P scap aest fron sob	Mit unterirdischen Ausläufern	8
P caesp	Sträucher	371
P caesp semp	Immergrüne Sträucher	47
P caesp semp ace	<i>Nadelsträucher</i>	12
P caesp semp cor	<i>Hartlaubsträucher</i>	35
P caesp aest	Sommergrüne (winterkahle) Sträucher	311
P caesp aest	Ohne Ausläufer	278
P caesp aest sob	Mit unterirdischen Ausläufern	33
P caesp hib	Überwinternd grüne Sträucher	13
P scand	Lianen	23
P scand semp	Immergrüne Lianen	6
P scand aest	Sommergrüne Lianen	17
P scand aest cirr	<i>Rankenpflanzen</i>	1
P scand aest vol	<i>Windenpflanzen</i>	12
P scand aest plec	<i>Spreizklimmer</i>	4
P ep	Epiphyten	4
P ep semp	Immergrüne Epiphyten	3
P ep aest	Sommergrüne Epiphyten	1
C	Chamaephyten	638
C frut	Zwergsträucher	192
C frut caesp	Aufrechte Zwergsträucher	130
C frut caesp semp	<i>Immergrüne aufrechte Zwergsträucher</i>	45
C frut caesp semp	Ohne Ausläufer	38
C frut caesp semp sob	Mit Ausläufern	7
C frut caesp aest	<i>Sommergrüne aufrechte Zwergsträucher</i>	77
C frut caesp aest	Ohne Ausläufer	74
C frut caesp aest sob	Mit Ausläufern	3
C frut caesp hib	<i>Überwinternd grüne aufrechte Zwergsträucher</i>	8
C frut caesp hib	Ohne Ausläufer	8
C frut caesp hib sob	Mit Ausläufern	-
C frut rep	Spalier - Zwergsträucher	62
C frut rep semp	<i>Immergrüne Spalier - Zwergsträucher</i>	25
C frut rep aest	<i>Sommergrüne Spalier - Zwergsträucher</i>	32
C frut rep hib	<i>Überwinternd grüne Spalier - Zwergsträucher</i>	5
C suff	Halbsträucher	446
C suff caesp	Aufrechte Halbsträucher	383
C suff rep	Kriechende Halbsträucher	60
C suff rep semp	<i>Immergrüne kriechende Halbsträucher</i>	4
C suff rep aest	<i>Sommergrüne kriechende Halbsträucher</i>	45
C suff rep hib	<i>Überwinternd grüne kriechende Halbsträucher</i>	11
C suff scand	Kletternde Halbsträucher	3

Zusammenfassung

Der Verfasser hat die Arten der europäischen Dendroflora in einem Lebensformsystem eingereiht. Die hierarchischen Anordnungsprinzipien des Lebensformsystems sind die Verholzung, Verzweigung und Ausrichtung der Sprossachse, die Blattausdauer, der Blatt-

typ und die vegetative Vermehrungsfähigkeit durch Wurzelausschlag. In dem Lebensformsystem befindet sich 31 Lebensformtypen, die innerhalb der Phanerophyten zu 4, innerhalb der Chamaephyten zu 2 Haupttypen gehören. Laut Flora Europaea wurden 1198 holzige Art eingeteilt.

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Anhang 1. Die Abkürzungen der Familien und Unterfamilien

Aceraceae	Ace	Liliaceae	Lil
Anacardiaceae	Ana	Linaceae	Lin
Apocynaceae	Apo	Loranthaceae	Lor
Aquifoliaceae	Aqu	Rosaceae subf. Maloideae	Malo
Araliaceae	Ara	Malvaceae	Malv
Aristolochiaceae	Ari	Moraceae	Mor
Asclepiadaceae	Asc	Myricaceae	Myri
Berberidaceae	Ber	Myrsinaceae	Myrs
Betulaceae	Bet	Myrtaceae	Myrt
Boraginaceae	Bor	Nyctaginaceae	Nyc
Buxaceae	Bux	Oleaceae	Ole
Caesalpiniaceae	Caes	Palmae	Pal
Campanulaceae	Cam	Pinaceae	Pin
Capparidaceae	Capp	Plantaginaceae	Plan
Caprifoliaceae	Capr	Platanaceae	Plat
Caryophyllaceae	Car	Plumbaginaceae	Plu
Celastraceae	Cel	Polygalaceae	Polygal
Chenopodiaceae	Chen	Polygonaceae	Polygon
Cichorioideae	Cich	Primulaceae	Pri
Cistaceae	Cis	Rosaceae subf. Prunoideae	Pru
Cneoraceae	Cne	Pyrolaceae	Pyr
Compositae	Com	Ranunculaceae	Ran
Coriariaceae	Cori	Resedaceae	Res
Cornaceae	Corn	Rhamnaceae	Rham
Corylaceae	Cory	Rosaceae subf. Rosoideae	Ros
Cruciferae	Cru	Rubiaceae	Rub
Cupressaceae	Cup	Salicaceae	Sal
Dipsacaceae	Dip	Santalaceae	San
Elaeagnaceae	Elae	Scrophulariaceae	Scr
Empetraceae	Emp	Solanaceae	Sol
Ephedraceae	Eph	Rosaceae subf. Spiraeoideae	Spi
Ericaceae	Eri	Staphyleaceae	Sta
Euphorbiaceae	Euph	Styracaceae	Sty
Fagaceae	Fag	Tamaricaceae	Tam
Globulariaceae	Glo	Taxaceae	Tax
Grossulariaceae	Gro	Thymelaeaceae	Thym
Guttiferae	Gutt	Tiliaceae	Til
Hippocastanaceae	Hipp	Ulmaceae	Ulm
Hydrangeaceae	Hyd	Umbelliferae	Umb
Juglandaceae	Jug	Verbenaceae	Ver
Labiatae	Lab	Violaceae	Vio
Lauraceae	Lau	Vitaceae	Vit
Leguminosae	Leg	Zygophyllaceae	Zyg

Anhang 2. Die Lebensformen der Dendroflora-Arten Europas

Gattung	Art	Verfasser	Familie	Lebensform
<i>Abies</i>	<i>alba</i>	MILLER	Pin	P scap semp ace
<i>Abies</i>	<i>borisii-regis</i>	MATTF.	Pin	P scap semp ace
<i>Abies</i>	<i>cephalonica</i>	LOUDON	Pin	P scap semp ace
<i>Abies</i>	<i>nebrodensis</i>	(LOJAC.) MATTEI	Pin	P scap semp ace
<i>Abies</i>	<i>pinsapo</i>	BOISS.	Pin	P scap semp ace
<i>Abies</i>	<i>sibirica</i>	LEDEB.	Pin	P scap semp ace
<i>Acantholimon</i>	<i>androsaceum</i>	(JAUB. et SPACH) BOISS.	Plu	P caesp aest
<i>Acer</i>	<i>campestre</i>	L.	Ace	P scap aest fron sob
<i>Acer</i>	<i>granatense</i>	BOISS.	Ace	P scap aest fron
<i>Acer</i>	<i>heldreichii</i>	ORPH.	Ace	P scap aest fron
<i>Acer</i>	<i>hyrcanum</i>	FISCHER et C. A. MEYER	Ace	P scap aest fron
<i>Acer</i>	<i>lobelii</i>	TEN.	Ace	P scap aest fron
<i>Acer</i>	<i>monspessulanum</i>	L.	Ace	P scap aest fron
<i>Acer</i>	<i>obtusatum</i>	WALDST. et KIT.	Ace	P scap aest fron
<i>Acer</i>	<i>opalus</i>	MILLER	Ace	P scap aest fron
<i>Acer</i>	<i>platanoides</i>	L.	Ace	P scap aest fron
<i>Acer</i>	<i>pseudoplatanus</i>	L.	Ace	P scap aest fron
<i>Acer</i>	<i>sempervirens</i>	L.	Ace	P scap aest fron
<i>Acer</i>	<i>stevenii</i>	POJARK.	Ace	P scap aest fron
<i>Acer</i>	<i>tataricum</i>	L.	Ace	P caesp aest
<i>Acer</i>	<i>trautvetteri</i>	MEDV.	Ace	P scap aest fron
<i>Achillea</i>	<i>cretica</i>	L.	Com	C suff caesp
<i>Achillea</i>	<i>santolinoides</i>	LAG.	Com	C suff caesp
<i>Adenocarpus</i>	<i>complicatus</i>	(L.) GAY.	Leg	P caesp aest
<i>Adenocarpus</i>	<i>decorticans</i>	BOISS.	Leg	P caesp aest
<i>Adenocarpus</i>	<i>hispanicus</i>	(LAM.) DC.	Leg	P caesp aest
<i>Adenocarpus</i>	<i>telonensis</i>	(LOISEL.) DC.	Leg	P caesp aest
<i>Aesculus</i>	<i>hippocastanum</i>	L.	Hipp	P scap aest fron
<i>Aethionema</i>	<i>cordatum</i>	(DESF.) BOISS.	Cru	C suff caesp
<i>Aethionema</i>	<i>iberideum</i>	(BOISS.) BOISS.	Cru	C suff caesp
<i>Aethionema</i>	<i>orbiculatum</i>	(BOISS.) HAYEK	Cru	C suff caesp
<i>Aethionema</i>	<i>polygaloides</i>	DC.	Cru	C suff caesp
<i>Alhagi</i>	<i>graecorum</i>	BOISS.	Leg	C suff caesp
<i>Alhagi</i>	<i>pseudalhagi</i>	(BIEB.) DESF.	Leg	C suff caesp
<i>Alnus</i>	<i>cordata</i>	(LOISEL.) LOISEL.	Bet	P scap aest fron
<i>Alnus</i>	<i>glutinosa</i>	(L.) GAERTNER	Bet	P scap aest fron
<i>Alnus</i>	<i>incana</i>	(L.) MOENCH	Bet	P scap aest fron
<i>Alnus</i>	<i>viridis</i>	(CHAIX.) DC.	Bet	P caesp aest
<i>Amelanchier</i>	<i>ovalis</i>	MEDICUS	Malo	P caesp aest
<i>Anabasis</i>	<i>aphylla</i>	L.	Chen	C suff caesp
<i>Anabasis</i>	<i>articulata</i>	(FORSKÄLL) MOQ.	Chen	C suff caesp
<i>Anabasis</i>	<i>cretacea</i>	PALLAS	Chen	C suff caesp
<i>Anabasis</i>	<i>salsa</i>	(C. A. MEYER) PAULSEN	Chen	C suff caesp
<i>Anagyris</i>	<i>foetida</i>	L.	Leg	P caesp aest
<i>Andrachne</i>	<i>telephoides</i>	L.	Euph	C suff caesp
<i>Andromeda</i>	<i>polifolia</i>	L.	Eri	C frut caesp semp sob
<i>Anthemis</i>	<i>abrotanifolia</i>	(WILLD.) GUSS.	Com	C suff caesp
<i>Anthemis</i>	<i>aetnensis</i>	SCHOUW	Com	C suff caesp
<i>Anthemis</i>	<i>maritima</i>	L.	Com	C suff caesp
<i>Anthemis</i>	<i>panachaica</i>	HALÁCSY	Com	C suff caesp
<i>Anthemis</i>	<i>trotzkiana</i>	CLAUS	Com	C suff caesp
<i>Anthyllis</i>	<i>aegea</i>	TURRILL	Leg	C suff caesp
<i>Anthyllis</i>	<i>barba-jovis</i>	L.	Leg	C suff caesp
<i>Anthyllis</i>	<i>cytisoides</i>	L.	Leg	C suff caesp
<i>Anthyllis</i>	<i>henoniana</i>	COSSON	Leg	C suff caesp

Fortsetzung Anhang 2. Die Lebensformen der Dendroflora-Arten Europas

Gattung	Art	Verfasser	Familie	Lebensform
<i>Anthyllis</i>	<i>hermanniae</i>	L.	Leg	C suff caesp
<i>Anthyllis</i>	<i>terniflora</i>	(LAG.) PAU	Leg	C suff caesp
<i>Antirrhinum</i>	<i>charidemi</i>	LANGÉ	Scr	C frut rep aest
<i>Antirrhinum</i>	<i>grossi</i>	FONT QUER	Scr	C frut rep aest
<i>Antirrhinum</i>	<i>hispanicum</i>	CHAV.	Scr	C frut caesp aest
<i>Antirrhinum</i>	<i>microphyllum</i>	ROTHM.	Scr	C frut rep aest
<i>Antirrhinum</i>	<i>molle</i>	L.	Scr	C frut rep aest
<i>Antirrhinum</i>	<i>pertegasii</i>	ROTHM.	Scr	C frut caesp hib
<i>Antirrhinum</i>	<i>pulverulentum</i>	LÁZ.-IBIZA	Scr	C frut rep aest
<i>Antirrhinum</i>	<i>sempervirens</i>	LAPEYR.	Scr	C frut rep aest
<i>Antirrhinum</i>	<i>valentinum</i>	FONT QUER	Scr	C frut rep aest
<i>Arbutus</i>	<i>andrachne</i>	L.	Eri	P caesp semp cor
<i>Arbutus</i>	<i>unedo</i>	L.	Eri	P caesp semp cor
<i>Arceuthobium</i>	<i>oxycedri</i>	(DC.) BIEB.	Lor	P ep semp
<i>Arctostaphylos</i>	<i>alpinus</i>	(L.) SPRENGEL	Eri	C frut rep hib
<i>Arctostaphylos</i>	<i>uva-ursi</i>	(L.) SPRENGEL	Eri	C frut rep semp
<i>Argyrolobium</i>	<i>biebersteinii</i>	P. W. BALL	Leg	C suff caesp
<i>Argyrolobium</i>	<i>zanonii</i>	(TURRA) P. W. BALL	Leg	C suff rep aest
<i>Aristolochia</i>	<i>baetica</i>	L.	Ari	P scand semp
<i>Aristolochia</i>	<i>sempervirens</i>	L.	Ari	P scand semp
<i>Armeria</i>	<i>berlengensis</i>	DAVEAU	Plu	C suff caesp
<i>Armeria</i>	<i>humilis</i>	(LINK) SCHULTES	Plu	C suff caesp
<i>Armeria</i>	<i>juniperifolia</i>	(VAHL) HOFFMANS.et LINK	Plu	C suff caesp
<i>Armeria</i>	<i>leucocephala</i>	SALZM.	Plu	C suff caesp
<i>Armeria</i>	<i>multiceps</i>	WALLR.	Plu	C suff caesp
<i>Armeria</i>	<i>pseudarmeria</i>	(MURRAY) MANSFELD	Plu	C suff caesp
<i>Armeria</i>	<i>pubigera</i>	(DESF.) BOISS.	Plu	C suff caesp
<i>Armeria</i>	<i>pungens</i>	(LINK) HOFFMANS.	Plu	C suff caesp
<i>Armeria</i>	<i>ruscinonensis</i>	GIRARD	Plu	C suff caesp
<i>Armeria</i>	<i>sardo</i>	SPRENGEL	Plu	C suff caesp
<i>Armeria</i>	<i>soleirolii</i>	(DUBY) GODRON	Plu	C suff caesp
<i>Armeria</i>	<i>splendens</i>	(LAG. et RODR.) WEBB	Plu	C suff caesp
<i>Armeria</i>	<i>welwitschii</i>	BOISS.	Plu	C suff caesp
<i>Artemisia</i>	<i>abrotanum</i>	L.	Com	C suff caesp
<i>Artemisia</i>	<i>gracilescens</i>	KRASCH. et ILJIN	Com	C suff caesp
<i>Artemisia</i>	<i>molinieri</i>	QUÉZ., BARB. et R. LOISEL.	Com	C suff caesp
<i>Artemisia</i>	<i>pauciflora</i>	WEBER	Com	C suff caesp
<i>Artemisia</i>	<i>reptans</i>	C. SM.	Com	C suff caesp
<i>Artemisia</i>	<i>rupestris</i>	L.	Com	C suff caesp
<i>Artemisia</i>	<i>salsoloides</i>	WILLD.	Com	C suff caesp
<i>Artemisia</i>	<i>trautvetterana</i>	BESSER	Com	C suff caesp
<i>Artemisia</i>	<i>tschernieviana</i>	BESSER	Com	C suff caesp
<i>Arthrocnemum</i>	<i>fruticosum</i>	MOQ.	Chen	C frut caesp aest
<i>Arthrocnemum</i>	<i>glaucum</i>	(DELILE) UNG.-STERNB.	Chen	C frut caesp aest
<i>Arthrocnemum</i>	<i>perenne</i>	(MILLER) MOSS	Chen	C frut caesp aest sob
<i>Asperula</i>	<i>rigida</i>	SIBTH. et SM.	Rub	C suff caesp
<i>Asperula</i>	<i>tournefortii</i>	SIEBER	Rub	C suff caesp
<i>Astragalus</i>	<i>angustifolius</i>	LAM.	Leg	C suff caesp
<i>Astragalus</i>	<i>arnacantha</i>	BIEB.	Leg	C suff caesp
<i>Astragalus</i>	<i>balearius</i>	CHATER	Leg	C suff caesp
<i>Astragalus</i>	<i>clusii</i>	BOISS.	Leg	C suff caesp
<i>Astragalus</i>	<i>creticus</i>	LAM.	Leg	C suff caesp
<i>Astragalus</i>	<i>giennensis</i>	HEYWOOD	Leg	C suff caesp
<i>Astragalus</i>	<i>granatensis</i>	LAM.	Leg	C suff caesp
<i>Astragalus</i>	<i>massiliensis</i>	(MILLER) LAM.	Leg	C suff caesp

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Gattung	Art	Verfasser	Familie	Lebensform
<i>Astragalus</i>	<i>odoratus</i>	LAM.	Leg	C suff caesp
<i>Astragalus</i>	<i>parnassi</i>	BOISS.	Leg	C suff caesp
<i>Astragalus</i>	<i>sempervirens</i>	LAM.	Leg	C suff caesp
<i>Astragalus</i>	<i>sirinicus</i>	TEN.	Leg	C suff caesp
<i>Astragalus</i>	<i>thracicus</i>	GRISEB.	Leg	C suff caesp
<i>Astragalus</i>	<i>trojanus</i>	STEVEN	Leg	C suff caesp
<i>Atraphaxis</i>	<i>billardieri</i>	JAUB. et SPACH	Polygon	P caesp aest
<i>Atraphaxis</i>	<i>frutescens</i>	(L.) C. KOCH	Polygon	P caesp aest
<i>Atraphaxis</i>	<i>replicata</i>	LAM.	Polygon	P caesp aest
<i>Atraphaxis</i>	<i>spinosa</i>	L.	Polygon	P caesp aest
<i>Atriplex</i>	<i>cana</i>	LEDEB.	Chen	C frut caesp aest
<i>Atriplex</i>	<i>glauca</i>	L.	Chen	C frut caesp aest
<i>Atriplex</i>	<i>halimus</i>	L.	Chen	P caesp aest
<i>Azorina</i>	<i>vidalii</i>	(H. C. WATSON) FEER	Cam	C suff caesp
<i>Ballota</i>	<i>frutescens</i>	(L.) J. WOODS	Lab	C frut caesp aest
<i>Berberis</i>	<i>aetnensis</i>	C. PRESL	Ber	P caesp aest
<i>Berberis</i>	<i>cretica</i>	L.	Ber	P caesp aest sob
<i>Berberis</i>	<i>hispanica</i>	BOISS. et REUTER	Ber	P caesp aest
<i>Berberis</i>	<i>vulgaris</i>	L.	Ber	P caesp aest
<i>Betula</i>	<i>humilis</i>	SCHRANK	Bet	P caesp aest
<i>Betula</i>	<i>nana</i>	L.	Bet	P caesp aest
<i>Betula</i>	<i>pendula</i>	ROTH	Bet	P scap aest fron
<i>Betula</i>	<i>pubescens</i>	EHRH.	Bet	P scap aest fron
<i>Boleum</i>	<i>asperum</i>	(PERS.) DESV.	Cru	C suff caesp
<i>Bornmuellera</i>	<i>baldaccii</i>	(DEGEN) HEYWOOD	Cru	C suff caesp
<i>Bornmuellera</i>	<i>dieckii</i>	DEGEN	Cru	C suff caesp
<i>Bornmuellera</i>	<i>tymphaea</i>	(HAUSSKN.) HAUSSKN.	Cru	C suff caesp
<i>Brassica</i>	<i>balearica</i>	PERS.	Cru	C suff caesp
<i>Brassica</i>	<i>macrocarpa</i>	GUSS.	Cru	C suff caesp
<i>Brassica</i>	<i>rupestris</i>	RAFIN.	Cru	C suff caesp
<i>Brassica</i>	<i>villosa</i>	BIV.	Cru	C suff caesp
<i>Bruckenthalia</i>	<i>spiculifolia</i>	(SALISB.) REICHENB.	Eri	C frut caesp semp
<i>Bupleurum</i>	<i>acutifolium</i>	BOISS.	Umb	C suff caesp
<i>Bupleurum</i>	<i>barceloi</i>	COSSON	Umb	C suff caesp
<i>Bupleurum</i>	<i>dianthifolium</i>	GUSS.	Umb	C suff caesp
<i>Bupleurum</i>	<i>foliosum</i>	SALZM.	Umb	C suff caesp
<i>Bupleurum</i>	<i>fruticescens</i>	L.	Umb	C suff caesp
<i>Bupleurum</i>	<i>fruticosum</i>	L.	Umb	P caesp aest
<i>Bupleurum</i>	<i>gibraltarium</i>	LAM.	Umb	P caesp aest
<i>Bupleurum</i>	<i>spinosum</i>	GOUAN.	Umb	C suff caesp
<i>Buxus</i>	<i>balearica</i>	LAM.	Bux	P caesp semp cor
<i>Buxus</i>	<i>sempervirens</i>	L.	Bux	P caesp semp cor
<i>Calicotome</i>	<i>spinosa</i>	(L.) LINK	Leg	P caesp aest
<i>Calicotome</i>	<i>villosa</i>	(POIRET) LINK	Leg	P caesp aest
<i>Calligonum</i>	<i>aphyllum</i>	(PALLAS) GÜRKE	Polygon	P caesp aest
<i>Calluna</i>	<i>vulgaris</i>	(L.) HULL.	Eri	C frut caesp semp
<i>Calophaca</i>	<i>wolgarica</i>	(L. f.) FISCHER	Leg	C frut caesp aest
<i>Camphorosma</i>	<i>lessingii</i>	LITV.	Chen	C suff caesp
<i>Camphorosma</i>	<i>monspeliaca</i>	L.	Chen	C suff caesp
<i>Camphorosma</i>	<i>nestensis</i>	TURRILL	Chen	C suff caesp
<i>Capparis</i>	<i>ovata</i>	DESF.	Capp	P caesp aest
<i>Capparis</i>	<i>spinosa</i>	L.	Capp	P caesp aest
<i>Caragana</i>	<i>frutex</i>	(L.) C. KOCH	Leg	P caesp aest
<i>Caragana</i>	<i>grandiflora</i>	(BIEB.) DC.	Leg	C frut caesp aest
<i>Carpinus</i>	<i>betulus</i>	L.	Cory	P scap aest fron

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Gattung	Art	Verfasser	Familie	Lebensform
<i>Carpinus</i>	<i>orientalis</i>	MILLER	Cory	P scap aest fron
<i>Carthamus</i>	<i>arborescens</i>	L.	Com	C suff caesp
<i>Cassiope</i>	<i>hypnoides</i>	(L.) D. DON	Eri	C frut rep semp
<i>Cassiope</i>	<i>tetragona</i>	(L.) D. DON	Eri	C frut caesp semp
<i>Castanea</i>	<i>sativa</i>	MILLER	Fag	P scap aest fron
<i>Celtis</i>	<i>australis</i>	L.	Ulm	P scap aest fron
<i>Celtis</i>	<i>caucasica</i>	WILLD.	Ulm	P scap aest fron
<i>Celtis</i>	<i>glabrata</i>	STEVEN	Ulm	P scap aest fron
<i>Celtis</i>	<i>tournefortii</i>	LAM.	Ulm	P scap aest fron
<i>Centaurea</i>	<i>balearica</i>	RODR.	Com	C suff caesp
<i>Centaurea</i>	<i>spinosa</i>	L.	Com	C suff caesp
<i>Cephalaria</i>	<i>squamiflora</i>	(SIEBER) W. GREUTER	Dip	C frut caesp hib
<i>Ceratonia</i>	<i>siliqua</i>	L.	Caes	P scap aest fron
<i>Cercis</i>	<i>siliquastrum</i>	L.	Caes	P scap aest fron
<i>Chamaecytisus</i>	<i>albus</i>	(HACQ.) ROTHM.	Leg	C suff caesp
<i>Chamaecytisus</i>	<i>austriacus</i>	(L.) LINK	Leg	C suff caesp
<i>Chamaecytisus</i>	<i>banaticus</i>	ROTHM.	Leg	C suff caesp
<i>Chamaecytisus</i>	<i>blockianus</i>	(PAWL) A. KLÁSKOVÁ	Leg	C suff caesp
<i>Chamaecytisus</i>	<i>borysthenticus</i>	(GRUNER) A. KLÁSKOVÁ	Leg	C suff caesp
<i>Chamaecytisus</i>	<i>ciliatus</i>	(WAHLENB.) ROTHM.	Leg	C suff caesp
<i>Chamaecytisus</i>	<i>creticus</i>	BOISS. et HELDR.) ROTHM.	Leg	C suff caesp
<i>Chamaecytisus</i>	<i>danubialis</i>	(VELEN.) ROTHM.	Leg	C suff caesp
<i>Chamaecytisus</i>	<i>dorycnioides</i>	FRODIN et HEYWOOD	Leg	C suff caesp
<i>Chamaecytisus</i>	<i>eriocarpus</i>	(BOISS.) ROTHM.	Leg	C suff caesp
<i>Chamaecytisus</i>	<i>glaber</i>	(L. f.) ROTHM.	Leg	C suff caesp
<i>Chamaecytisus</i>	<i>graniticus</i>	(REHMANN) ROTHM.	Leg	C suff caesp
<i>Chamaecytisus</i>	<i>heuffelii</i>	(WIERZB.) ROTHM.	Leg	C suff caesp
<i>Chamaecytisus</i>	<i>hirsutus</i>	(L.) LINK	Leg	C suff caesp
<i>Chamaecytisus</i>	<i>jankae</i>	(VELEN.) ROTHM.	Leg	C suff rep aest
<i>Chamaecytisus</i>	<i>kovacevii</i>	(VELEN.) ROTHM.	Leg	C suff caesp
<i>Chamaecytisus</i>	<i>leiocarpus</i>	(A. KERNER) ROTHM.	Leg	C suff rep aest
<i>Chamaecytisus</i>	<i>lindemannii</i>	(V. KRECZ) A. KLÁSKOVÁ	Leg	C suff caesp
<i>Chamaecytisus</i>	<i>litwinowii</i>	(V. KRECZ) A. KLÁSKOVÁ	Leg	C suff caesp
<i>Chamaecytisus</i>	<i>nejceffii</i>	(URUM.) ROTHM.	Leg	C suff caesp
<i>Chamaecytisus</i>	<i>paczoskii</i>	(V. KRECZ) A. KLÁSKOVÁ	Leg	C suff caesp
<i>Chamaecytisus</i>	<i>podolicus</i>	(BLOCKI) A. KLÁSKOVÁ	Leg	C suff caesp
<i>Chamaecytisus</i>	<i>polytrichus</i>	(BIEB.) ROTHM.	Leg	C suff rep aest
<i>Chamaecytisus</i>	<i>purpureus</i>	(SCOP.) LINK	Leg	C suff caesp
<i>Chamaecytisus</i>	<i>pygmaeus</i>	(WILLD.) ROTHM.	Leg	C suff rep aest
<i>Chamaecytisus</i>	<i>ratisbonensis</i>	(SCHAEFFER) ROTHM.	Leg	C suff rep aest
<i>Chamaecytisus</i>	<i>rochelii</i>	(WIERZ.) ROTHM.	Leg	C suff caesp
<i>Chamaecytisus</i>	<i>ruthenicus</i>	(FISCHER) A. KLÁSKOVÁ	Leg	C suff caesp
<i>Chamaecytisus</i>	<i>skrobiszewskii</i>	(PACZ.) A. KLÁSKOVÁ	Leg	C suff caesp
<i>Chamaecytisus</i>	<i>spinescens</i>	(C. PRESL) ROTHM.	Leg	C suff caesp
<i>Chamaecytisus</i>	<i>subidaeus</i>	(GAND.) ROTHM.	Leg	C suff caesp
<i>Chamaecytisus</i>	<i>supinus</i>	(L.) LINK	Leg	C suff caesp
<i>Chamaecytisus</i>	<i>tommasinii</i>	(VIS.) ROTHM.	Leg	C suff caesp
<i>Chamaecytisus</i>	<i>wulfii</i>	(V. KRECZ) A. KLÁSKOVÁ	Leg	C suff caesp
<i>Chamaecytisus</i>	<i>zingeri</i>	(NENUKOW) A. KLÁSKOVÁ	Leg	C suff caesp
<i>Chamaedaphne</i>	<i>calyculata</i>	(L.) MOENCH	Eri	C frut caesp semp
<i>Chamaerops</i>	<i>humilis</i>	L.	Pal	Palmentyp
<i>Chamaespartium</i>	<i>sagittale</i>	(L.) P. GIBBS.	Leg	C suff rep aest
<i>Chamaespartium</i>	<i>tridentatum</i>	(L.) P. GIBBS.	Leg	C suff caesp
<i>Chimaphila</i>	<i>umbellata</i>	(L.) W. BARTON	Pyr	C frut caesp semp sob
<i>Chronanthus</i>	<i>biflorus</i>	FRODIN et HEYWOOD	Leg	C suff caesp

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Gattung	Art	Verfasser	Familie	Lebensform
<i>Cistus</i>	<i>albanicus</i>	E. F. WARBURG	Cis	C frut caesp aest
<i>Cistus</i>	<i>albidus</i>	L.	Cis	P caesp aest
<i>Cistus</i>	<i>clusii</i>	DUNAL	Cis	P caesp aest
<i>Cistus</i>	<i>crispus</i>	L.	Cis	P caesp aest
<i>Cistus</i>	<i>heterophyllus</i>	DESF.	Cis	P caesp aest
<i>Cistus</i>	<i>incanus</i>	L.	Cis	P caesp aest
<i>Cistus</i>	<i>ladanifer</i>	L.	Cis	P caesp aest
<i>Cistus</i>	<i>laurifolius</i>	L.	Cis	P caesp aest
<i>Cistus</i>	<i>libanotis</i>	L.	Cis	P caesp aest
<i>Cistus</i>	<i>monspeliensis</i>	L.	Cis	P caesp aest
<i>Cistus</i>	<i>pahiniae</i>	INGRAM	Cis	P caesp aest
<i>Cistus</i>	<i>parviflorus</i>	LAM.	Cis	P caesp aest
<i>Cistus</i>	<i>populifolius</i>	L.	Cis	P caesp aest
<i>Cistus</i>	<i>psilosepalus</i>	SWEET	Cis	P caesp aest
<i>Cistus</i>	<i>salvifolius</i>	L.	Cis	P caesp aest
<i>Cistus</i>	<i>varius</i>	POURRET	Cis	P caesp aest
<i>Clematis</i>	<i>alpina</i>	(L.) MILLER	Ran	P scand aest vol
<i>Clematis</i>	<i>campaniflora</i>	BROT.	Ran	P scand aest vol
<i>Clematis</i>	<i>cirrhusa</i>	L.	Ran	P scand semp
<i>Clematis</i>	<i>flammula</i>	L.	Ran	P scand aest vol
<i>Clematis</i>	<i>orientalis</i>	L.	Ran	P scand aest vol
<i>Clematis</i>	<i>vitalba</i>	L.	Ran	P scand aest vol
<i>Clematis</i>	<i>viticella</i>	L.	Ran	P scand aest vol
<i>Cneorum</i>	<i>tricoccon</i>	L.	Cne	P caesp semp cor
<i>Colutea</i>	<i>arborescens</i>	L.	Leg	P caesp aest
<i>Colutea</i>	<i>atlantica</i>	BROWICZ	Leg	P caesp aest
<i>Colutea</i>	<i>cilicica</i>	BOISS. et BALANSA	Leg	P caesp aest
<i>Commicarpus</i>	<i>plumbagineus</i>	(CAV.) STANDLEY	Nyc	C frut caesp aest
<i>Convolvulus</i>	<i>boissieri</i>	STEUDEL	Con	C suff caesp
<i>Convolvulus</i>	<i>cneorum</i>	L.	Con	C suff caesp
<i>Convolvulus</i>	<i>dorycnium</i>	L.	Con	C suff caesp
<i>Convolvulus</i>	<i>libanoticus</i>	BOISS.	Con	C suff caesp
<i>Convolvulus</i>	<i>oleifolius</i>	DESR.	Con	C suff caesp
<i>Corema</i>	<i>album</i>	(L.) DON	Emp	C frut caesp semp
<i>Coriaria</i>	<i>myrtifolia</i>	L.	Cori	P caesp aest
<i>Cornus</i>	<i>alba</i>	L.	Corn	P caesp aest
<i>Cornus</i>	<i>mas</i>	L.	Corn	P caesp aest
<i>Cornus</i>	<i>sanguinea</i>	L.	Corn	P caesp aest sob
<i>Coronilla</i>	<i>emerus</i>	L.	Leg	P caesp aest
<i>Coronilla</i>	<i>juncea</i>	L.	Leg	P caesp aest
<i>Coronilla</i>	<i>minima</i>	L.	Leg	C suff caesp
<i>Coronilla</i>	<i>vaginalis</i>	LAM.	Leg	C suff caesp
<i>Coronilla</i>	<i>valentina</i>	L.	Leg	P caesp aest
<i>Corylus</i>	<i>avellana</i>	L.	Cory	P caesp aest
<i>Corylus</i>	<i>colurna</i>	L.	Cory	P scap aest fron
<i>Corylus</i>	<i>maxima</i>	MILLER	Cory	P caesp aest
<i>Cotinus</i>	<i>coggygria</i>	SCOP.	Ana	P caesp aest sob
<i>Cotoneaster</i>	<i>cinnabarinus</i>	JUZ.	Malo	P caesp aest
<i>Cotoneaster</i>	<i>granatensis</i>	BOISS.	Malo	P caesp aest
<i>Cotoneaster</i>	<i>integerrimus</i>	MEDICIUS	Malo	P caesp aest
<i>Cotoneaster</i>	<i>nebrodensis</i>	(GUSS) C. KOCH	Malo	P caesp aest
<i>Cotoneaster</i>	<i>niger</i>	(THUNB.) FRIES	Malo	P caesp aest
<i>Cotoneaster</i>	<i>nummularia</i>	FISCHER et C. A. MEYER	Malo	P caesp aest
<i>Cotoneaster</i>	<i>tauricus</i>	POJARK.	Malo	P caesp aest
<i>Crataegus</i>	<i>altaica</i>	(LOUDON) LANGE	Malo	P scap aest fron

Fortsetzung Anhang 2. Die Lebensformen der Dendroflora-Arten Europas

Gattung	Art	Verfasser	Familie	Lebensform
<i>Crataegus</i>	<i>ambigua</i>	C.A. MEYER	Malo	P caesp aest
<i>Crataegus</i>	<i>azarolus</i>	L.	Malo	P caesp hib
<i>Crataegus</i>	<i>calycina</i>	PETERM.	Malo	P caesp aest
<i>Crataegus</i>	<i>heldreichii</i>	BOISS.	Malo	P caesp hib
<i>Crataegus</i>	<i>karadaghensis</i>	POJARK.	Malo	P caesp aest
<i>Crataegus</i>	<i>laciniata</i>	UCRIA.	Malo	P caesp hib
<i>Crataegus</i>	<i>laevigata</i>	(POIRET) DC.	Malo	P caesp aest
<i>Crataegus</i>	<i>macrocarpa</i>	HEGETSCHW.	Malo	P caesp aest
<i>Crataegus</i>	<i>microphylla</i>	C. KOCH	Malo	P caesp aest
<i>Crataegus</i>	<i>monogyna</i>	JACQ.	Malo	P caesp aest
<i>Crataegus</i>	<i>nigra</i>	WALDST. et KIT.	Malo	P caesp aest
<i>Crataegus</i>	<i>pallasii</i>	GRISEB.	Malo	P caesp aest
<i>Crataegus</i>	<i>pentagyna</i>	WALDST. et KIT.	Malo	P caesp aest
<i>Crataegus</i>	<i>pynoloba</i>	BOISS. et HELDR.	Malo	P caesp aest
<i>Crataegus</i>	<i>sanguinea</i>	PALLAS	Malo	P caesp aest
<i>Crataegus</i>	<i>schraderana</i>	LEDEB.	Malo	P caesp hib
<i>Crataegus</i>	<i>sphaenophylla</i>	POJARK.	Malo	P caesp hib
<i>Crataegus</i>	<i>taurica</i>	POJARK.	Malo	P caesp aest
<i>Crataegus</i>	<i>ucrainica</i>	POJARK.	Malo	P caesp aest
<i>Cupressus</i>	<i>sempervirens</i>	L.	Cup	P scap semp ace
<i>Cynanchum</i>	<i>acutum</i>	L.	Asc	P scand aest plec
<i>Cytisus</i>	<i>aeolicus</i>	GUSS.	Leg	P caesp aest
<i>Cytisus</i>	<i>agnipilus</i>	VELEN.	Leg	C suff caesp
<i>Cytisus</i>	<i>ardoini</i>	E. FOURN.	Leg	C suff caesp
<i>Cytisus</i>	<i>baeticus</i>	(WEBB) STEUDEL	Leg	P caesp aest
<i>Cytisus</i>	<i>cantabricus</i>	(WILLK.) REICHENB. f.	Leg	P caesp aest
<i>Cytisus</i>	<i>commutatus</i>	(WILLK.) BRIQ.	Leg	P caesp aest
<i>Cytisus</i>	<i>decumbens</i>	(DURANDE) SPACH	Leg	C suff caesp
<i>Cytisus</i>	<i>emeriflorus</i>	REICHENB.	Leg	C suff caesp
<i>Cytisus</i>	<i>grandiflorus</i>	DC.	Leg	P caesp aest
<i>Cytisus</i>	<i>ingramii</i>	BLAKELOCK	Leg	P caesp aest
<i>Cytisus</i>	<i>malacitanus</i>	BOISS.	Leg	P caesp aest
<i>Cytisus</i>	<i>multiflorus</i>	(L'HÉR) SWEET	Leg	P caesp aest
<i>Cytisus</i>	<i>patens</i>	L.	Leg	P caesp aest
<i>Cytisus</i>	<i>procumbens</i>	(W. et K.) SPRENGEL	Leg	C suff caesp
<i>Cytisus</i>	<i>pseudoprocumbens</i>	MARKGRAF	Leg	C suff caesp
<i>Cytisus</i>	<i>purgans</i>	(L.) BOISS.	Leg	P caesp aest
<i>Cytisus</i>	<i>reverchonii</i>	(DEGEN et HERVIER) BEAN	Leg	P caesp aest
<i>Cytisus</i>	<i>sauzeanus</i>	BURNATet BRIQ.	Leg	C suff caesp
<i>Cytisus</i>	<i>scoparius</i>	(L.) LINK	Leg	P caesp aest
<i>Cytisus</i>	<i>sessilifolius</i>	L.	Leg	P caesp aest
<i>Cytisus</i>	<i>striatus</i>	(HILL) ROTHM.	Leg	P caesp aest
<i>Cytisus</i>	<i>tribracteolatus</i>	WEBB	Leg	P caesp aest
<i>Cytisus</i>	<i>villosus</i>	POURRET	Leg	P caesp aest
<i>Daboecia</i>	<i>azorica</i>	TUTIN et F. E. WARBURG	Eri	C frut rep semp
<i>Daboecia</i>	<i>cantabrica</i>	(HUDSON) C. KOCH	Eri	C frut caesp semp
<i>Daphne</i>	<i>alpina</i>	L.	Thym	C frut rep aest
<i>Daphne</i>	<i>arbuscula</i>	CELAK.	Thym	C frut rep semp
<i>Daphne</i>	<i>blagayana</i>	FREYER	Thym	C frut rep semp
<i>Daphne</i>	<i>cneorum</i>	L.	Thym	C frut rep semp
<i>Daphne</i>	<i>gnidioides</i>	JAUB. et SPACH	Thym	C frut caesp semp
<i>Daphne</i>	<i>gnidium</i>	L.	Thym	P caesp semp cor
<i>Daphne</i>	<i>jasminea</i>	SIBTH. et SM.	Thym	C frut rep semp
<i>Daphne</i>	<i>malyana</i>	BLECIC	Thym	C frut rep semp
<i>Daphne</i>	<i>mezereum</i>	L.	Thym	P caesp aest

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Gattung	Art	Verfasser	Familie	Lebensform
<i>Daphne</i>	<i>laureola</i>	L.	Thym	P caesp semp cor
<i>Daphne</i>	<i>oleoides</i>	SCHREBER	Thym	C frut caesp semp
<i>Daphne</i>	<i>petraea</i>	LEYBOLD	Thym	C frut rep semp
<i>Daphne</i>	<i>pontica</i>	L.	Thym	P caesp semp cor
<i>Daphne</i>	<i>rodriguezii</i>	TEXIDOR	Thym	C frut caesp semp
<i>Daphne</i>	<i>sericea</i>	VAHL	Thym	C frut caesp semp
<i>Daphne</i>	<i>sophia</i>	KALENICZ	Thym	P caesp aest
<i>Daphne</i>	<i>striata</i>	TRATT.	Thym	C frut rep semp
<i>Dianthus</i>	<i>arboreus</i>	L.	Car	C suff caesp
<i>Dianthus</i>	<i>fruticosus</i>	L.	Car	C suff caesp
<i>Dianthus</i>	<i>juniperinus</i>	SM.	Car	C suff caesp
<i>Dianthus</i>	<i>rupicola</i>	BIV.	Car	C suff caesp
<i>Digitalis</i>	<i>obscura</i>	L.	Scr	C suff caesp
<i>Dorycnium</i>	<i>graecum</i>	(L.) SER.	Leg	C suff caesp
<i>Dorycnium</i>	<i>hirsutum</i>	(L.) SER	Leg	C suff caesp
<i>Dorycnium</i>	<i>pentaphyllum</i>	SCOP.	Leg	C suff caesp
<i>Dorycnium</i>	<i>rectum</i>	(L.) SER.	Leg	C suff caesp
<i>Dryas</i>	<i>octopetala</i>	L.	Ros	C frut rep semp
<i>Ebenus</i>	<i>cretica</i>	L.	Leg	C suff caesp
<i>Ebenus</i>	<i>sibthorpii</i>	DC.	Leg	C suff caesp
<i>Echinopartum</i>	<i>boissieri</i>	(SPACH) ROTHM.	Leg	C suff caesp
<i>Echinopartum</i>	<i>horridum</i>	(VAHL) ROTHM.	Leg	C suff caesp
<i>Echinopartum</i>	<i>lusitanicum</i>	(L.) ROTHM.	Leg	C suff caesp
<i>Empetrum</i>	<i>nigrum</i>	L.	Emp	C frut rep semp
<i>Ephedra</i>	<i>distachia</i>	L.	Eph	C frut caesp semp sob
<i>Ephedra</i>	<i>fragilis</i>	DESF.	Eph	P scand aest plec
<i>Ephedra</i>	<i>major</i>	HOST	Eph	P caesp semp cor
<i>Eremosparton</i>	<i>aphyllum</i>	FISCHER et C. A. MEYER	Leg	C suff caesp
<i>Erica</i>	<i>arborea</i>	L.	Eri	P caesp semp ace
<i>Erica</i>	<i>australis</i>	L.	Eri	P caesp semp ace
<i>Erica</i>	<i>ciliaris</i>	L.	Eri	C frut caesp semp
<i>Erica</i>	<i>cinerea</i>	L.	Eri	C frut caesp semp
<i>Erica</i>	<i>erigena</i>	R. ROSS	Eri	P caesp semp ace
<i>Erica</i>	<i>herbacea</i>	L.	Eri	C frut caesp semp
<i>Erica</i>	<i>lusitanica</i>	RUDOLPHI	Eri	P caesp semp ace
<i>Erica</i>	<i>mackaiana</i>	BAB.	Eri	C frut caesp semp
<i>Erica</i>	<i>manipuliflora</i>	L.	Eri	C frut caesp semp
<i>Erica</i>	<i>multiflora</i>	L.	Eri	P caesp semp ace
<i>Erica</i>	<i>scoparia</i>	L.	Eri	P caesp semp ace
<i>Erica</i>	<i>sicula</i>	GUSS.	Eri	C frut caesp semp
<i>Erica</i>	<i>terminalis</i>	SALISB.	Eri	P caesp semp ace
<i>Erica</i>	<i>tetralix</i>	L.	Eri	C frut caesp semp
<i>Erica</i>	<i>umbellata</i>	L.	Eri	C frut caesp semp
<i>Erica</i>	<i>vagans</i>	L.	Eri	C frut caesp semp
<i>Erinacea</i>	<i>anthyllis</i>	LINK	Leg	C suff caesp
<i>Euonymus</i>	<i>europaeus</i>	L.	Cel	P caesp aest
<i>Euonymus</i>	<i>latifolius</i>	(L.) MILLER	Cel	P caesp aest
<i>Euonymus</i>	<i>nanus</i>	BIEB.	Cel	P caesp hib
<i>Euonymus</i>	<i>verrucosus</i>	SCOP.	Cel	P caesp aest
<i>Euphorbia</i>	<i>acanthothamnos</i>	HELDL. et SART.	Euph	C suff caesp
<i>Euphorbia</i>	<i>bivonae</i>	STEUDEL	Euph	P caesp aest
<i>Euphorbia</i>	<i>dendroides</i>	L.	Euph	P caesp aest
<i>Euphorbia</i>	<i>glabriflora</i>	VIS.	Euph	C suff caesp
<i>Euphorbia</i>	<i>spinosa</i>	L.	Euph	C suff caesp
<i>Euphorbia</i>	<i>squamigera</i>	LOISEL.	Euph	P caesp aest

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Gattung	Art	Verfasser	Familie	Lebensform
<i>Euphorbia</i>	<i>stygana</i>	H. C. WATSON	Euph	P caesp aest
<i>Euzomodendron</i>	<i>bourgeanum</i>	COSSON	Cru	C suff caesp
<i>Eversmannia</i>	<i>subspinosa</i>	(FISCHER) B. FEDTSCH.	Leg	C suff caesp
<i>Fagus</i>	<i>orientalis</i>	LIPSKY	Fag	P scap aest fron
<i>Fagus</i>	<i>sylvatica</i>	L.	Fag	P scap aest fron
<i>Ficus</i>	<i>carica</i>	L.	Mor	P caesp aest
<i>Fontanesia</i>	<i>phillyraeoides</i>	LABILL.	Ole	P caesp aest
<i>Forsythia</i>	<i>europaea</i>	DEGEN et BALD.	Ole	P caesp aest
<i>Frangula</i>	<i>alnus</i>	MILLER	Rham	P caesp aest
<i>Frangula</i>	<i>azorica</i>	TUTIN	Rham	P caesp aest
<i>Frangula</i>	<i>rupestris</i>	(SCOP) SCHUR	Rham	P caesp aest
<i>Fraxinus</i>	<i>angustifolia</i>	VAHL	Ole	P scap aest fron
<i>Fraxinus</i>	<i>excelsior</i>	L.	Ole	P scap aest fron
<i>Fraxinus</i>	<i>ornus</i>	L.	Ole	P scap aest fron
<i>Fraxinus</i>	<i>pallisiae</i>	WILLMOTT	Ole	P scap aest fron
<i>Fumana</i>	<i>aciphylla</i>	BOISS.	Cis	C suff caesp
<i>Fumana</i>	<i>arabica</i>	(L.) SPACH	Cis	C suff rep aest
<i>Fumana</i>	<i>bonapartei</i>	MARIE et PETIT- MENGIN	Cis	C suff rep aest
<i>Fumana</i>	<i>ericoides</i>	(CAV.) GAND.	Cis	C suff rep aest
<i>Fumana</i>	<i>laevipes</i>	(L.) SPACH	Cis	C suff caesp
<i>Fumana</i>	<i>paradoxa</i>	HEYWOOD	Cis	C suff caesp
<i>Fumana</i>	<i>procumbens</i>	(DUNAL) GREN. et GODRON	Cis	C suff rep aest
<i>Fumana</i>	<i>scoparia</i>	POMEL	Cis	C suff caesp
<i>Fumana</i>	<i>thymifolia</i>	(L.) SPACH	Cis	C suff caesp
<i>Galium</i>	<i>ephedroides</i>	WILLK.	Rub	C suff caesp
<i>Galium</i>	<i>fruticosum</i>	WILLD.	Rub	C suff caesp
<i>Genista</i>	<i>acanthoclada</i>	DC.	Leg	C suff caesp
<i>Genista</i>	<i>aetnensis</i>	(BIV.) DC.	Leg	P caesp aest
<i>Genista</i>	<i>albida</i>	WILLD.	Leg	C suff rep aest
<i>Genista</i>	<i>anatolica</i>	BOISS.	Leg	C suff caesp
<i>Genista</i>	<i>anglica</i>	L.	Leg	C suff caesp
<i>Genista</i>	<i>aristata</i>	C. PRESL	Leg	C suff caesp
<i>Genista</i>	<i>asplathoides</i>	LAM.	Leg	C suff caesp
<i>Genista</i>	<i>baetica</i>	SPACH	Leg	C suff caesp
<i>Genista</i>	<i>berberida</i>	LANGE	Leg	C suff caesp
<i>Genista</i>	<i>carinalis</i>	GRISEB.	Leg	C suff caesp
<i>Genista</i>	<i>carpetana</i>	LERESCHE	Leg	C suff caesp
<i>Genista</i>	<i>cinerea</i>	(VILL.) DC.	Leg	C suff caesp
<i>Genista</i>	<i>corsica</i>	(LOISEL.) DC.	Leg	C suff caesp
<i>Genista</i>	<i>cupanii</i>	BOISS.	Leg	C suff caesp
<i>Genista</i>	<i>doricnyfolia</i>	FONT QUER	Leg	C suff caesp
<i>Genista</i>	<i>ephedroides</i>	DC.	Leg	C suff caesp
<i>Genista</i>	<i>falcata</i>	BROT.	Leg	C suff caesp
<i>Genista</i>	<i>fasselata</i>	DECNE.	Leg	C suff caesp
<i>Genista</i>	<i>florida</i>	L.	Leg	C suff caesp
<i>Genista</i>	<i>germanica</i>	L.	Leg	C suff caesp
<i>Genista</i>	<i>haenseleri</i>	BOISS.	Leg	P caesp aest
<i>Genista</i>	<i>hassertiana</i>	(BALD.) BALD.	Leg	C suff caesp
<i>Genista</i>	<i>hirsuta</i>	VAHL	Leg	C suff caesp
<i>Genista</i>	<i>hispanica</i>	L.	Leg	C suff caesp
<i>Genista</i>	<i>holopetala</i>	(FLEISCHM.) BALD.	Leg	C suff caesp
<i>Genista</i>	<i>hystrix</i>	LANGE	Leg	C suff caesp
<i>Genista</i>	<i>januensis</i>	VIV.	Leg	C suff caesp
<i>Genista</i>	<i>lobelii</i>	DC.	Leg	C suff caesp
<i>Genista</i>	<i>lucida</i>	CAMB.	Leg	C suff caesp

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Gattung	Art	Verfasser	Familie	Lebensform
<i>Genista</i>	<i>lydia</i>	BOISS.	Leg	C suff caesp
<i>Genista</i>	<i>micrantha</i>	ORTEGA	Leg	C suff caesp
<i>Genista</i>	<i>morisii</i>	COLLA	Leg	C suff caesp
<i>Genista</i>	<i>nissana</i>	PETROVIC	Leg	C suff caesp
<i>Genista</i>	<i>optusiramea</i>	GAY	Leg	C suff caesp
<i>Genista</i>	<i>pilosa</i>	L.	Leg	C suff rep aest
<i>Genista</i>	<i>polyanthos</i>	R. DE ROEMER	Leg	C suff caesp
<i>Genista</i>	<i>pseudopilosa</i>	COSSON	Leg	C suff rep aest
<i>Genista</i>	<i>pulchella</i>	VIS.	Leg	C suff rep aest
<i>Genista</i>	<i>pumila</i>	(DEB. et REV.) VIERH.	Leg	C suff caesp
<i>Genista</i>	<i>radiata</i>	(L.) SCOP.	Leg	C suff caesp
<i>Genista</i>	<i>ramosissima</i>	(DESF.) POIRET	Leg	C suff caesp
<i>Genista</i>	<i>sakellariadis</i>	BOISS. et ORPH.	Leg	C suff rep aest
<i>Genista</i>	<i>salzmännii</i>	DC.	Leg	C suff caesp
<i>Genista</i>	<i>scorpius</i>	(L.) DC.	Leg	C suff caesp
<i>Genista</i>	<i>sericea</i>	WULFEN	Leg	C suff caesp
<i>Genista</i>	<i>sessilifolia</i>	DC.	Leg	C suff caesp
<i>Genista</i>	<i>spartoides</i>	SPACH	Leg	C suff caesp
<i>Genista</i>	<i>subcapitata</i>	PANCIC	Leg	C suff caesp
<i>Genista</i>	<i>sylvestris</i>	SCOP.	Leg	C suff rep aest
<i>Genista</i>	<i>teretifolia</i>	WILLK.	Leg	C suff rep aest
<i>Genista</i>	<i>tinctoria</i>	L.	Leg	C suff caesp
<i>Genista</i>	<i>tournefortii</i>	SPACH	Leg	C suff caesp
<i>Genista</i>	<i>triacanthos</i>	BROT.	Leg	C suff caesp
<i>Genista</i>	<i>tridens</i>	(CAV.) DC.	Leg	C suff caesp
<i>Genista</i>	<i>umbellata</i>	(L'HER) POIRET	Leg	C suff caesp
<i>Genista</i>	<i>valentina</i>	(WILLD.) STEUDEL	Leg	C suff caesp
<i>Globularia</i>	<i>alypum</i>	L.	Glo	C frut caesp semp
<i>Globularia</i>	<i>cordifolia</i>	L.	Glo	C frut rep semp
<i>Globularia</i>	<i>meridionalis</i>	(PODP.) O. SCHWARZ	Glo	C frut rep semp
<i>Globularia</i>	<i>neapolitana</i>	O. SCHWARZ	Glo	C frut rep semp
<i>Globularia</i>	<i>repens</i>	LAM.	Glo	C frut rep semp
<i>Globularia</i>	<i>stygia</i>	ORPH.	Glo	C frut rep semp
<i>Gonocytisus</i>	<i>angulatus</i>	(L.) SPACH	Leg	P caesp aest
<i>Halimione</i>	<i>portulacoides</i>	(L.) AELLEN	Chen	C suff rep aest
<i>Halimione</i>	<i>verrucifera</i>	(BIEB.) AELLEN	Chen	C suff rep aest
<i>Halimium</i>	<i>alyssoides</i>	(LAM.) C. KOCH	Cis	P caesp aest
<i>Halimium</i>	<i>atriplicifolium</i>	(LAM.) SPACH	Cis	P caesp aest
<i>Halimium</i>	<i>commutatum</i>	PAU	Cis	C frut caesp aest
<i>Halimium</i>	<i>halimifolium</i>	(L.) WILLK.	Cis	P caesp aest
<i>Halimium</i>	<i>lasianthum</i>	(LAM.) SPACH	Cis	P caesp aest
<i>Halimium</i>	<i>ocymoides</i>	(LAM.) WILLK.	Cis	P caesp aest
<i>Halimium</i>	<i>umbellatum</i>	(L.) SPACH	Cis	C frut caesp aest
<i>Halimium</i>	<i>verticillatum</i>	(BROT.) SENNEN	Cis	C frut caesp aest
<i>Halimium</i>	<i>viscosum</i>	(WILLK.) P. SILVA	Cis	C frut caesp aest
<i>Halimodendron</i>	<i>halodendron</i>	(PALLAS) VOSS	Leg	P caesp aest
<i>Halocnemum</i>	<i>strobilaceum</i>	(PALLAS) BIEB.	Chen	C suff caesp
<i>Halostachys</i>	<i>belangerana</i>	(MOQ.) BOTSCH.	Chen	P caesp aest
<i>Haloxyton</i>	<i>articulatum</i>	(MOQ.) BUNGE	Chen	C suff caesp
<i>Hedera</i>	<i>helix</i>	L.	Ara	P scand semp
<i>Helianthemum</i>	<i>appeninum</i>	(L.) MILLER	Cis	C frut caesp aest
<i>Helianthemum</i>	<i>asperum</i>	LAG.	Cis	C frut caesp aest
<i>Helianthemum</i>	<i>canum</i>	(L.) BAUMG.	Cis	C frut rep aest
<i>Helianthemum</i>	<i>caput-felis</i>	BOISS.	Cis	C frut caesp aest
<i>Helianthemum</i>	<i>cinereum</i>	(CAV.) PERS.	Cis	C frut caesp aest

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Gattung	Art	Verfasser	Familie	Lebensform
<i>Helianthemum</i>	<i>croceum</i>	(DESF.) PERS.	Cis	C frut caesp aest
<i>Helianthemum</i>	<i>hirtum</i>	(L.) MILLER	Cis	C frut caesp aest
<i>Helianthemum</i>	<i>hymettium</i>	BOISS. et HELDR.	Cis	C frut rep aest
<i>Helianthemum</i>	<i>lavandulifolium</i>	MILLER	Cis	C frut caesp aest
<i>Helianthemum</i>	<i>leptophyllum</i>	DUNAL	Cis	C frut caesp aest
<i>Helianthemum</i>	<i>lunulatum</i>	(ALL.) DC.	Cis	C frut caesp aest
<i>Helianthemum</i>	<i>marifolium</i>	(L.) MILLER	Cis	C frut rep aest
<i>Helianthemum</i>	<i>nummularium</i>	(L.) MILLER	Cis	C frut caesp aest
<i>Helianthemum</i>	<i>oelandicum</i>	(L.) DC.	Cis	C frut caesp aest
<i>Helianthemum</i>	<i>origanifolium</i>	(LAM.) PERS.	Cis	C frut rep aest
<i>Helianthemum</i>	<i>pannosum</i>	BOISS.	Cis	C frut caesp aest
<i>Helianthemum</i>	<i>piliferum</i>	BOISS.	Cis	C frut caesp aest
<i>Helianthemum</i>	<i>pilosum</i>	(L.) PERS.	Cis	C frut caesp aest
<i>Helianthemum</i>	<i>rossmaessleri</i>	WILLK.	Cis	C frut caesp aest
<i>Helianthemum</i>	<i>sessiliflorum</i>	(DESF.) PERS.	Cis	C frut caesp aest
<i>Helianthemum</i>	<i>squamatum</i>	(L.) PERS.	Cis	C frut caesp aest
<i>Helianthemum</i>	<i>stipulatum</i>	(FORSKÖL) C. CHR.	Cis	C frut caesp aest
<i>Helianthemum</i>	<i>virgatum</i>	(DESF.) PERS.	Cis	C frut caesp aest
<i>Helianthemum</i>	<i>viscarium</i>	BOISS. et REUTER	Cis	C frut caesp aest
<i>Helianthemum</i>	<i>viscidulum</i>	BOISS.	Cis	C frut caesp aest
<i>Hippophaë</i>	<i>rhamnoides</i>	L.	Elae	P caesp aest sob
<i>Hypericum</i>	<i>aciferum</i>	N. K. B. ROBSON	Gutt	C frut rep aest
<i>Hypericum</i>	<i>aegypticum</i>	L.	Gutt	C frut rep aest
<i>Hypericum</i>	<i>amblycalyx</i>	COUST et GAND.	Gutt	C frut rep aest
<i>Hypericum</i>	<i>androsaemum</i>	L.	Gutt	C frut caesp aest
<i>Hypericum</i>	<i>balearicum</i>	L.	Gutt	P caesp aest
<i>Hypericum</i>	<i>calycinum</i>	L.	Gutt	C frut rep aest
<i>Hypericum</i>	<i>coris</i>	L.	Gutt	C suff rep aest
<i>Hypericum</i>	<i>empetrifolium</i>	WILLD.	Gutt	C frut rep aest
<i>Hypericum</i>	<i>ericoides</i>	L.	Gutt	C frut caesp aest
<i>Hypericum</i>	<i>foliosum</i>	AITON	Gutt	P caesp aest
<i>Hypericum</i>	<i>haplophylloides</i>	HALÁCSY et BALD.	Gutt	C frut caesp aest
<i>Hypericum</i>	<i>hircinum</i>	L.	Gutt	P caesp aest
<i>Hyssopus</i>	<i>officinalis</i>	L.	Lab	C suff caesp
<i>Iberis</i>	<i>saxatilis</i>	L.	Cru	C suff rep semp
<i>Iberis</i>	<i>semperflorens</i>	L.	Cru	C suff rep semp
<i>Iberis</i>	<i>sempervirens</i>	L.	Cru	C suff rep semp
<i>Ilex</i>	<i>aquifolium</i>	L.	Aqu	P scap semp cor
<i>Ilex</i>	<i>colchica</i>	POJARK.	Aqu	P caesp semp cor
<i>Ilex</i>	<i>perado</i>	AITON	Aqu	P scap semp cor
<i>Inula</i>	<i>crithmoides</i>	L.	Com	C suff caesp
<i>Jasminum</i>	<i>fruticans</i>	L.	Ole	P caesp hib
<i>Juglans</i>	<i>regia</i>	L.	Jug	P scap aest fron
<i>Juniperus</i>	<i>brevifolia</i>	(SEUB.) ANTOINE	Cup	P caesp semp ace
<i>Juniperus</i>	<i>communis</i>	L.	Cup	P caesp semp ace
<i>Juniperus</i>	<i>drupacea</i>	LABILL.	Cup	P scap semp ace
<i>Juniperus</i>	<i>excelsa</i>	BIEB.	Cup	P scap semp ace
<i>Juniperus</i>	<i>foetidissima</i>	WILLD.	Cup	P scap semp ace
<i>Juniperus</i>	<i>oxycedrus</i>	L.	Cup	P scap semp ace
<i>Juniperus</i>	<i>phoenica</i>	L.	Cup	P caesp semp ace
<i>Juniperus</i>	<i>sabina</i>	L.	Cup	P caesp semp ace
<i>Juniperus</i>	<i>thurifera</i>	L.	Cup	P scap semp ace
<i>Kalidium</i>	<i>caspium</i>	(L.) UNG. – STERNB.	Chen	C suff caesp
<i>Kalidium</i>	<i>foliatum</i>	(PALLAS) MOQ	Chen	C suff caesp
<i>Kochia</i>	<i>prostrata</i>	(L.) SCHRADER	Chen	C suff rep aest

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Gattung	Art	Verfasser	Familie	Lebensform
<i>Kochia</i>	<i>saxicola</i>	GUSS.	Chen	C suff caesp
<i>Krascheninnikovia</i>	<i>ceratoides</i>	(L.) GUELDEST.	Chen	C suff caesp
<i>Laburnum</i>	<i>alpinum</i>	(MILLER) BERCHTOLD	Leg	P caesp aest
<i>Laburnum</i>	<i>anagyroides</i>	MEDICUS	Leg	P caesp aest
<i>Larix</i>	<i>decidua</i>	MILLER	Pin	P scap aest ace
<i>Larix</i>	<i>russica</i>	(ENDL.) SABINE	Pin	P scap aest ace
<i>Launaea</i>	<i>arborescens</i>	(BATT.) MURB.	Cich	C suff caesp
<i>Launaea</i>	<i>cervicornis</i>	FONT QUER et ROTHM.	Cich	C suff caesp
<i>Launaea</i>	<i>lanifera</i>	PAU	Cich	C suff caesp
<i>Laurus</i>	<i>azorica</i>	J.FRANCO	Lau	P scap semp cor
<i>Laurus</i>	<i>nobilis</i>	L.	Lau	P scap semp cor
<i>Lavandula</i>	<i>angustifolia</i>	MILLER	Lab	C suff caesp
<i>Lavandula</i>	<i>dentata</i>	L.	Lab	C suff caesp
<i>Lavandula</i>	<i>lanata</i>	BOISS.	Lab	C suff caesp
<i>Lavandula</i>	<i>latifolia</i>	MEDICUS	Lab	C suff caesp
<i>Lavandula</i>	<i>multifida</i>	L.	Lab	C suff caesp
<i>Lavandula</i>	<i>stoechas</i>	L.	Lab	C suff caesp
<i>Lavandula</i>	<i>viridis</i>	L'HÉR	Lab	C suff caesp
<i>Lavatera</i>	<i>bryoniifolia</i>	MILLER	Malv	C suff caesp
<i>Lavatera</i>	<i>maritima</i>	GOUAN	Malv	C suff caesp
<i>Lavatera</i>	<i>olbia</i>	L.	Malv	C suff caesp
<i>Ledum</i>	<i>palustre</i>	L.	Eri	C frut caesp semp sob
<i>Lembotropis</i>	<i>nigricans</i>	(L.) GRISEB.	Leg	C suff caesp
<i>Lepidium</i>	<i>subulatum</i>	L.	Cru	C suff caesp
<i>Ligustrum</i>	<i>vulgare</i>	L.	Ole	P caesp aest sob
<i>Limoniastrum</i>	<i>monopetalum</i>	(L.) BOISS.	Plu	C suff caesp
<i>Limonium</i>	<i>caesium</i>	(GIRARD) O. KUNTZE	Plu	C suff caesp
<i>Limonium</i>	<i>diffusum</i>	(POURRET) O. KUNTZE	Plu	C suff caesp
<i>Limonium</i>	<i>ferulaceum</i>	(L.) O. KUNTZE	Plu	C suff caesp
<i>Limonium</i>	<i>insigne</i>	(COSSON) O. KUNTZE	Plu	C suff caesp
<i>Limonium</i>	<i>suffructicosum</i>	(L.) O. KUNTZE	Plu	C suff caesp
<i>Linum</i>	<i>arborescens</i>	L.	Lin	C frut caesp aest
<i>Linnaea</i>	<i>borealis</i>	L.	Capr	C frut caesp semp sob
<i>Lithodora</i>	<i>diffusa</i>	(LAG.) I. M. JOHNSTON	Bor	C suff caesp
<i>Lithodora</i>	<i>fruticosa</i>	(L.) GRISEB.	Bor	C suff caesp
<i>Lithodora</i>	<i>hispidula</i>	(SIBTH. et SM.) GRISEB.	Bor	C suff caesp
<i>Lithodora</i>	<i>nitida</i>	(ERN.) R. FERNANDES	Bor	C suff caesp
<i>Lithodora</i>	<i>oleifolia</i>	(LAPEYR.) GRISEB.	Bor	C suff caesp
<i>Lithodora</i>	<i>rosmarinifolia</i>	(TEN.) I. M. JOHNSTON	Bor	C suff caesp
<i>Lithodora</i>	<i>zahnii</i>	(HELDL.) I. M. JOHNSTON	Bor	C suff caesp
<i>Loiseleuria</i>	<i>procumbens</i>	(L.) DESV.	Eri	C frut rep semp
<i>Lonicera</i>	<i>alpigena</i>	L.	Capr	P caesp aest
<i>Lonicera</i>	<i>arborescens</i>	BOISS.	Capr	P caesp aest
<i>Lonicera</i>	<i>biflora</i>	DESF.	Capr	P scand aest vol
<i>Lonicera</i>	<i>caprifolium</i>	L.	Capr	P scand aest vol
<i>Lonicera</i>	<i>coerulea</i>	L.	Capr	P caesp aest
<i>Lonicera</i>	<i>etrusca</i>	G.SANTI	Capr	P scand aest vol
<i>Lonicera</i>	<i>glutinosa</i>	VIS.	Capr	P caesp aest
<i>Lonicera</i>	<i>hellenica</i>	ORPH.	Capr	P caesp aest
<i>Lonicera</i>	<i>implexa</i>	AITON	Capr	P scand semp
<i>Lonicera</i>	<i>nigra</i>	L.	Capr	P caesp aest
<i>Lonicera</i>	<i>nummulariifolia</i>	JAUB. et SPACH	Capr	P caesp aest
<i>Lonicera</i>	<i>periclymenum</i>	L.	Capr	P scand aest vol
<i>Lonicera</i>	<i>pyrenaica</i>	L.	Capr	P caesp aest
<i>Lonicera</i>	<i>splendida</i>	BOISS.	Capr	P scand semp

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Gattung	Art	Verfasser	Familie	Lebensform
<i>Lonicera</i>	<i>tatarica</i>	L.	Capr	P caesp aest
<i>Lonicera</i>	<i>xylosteum</i>	L.	Capr	P caesp aest
<i>Loranthus</i>	<i>europaeus</i>	JACQ.	Lor	P ep aest
<i>Lotononis</i>	<i>genistoides</i>	(FENZL) BENTHAM	Leg	C frut caesp aest
<i>Lotononis</i>	<i>lupinifolia</i>	(BOISS.) BENTHAM	Leg	C frut caesp aest
<i>Lycium</i>	<i>europaeum</i>	L.	Sol	P caesp aest sob
<i>Lycium</i>	<i>intricatum</i>	BOISS.	Sol	P caesp aest sob
<i>Lycium</i>	<i>ruthenicum</i>	MURRAY	Sol	P caesp aest sob
<i>Lygos</i>	<i>monosperma</i>	(L.) HEYWOOD	Leg	P caesp aest
<i>Lygos</i>	<i>raetam</i>	(FORSWKÍLL) HEYWOOD	Leg	P caesp aest
<i>Lygos</i>	<i>sphaerocarpa</i>	(L.) HEYWOOD	Leg	P caesp aest
<i>Lysimachia</i>	<i>serpyllifolia</i>	SCHREBER	Pri	C suff rep semp
<i>Malus</i>	<i>dasyphylla</i>	BORKH.	Malo	P scap aest fron
<i>Malus</i>	<i>florentina</i>	(ZUCC.) C. K. SCHNEIDER	Malo	P scap aest fron
<i>Malus</i>	<i>praecox</i>	(PALLAS) BORKH.	Malo	P scap aest fron
<i>Malus</i>	<i>sylvestris</i>	MILLER	Malo	P scap aest fron
<i>Malus</i>	<i>trilobata</i>	(LABILL.) C. K. SCHNEIDER	Malo	P caesp aest
<i>Maytenus</i>	<i>senegalensis</i>	(LAM.) EXELL.	Cel	P caesp semp cor
<i>Medicago</i>	<i>arborea</i>	L.	Leg	P caesp aest
<i>Mespilus</i>	<i>germanica</i>	L.	Malo	P scap aest fron
<i>Micromeria</i>	<i>acropolitana</i>	HALÁCSY	Lab	C frut caesp aest
<i>Micromeria</i>	<i>croatica</i>	(PERS) SCHOTT	Lab	C frut caesp aest
<i>Micromeria</i>	<i>filiformis</i>	(AITON) BENTHAM	Lab	C frut caesp aest
<i>Micromeria</i>	<i>fruticosa</i>	(L.) DRUCE	Lab	C frut caesp aest
<i>Micromeria</i>	<i>graeca</i>	(L.) BENTHAM	Lab	C frut caesp aest
<i>Micromeria</i>	<i>hispida</i>	BOISS. et HELDR.	Lab	C frut caesp aest
<i>Micromeria</i>	<i>inodora</i>	(DESF.) BENTHAM	Lab	C frut caesp aest
<i>Micromeria</i>	<i>juliana</i>	(L.) BENTHAM	Lab	C frut caesp aest
<i>Micromeria</i>	<i>marginata</i>	(SM.) CHATER	Lab	C frut caesp aest
<i>Micromeria</i>	<i>microphylla</i>	(D'URV.) BENTHAM	Lab	C frut caesp aest
<i>Micromeria</i>	<i>myrtifolia</i>	BOISS. et HOHEN	Lab	C frut caesp aest
<i>Micromeria</i>	<i>nervosa</i>	(DESF.) BENTHAM	Lab	C frut caesp aest
<i>Moltkia</i>	<i>petraea</i>	(TRATT.) GRISEB.	Bor	C suff caesp
<i>Moltkia</i>	<i>suffruticosa</i>	(L.) BRAND	Bor	C suff caesp
<i>Myrica</i>	<i>faya</i>	AITON	Myri	P caesp semp cor
<i>Myrica</i>	<i>gale</i>	L.	Myri	P caesp aest
<i>Myricaria</i>	<i>germanica</i>	(L.) DESV.	Tam	P caesp aest
<i>Myrsine</i>	<i>africana</i>	L.	Myrs	P caesp semp cor
<i>Myrtus</i>	<i>communis</i>	L.	Myrt	P caesp semp cor
<i>Nanophyton</i>	<i>erinaceum</i>	(PALLAS) BUNGE	Chen	C suff rep aest
<i>Nerium</i>	<i>oleander</i>	L.	Apo	P caesp semp cor
<i>Nitraria</i>	<i>schoberi</i>	L.	Zyg	P caesp aest
<i>Noaea</i>	<i>mucronata</i>	ASCHERSON et SCHWEINF.	Chen	C suff caesp
<i>Odontites</i>	<i>bocconei</i>	(GUSS.) WALPERS	Ser	C suff caesp
<i>Odontites</i>	<i>linkii</i>	HELDL. et SART	Ser	C suff caesp
<i>Olea</i>	<i>europaea</i>	L.	Ole	P scap semp cor
<i>Ononis</i>	<i>aragonensis</i>	ASSO	Leg	C frut caesp aest
<i>Ononis</i>	<i>arvensis</i>	L.	Leg	C suff caesp
<i>Ononis</i>	<i>crispa</i>	L.	Leg	C frut caesp aest
<i>Ononis</i>	<i>fruticosa</i>	L.	Leg	C frut caesp aest
<i>Ononis</i>	<i>hispida</i>	DESF.	Leg	C frut caesp aest
<i>Ononis</i>	<i>leucotricha</i>	COSSON	Leg	C frut caesp aest
<i>Ononis</i>	<i>masquillieri</i>	BERTOL.	Leg	C frut caesp aest
<i>Ononis</i>	<i>minutissima</i>	L.	Leg	C frut rep aest
<i>Ononis</i>	<i>matrix</i>	L.	Leg	C frut caesp aest

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Gattung	Art	Verfasser	Familie	Lebensform
<i>Ononis</i>	<i>pinnata</i>	BROT.	Leg	C frut caesp aest
<i>Ononis</i>	<i>pusilla</i>	L.	Leg	C suff caesp
<i>Ononis</i>	<i>repens</i>	L.	Leg	C frut rep aest
<i>Ononis</i>	<i>reuteri</i>	BOISS.	Leg	C frut caesp aest
<i>Ononis</i>	<i>rotundifolia</i>	L.	Leg	C frut caesp aest
<i>Ononis</i>	<i>speciosa</i>	LAG.	Leg	C frut caesp aest
<i>Ononis</i>	<i>spinosa</i>	L.	Leg	C suff caesp
<i>Ononis</i>	<i>tridentata</i>	L.	Leg	C frut caesp aest
<i>Origanum</i>	<i>compactum</i>	BENTHAM	Lab	C suff caesp
<i>Origanum</i>	<i>dictamnus</i>	L.	Lab	C suff caesp
<i>Origanum</i>	<i>majoricum</i>	CAMB.	Lab	C suff caesp
<i>Origanum</i>	<i>microphyllum</i>	(BENTHAM) BOISS.	Lab	C suff caesp
<i>Origanum</i>	<i>onites</i>	L.	Lab	C suff caesp
<i>Origanum</i>	<i>tournefortii</i>	AITON	Lab	C suff caesp
<i>Origanum</i>	<i>vetteri</i>	BRIQ. et W. BARBEY	Lab	C suff caesp
<i>Ostrya</i>	<i>carpinifolia</i>	SCOP.	Cory	P scap aest fron
<i>Osyris</i>	<i>alba</i>	L.	San	P caesp semp cor
<i>Osyris</i>	<i>quadripartita</i>	SALZM.	San	P caesp semp cor
<i>Paliurus</i>	<i>spina-christi</i>	MILLER	Rham	P caesp aest
<i>Periploca</i>	<i>graeca</i>	L.	Asc	P scand aest vol
<i>Periploca</i>	<i>laevigata</i>	AITON	Asc	P scand aest vol
<i>Petteria</i>	<i>ramentacea</i>	(SIEBER) C. PRESL	Leg	P caesp aest
<i>Phagnalon</i>	<i>graecum</i>	BOISS.et HELDR.	Com	C suff caesp
<i>Phagnalon</i>	<i>metlesicsii</i>	PIGNATTI	Com	C suff caesp
<i>Phagnalon</i>	<i>rupestre</i>	(L.) DC.	Com	C suff caesp
<i>Phagnalon</i>	<i>saxatile</i>	(L.) CASS.	Com	C suff caesp
<i>Phagnalon</i>	<i>sordidum</i>	(L.) REICHENB.	Com	C suff caesp
<i>Philadelphus</i>	<i>coronarius</i>	L.	Hyd	P caesp aest
<i>Phillyrea</i>	<i>angustifolia</i>	L.	Ole	P caesp semp cor
<i>Phillyrea</i>	<i>latifolia</i>	L.	Ole	P caesp semp cor
<i>Phlomis</i>	<i>cretica</i>	C. PRESL	Lab	C frut caesp hib
<i>Phlomis</i>	<i>crinita</i>	CAV.	Lab	C frut caesp hib
<i>Phlomis</i>	<i>ferruginea</i>	TEN.	Lab	C frut caesp hib
<i>Phlomis</i>	<i>floccosa</i>	D. DON	Lab	C frut caesp hib
<i>Phlomis</i>	<i>fruticosa</i>	L.	Lab	P caesp hib
<i>Phlomis</i>	<i>italica</i>	L.	Lab	P caesp hib
<i>Phlomis</i>	<i>lanata</i>	WILLD.	Lab	C frut caesp hib
<i>Phlomis</i>	<i>lychnitis</i>	L.	Lab	C frut caesp hib
<i>Phlomis</i>	<i>purpurea</i>	L.	Lab	P caesp hib
<i>Phoenix</i>	<i>theophrasti</i>	W. GREUTER	Pal	Palmentyp
<i>Phyllodoce</i>	<i>caerulea</i>	(L.) BAB.	Eri	C frut caesp semp sob
<i>Picconia</i>	<i>azorica</i>	(TUTIN) KNOBL.	Ole	P caesp semp cor
<i>Picea</i>	<i>abies</i>	(L.) KARSTEN	Pin	P scap semp ace
<i>Picea</i>	<i>omorika</i>	(PANCIC) PURKYNÉ	Pin	P scap semp ace
<i>Pinus</i>	<i>brutia</i>	TEN.	Pin	P scap semp ace
<i>Pinus</i>	<i>cembra</i>	L.	Pin	P scap semp ace
<i>Pinus</i>	<i>halepensis</i>	MILLER	Pin	P scap semp ace
<i>Pinus</i>	<i>heldreichii</i>	CHRIST	Pin	P scap semp ace
<i>Pinus</i>	<i>leucodermis</i>	ANTOINE	Pin	P scap semp ace
<i>Pinus</i>	<i>mugo</i>	TURRA	Pin	P caesp semp ace
<i>Pinus</i>	<i>nigra</i>	ARNOLD	Pin	P scap semp ace
<i>Pinus</i>	<i>peuce</i>	GRISEB.	Pin	P scap semp ace
<i>Pinus</i>	<i>pinaster</i>	AITON	Pin	P scap semp ace
<i>Pinus</i>	<i>pinea</i>	L.	Pin	P scap semp ace
<i>Pinus</i>	<i>pitusa</i>	STEVEN	Pin	P scap semp ace

Fortsetzung Anhang 2. Die Lebensformen der Dendroflora-Arten Europas

Gattung	Art	Verfasser	Familie	Lebensform
<i>Pinus</i>	<i>sibirica</i>	DU TOUR	Pin	P scap semp ace
<i>Pinus</i>	<i>stankewiczii</i>	(SUK.) FOMIN	Pin	P scap semp ace
<i>Pinus</i>	<i>sylvestris</i>	L.	Pin	P scap semp ace
<i>Pinus</i>	<i>uncinata</i>	MILLER	Pin	P scap semp ace
<i>Pistacia</i>	<i>atlantica</i>	DESF.	Ana	P scap aest fron
<i>Pistacia</i>	<i>lentiscus</i>	L.	Ana	P scap semp cor
<i>Pistacia</i>	<i>terebinthus</i>	L.	Ana	P scap aest fron
<i>Plantago</i>	<i>asperrima</i>	(GAND.) HERVIER	Plan	C suff caesp
<i>Plantago</i>	<i>sempervirens</i>	CRANTZ	Plan	C suff caesp
<i>Platanus</i>	<i>hybrida</i>	BROT.	Plat	P scap aest fron
<i>Platanus</i>	<i>orientalis</i>	L.	Plat	P scap aest fron
<i>Podocytisus</i>	<i>caramanicus</i>	BOISS. et HELDR.	Leg	P caesp aest
<i>Polygala</i>	<i>chamaebuxus</i>	L.	Polygal	C frut rep hib
<i>Polygala</i>	<i>microphylla</i>	L.	Polygal	C frut caesp aest
<i>Polygala</i>	<i>vayredae</i>	COSTA	Polygal	C frut rep hib
<i>Populus</i>	<i>alba</i>	L.	Sal	P scap aest fron sob
<i>Populus</i>	<i>nigra</i>	L.	Sal	P scap aest fron
<i>Populus</i>	<i>tremula</i>	L.	Sal	P scap aest fron sob
<i>Potentilla</i>	<i>fruticosa</i>	L.	Ros	P caesp aest
<i>Prasium</i>	<i>majus</i>	L.	Lab	C suff caesp
<i>Prunus</i>	<i>avium</i>	L.	Pru	P scap aest fron sob
<i>Prunus</i>	<i>brigantina</i>	VILL.	Pru	P caesp aest
<i>Prunus</i>	<i>cerasifera</i>	EHRH.	Pru	P scap aest fron sob
<i>Prunus</i>	<i>cocomilia</i>	TEN.	Pru	P caesp aest
<i>Prunus</i>	<i>fruticosa</i>	PALLAS	Pru	P caesp aest sob
<i>Prunus</i>	<i>laurocerasus</i>	L.	Pru	P caesp semp cor
<i>Prunus</i>	<i>lusitanica</i>	L.	Pru	P caesp semp cor
<i>Prunus</i>	<i>mahaleb</i>	L.	Pru	P scap aest fron
<i>Prunus</i>	<i>padus</i>	L.	Pru	P scap aest fron
<i>Prunus</i>	<i>prostrata</i>	LABILL.	Pru	P caesp aest
<i>Prunus</i>	<i>rambourii</i>	BOISS.	Pru	P caesp aest sob
<i>Prunus</i>	<i>spinosa</i>	L.	Pru	P caesp aest sob
<i>Prunus</i>	<i>tenella</i>	BATSCH	Pru	P caesp aest sob
<i>Prunus</i>	<i>webbii</i>	(SPACH) VIERH.	Pru	P scap aest fron
<i>Ptilostemon</i>	<i>chamaepeuce</i>	(L.) LESS.	Com	C suff caesp
<i>Ptilostemon</i>	<i>gnaphaloides</i>	(CYR) SOJÁK	Com	C suff caesp
<i>Ptilotrichum</i>	<i>halimifolium</i>	BOISS.	Cru	C suff caesp
<i>Ptilotrichum</i>	<i>lapeyrouisianum</i>	(JORDAN) JORDAN	Cru	C suff caesp
<i>Ptilotrichum</i>	<i>macrocarpum</i>	(DC.) BOISS.	Cru	C suff caesp
<i>Ptilotrichum</i>	<i>pyrenaicum</i>	(LAPEYR.) BOISS.	Cru	C suff caesp
<i>Ptilotrichum</i>	<i>reverchonii</i>	DEGEN et HERVIER	Cru	C suff caesp
<i>Ptilotrichum</i>	<i>spinosum</i>	(L.) BOISS.	Cru	C suff caesp
<i>Putoria</i>	<i>calabrica</i>	(L. f.) DC.	Rub	C suff caesp
<i>Pyracantha</i>	<i>coccinea</i>	M. J. ROEMER	Malo	P caesp semp cor
<i>Pyrus</i>	<i>austriaca</i>	A. KERNER	Malo	P scap aest fron
<i>Pyrus</i>	<i>amygdaliformis</i>	VILL.	Malo	P scap aest fron
<i>Pyrus</i>	<i>bourgeana</i>	DECNE.	Malo	P scap aest fron
<i>Pyrus</i>	<i>caucasica</i>	FEDOROV	Malo	P scap aest fron
<i>Pyrus</i>	<i>cordata</i>	DESV.	Malo	P scap aest fron
<i>Pyrus</i>	<i>eleagifolia</i>	PALLAS	Malo	P scap aest fron
<i>Pyrus</i>	<i>magyarica</i>	TERPÓ	Malo	P scap aest fron
<i>Pyrus</i>	<i>nivalis</i>	JACQ.	Malo	P scap aest fron
<i>Pyrus</i>	<i>pyraster</i>	BURGS.	Malo	P scap aest fron
<i>Pyrus</i>	<i>rossica</i>	DANILOV	Malo	P scap aest fron
<i>Pyrus</i>	<i>salvifolia</i>	DC.	Malo	P scap aest fron

Fortsetzung Anhang 2. Die Lebensformen der Dendroflora-Arten Europas

Gattung	Art	Verfasser	Familie	Lebensform
<i>Quercus</i>	<i>brachyphylla</i>	KOTSCHY	Fag	P scap hib
<i>Quercus</i>	<i>canariensis</i>	WILLD.	Fag	P scap hib
<i>Quercus</i>	<i>cerris</i>	L.	Fag	P scap aest fron
<i>Quercus</i>	<i>coccifera</i>	L.	Fag	P caesp semp cor
<i>Quercus</i>	<i>congesta</i>	C. PRESL	Fag	P scap aest fron
<i>Quercus</i>	<i>dalechampii</i>	TEN.	Fag	P scap aest fron
<i>Quercus</i>	<i>faginea</i>	LAM.	Fag	P scap hib
<i>Quercus</i>	<i>frainetto</i>	TEN.	Fag	P scap aest fron
<i>Quercus</i>	<i>fruticosa</i>	BROT.	Fag	P caesp hib
<i>Quercus</i>	<i>hartwissiana</i>	STEVEN	Fag	P scap aest fron
<i>Quercus</i>	<i>ilex</i>	L.	Fag	P scap semp cor
<i>Quercus</i>	<i>infectoria</i>	OLIVIER	Fag	P caesp hib
<i>Quercus</i>	<i>macrolepis</i>	KOTSCHY	Fag	P scap hib
<i>Quercus</i>	<i>mas</i>	THORE	Fag	P scap aest fron
<i>Quercus</i>	<i>pedunculiflora</i>	C. KOCH	Fag	P scap aest fron
<i>Quercus</i>	<i>petraea</i>	(MATTUSCHKA) LIEBL.	Fag	P scap aest fron
<i>Quercus</i>	<i>polycarpa</i>	SCHUR	Fag	P scap aest fron
<i>Quercus</i>	<i>pubescens</i>	WILLD.	Fag	P scap aest fron
<i>Quercus</i>	<i>pyrenaica</i>	WILLD.	Fag	P scap aest fron
<i>Quercus</i>	<i>robur</i>	L.	Fag	P scap aest fron
<i>Quercus</i>	<i>rotundifolia</i>	LAM.	Fag	P scap semp cor
<i>Quercus</i>	<i>sicula</i>	BORZI	Fag	P scap aest fron
<i>Quercus</i>	<i>suber</i>	L.	Fag	P scap semp cor
<i>Quercus</i>	<i>trojana</i>	WEBB	Fag	P scap hib
<i>Quercus</i>	<i>virgiliana</i>	(TEN.) TEN.	Fag	P scap aest fron
<i>Reaumuria</i>	<i>vermiculata</i>	L.	Tam	C frut caesp aest
<i>Rhamnus</i>	<i>alaternus</i>	L.	Rham	P caesp semp cor
<i>Rhamnus</i>	<i>alpinus</i>	L.	Rham	P caesp aest
<i>Rhamnus</i>	<i>catharticus</i>	L.	Rham	P caesp aest
<i>Rhamnus</i>	<i>intermedius</i>	STUDEL et HOCHST.	Rham	P caesp aest
<i>Rhamnus</i>	<i>ludovici-salvatoris</i>	CHODAT	Rham	P caesp semp cor
<i>Rhamnus</i>	<i>lycioides</i>	L.	Rham	P caesp hib
<i>Rhamnus</i>	<i>orbiculatus</i>	BORNM.	Rham	P caesp aest
<i>Rhamnus</i>	<i>persicifolius</i>	MORIS	Rham	P caesp aest
<i>Rhamnus</i>	<i>prunifolius</i>	SIBTH. et SM.	Rham	P caesp aest
<i>Rhamnus</i>	<i>pumilus</i>	TURRA	Rham	C frut caesp aest
<i>Rhamnus</i>	<i>rhodopaeus</i>	VELEN.	Rham	P caesp aest
<i>Rhamnus</i>	<i>saxatilis</i>	JACQ.	Rham	P caesp aest
<i>Rhamnus</i>	<i>sibthorpianus</i>	ROEMER et SCHULTES	Rham	P caesp aest
<i>Rhododendron</i>	<i>ferrugineum</i>	L.	Eri	P caesp semp cor
<i>Rhododendron</i>	<i>hirsutum</i>	L.	Eri	P caesp semp cor
<i>Rhododendron</i>	<i>lapponicum</i>	(L.) WAHLENB.	Eri	C frut rep semp
<i>Rhododendron</i>	<i>luteum</i>	SWEET	Eri	P caesp aest
<i>Rhododendron</i>	<i>myrtifolium</i>	SCHOTT et KOTSCHY	Eri	C frut caesp semp
<i>Rhododendron</i>	<i>ponticum</i>	L.	Eri	P caesp semp cor
<i>Rhodothamnus</i>	<i>chamaecistus</i>	(L.) REICHENB.	Eri	C frut caesp semp
<i>Rhus</i>	<i>coriaria</i>	L.	Ana	P caesp semp cor
<i>Rhus</i>	<i>pentaphylla</i>	(JACQ.) DESF.	Ana	P scap aest fron
<i>Rhus</i>	<i>tripartita</i>	(UCRIA) GRANDE	Ana	P scap aest fron
<i>Ribes</i>	<i>alpinum</i>	L.	Gro	P caesp aest
<i>Ribes</i>	<i>multiflorum</i>	KIT.	Gro	P caesp aest
<i>Ribes</i>	<i>nigrum</i>	L.	Gro	P caesp aest sob
<i>Ribes</i>	<i>orientale</i>	DESF.	Gro	P caesp aest
<i>Ribes</i>	<i>petraeum</i>	WULFEN	Gro	P caesp aest
<i>Ribes</i>	<i>rubrum</i>	L.	Gro	P caesp aest

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Gattung	Art	Verfasser	Familie	Lebensform
<i>Ribes</i>	<i>sardoum</i>	U. MARTELLI	Gro	P caesp aest
<i>Ribes</i>	<i>spicatum</i>	ROBSON	Gro	P caesp aest
<i>Ribes</i>	<i>uva-crispa</i>	L.	Gro	P caesp aest
<i>Rosa</i>	<i>abietina</i>	GREN.	Ros	P caesp aest
<i>Rosa</i>	<i>acicularis</i>	LINDLEY	Ros	P caesp aest sob
<i>Rosa</i>	<i>agrestis</i>	SAVI	Ros	P caesp aest
<i>Rosa</i>	<i>andegavensis</i>	BAST.	Ros	P caesp aest
<i>Rosa</i>	<i>arvensis</i>	HUDSON	Ros	P scand aest plec
<i>Rosa</i>	<i>caesia</i>	SM.	Ros	P caesp aest sob
<i>Rosa</i>	<i>canina</i>	L.	Ros	P caesp aest
<i>Rosa</i>	<i>carophyllacea</i>	BESSER	Ros	P caesp aest
<i>Rosa</i>	<i>corymbifera</i>	BORKH.	Ros	P caesp aest
<i>Rosa</i>	<i>desegliesi</i>	BOREAU	Ros	P caesp aest
<i>Rosa</i>	<i>elliptica</i>	TAUSCH	Ros	P caesp aest
<i>Rosa</i>	<i>gallica</i>	L.	Ros	P caesp aest sob
<i>Rosa</i>	<i>glauca</i>	POURRET	Ros	P caesp aest sob
<i>Rosa</i>	<i>glutinosa</i>	SIBTH. et SM.	Ros	P caesp aest
<i>Rosa</i>	<i>heckeliana</i>	TRATT.	Ros	P caesp aest
<i>Rosa</i>	<i>jundzillii</i>	BESSER	Ros	P caesp aest
<i>Rosa</i>	<i>majalis</i>	J. HERRMANN	Ros	P caesp aest sob
<i>Rosa</i>	<i>micrantha</i>	BORRER	Ros	P caesp aest
<i>Rosa</i>	<i>mollis</i>	SM.	Ros	P caesp aest
<i>Rosa</i>	<i>montana</i>	CHAIX	Ros	P caesp aest
<i>Rosa</i>	<i>nitidula</i>	BESSER	Ros	P caesp aest
<i>Rosa</i>	<i>obtusifolia</i>	DESF.	Ros	P caesp aest
<i>Rosa</i>	<i>orientalis</i>	DUPONT	Ros	P caesp aest
<i>Rosa</i>	<i>pendulina</i>	L.	Ros	P caesp aest sob
<i>Rosa</i>	<i>phoenicia</i>	BOISS.	Ros	P scand aest plec
<i>Rosa</i>	<i>pimpinellifolia</i>	L.	Ros	P caesp aest sob
<i>Rosa</i>	<i>pouzinii</i>	TRATT.	Ros	P caesp aest
<i>Rosa</i>	<i>rhaetica</i>	GREMLI	Ros	P caesp aest
<i>Rosa</i>	<i>rubiginosa</i>	L.	Ros	P caesp aest sob
<i>Rosa</i>	<i>scabriuscula</i>	SM.	Ros	P caesp aest
<i>Rosa</i>	<i>sempervirens</i>	L.	Ros	P caesp semp cor
<i>Rosa</i>	<i>serafinii</i>	VIV.	Ros	P caesp aest
<i>Rosa</i>	<i>sherardii</i>	DAVIES	Ros	P caesp aest sob
<i>Rosa</i>	<i>sicula</i>	TRATT.	Ros	P caesp aest
<i>Rosa</i>	<i>squarrosa</i>	(RAU) BOREAU	Ros	P caesp aest
<i>Rosa</i>	<i>stylosa</i>	DESV.	Ros	P caesp aest
<i>Rosa</i>	<i>subcanina</i>	DALLA TORRE et SARNTH.	Ros	P caesp aest
<i>Rosa</i>	<i>subcollina</i>	DALLA TORRE et SARNTH.	Ros	P caesp aest
<i>Rosa</i>	<i>tomentosa</i>	SM.	Ros	P caesp aest
<i>Rosa</i>	<i>turcica</i>	ROUY	Ros	P caesp aest
<i>Rosa</i>	<i>villosa</i>	L.	Ros	P caesp aest
<i>Rosa</i>	<i>vosagiaca</i>	DESPORTES	Ros	P caesp aest
<i>Rosmarinus</i>	<i>ericalyx</i>	JORDAN et FOURR.	Lab	P caesp semp cor
<i>Rosmarinus</i>	<i>officinalis</i>	L.	Lab	P caesp semp cor
<i>Rubus</i>	<i>caesius</i>	L.	Ros	C suff rep aest
<i>Rubus</i>	<i>fruticosus</i>	L.	Ros	C suff rep hib
<i>Rubus</i>	<i>idaeus</i>	L.	Ros	C suff caesp
<i>Rubus</i>	<i>sachalinensis</i>	LÉVEILLÉ	Ros	C suff caesp
<i>Ruscus</i>	<i>aculeatus</i>	L.	Lil	C frut caesp semp
<i>Ruscus</i>	<i>hypoglossum</i>	L.	Lil	C frut caesp semp
<i>Ruscus</i>	<i>hypophyllum</i>	L.	Lil	C frut caesp semp
<i>Salix</i>	<i>acutifolia</i>	WILLD.	Sal	P caesp aest

Fortsetzung Anhang 2. Die Lebensformen der Dendroflora-Arten Europas

Gattung	Art	Verfasser	Familie	Lebensform
<i>Salix</i>	<i>aegyptiaca</i>	L.	Sal	P caesp aest
<i>Salix</i>	<i>alba</i>	L.	Sal	P scap aest fron
<i>Salix</i>	<i>alpina</i>	SCOP.	Sal	C frut rep aest
<i>Salix</i>	<i>amplexicaulis</i>	BORY	Sal	P caesp aest
<i>Salix</i>	<i>appendiculata</i>	VILL.	Sal	P caesp aest
<i>Salix</i>	<i>arbuscula</i>	L.	Sal	P caesp aest
<i>Salix</i>	<i>arctica</i>	PALLAS	Sal	C frut rep aest
<i>Salix</i>	<i>arenaria</i>	L.	Sal	P caesp aest sob
<i>Salix</i>	<i>atrocinerea</i>	BROT.	Sal	P caesp aest
<i>Salix</i>	<i>aurita</i>	L.	Sal	P caesp aest sob
<i>Salix</i>	<i>bicolor</i>	WILLD.	Sal	P caesp aest
<i>Salix</i>	<i>borealis</i>	FRIES	Sal	P scap aest fron
<i>Salix</i>	<i>breviserrata</i>	B. FLOD.	Sal	C frut rep aest
<i>Salix</i>	<i>caesia</i>	VILL.	Sal	P caesp aest
<i>Salix</i>	<i>callicarpaea</i>	TRAUTV.	Sal	P caesp aest
<i>Salix</i>	<i>cantabrica</i>	RECH.	Sal	P caesp aest
<i>Salix</i>	<i>caprea</i>	L.	Sal	P caesp aest
<i>Salix</i>	<i>caspica</i>	PALLAS	Sal	P caesp aest
<i>Salix</i>	<i>cinerea</i>	L.	Sal	P caesp aest
<i>Salix</i>	<i>coaetanea</i>	(HARTMANN) B. FLOD.	Sal	P caesp aest
<i>Salix</i>	<i>crataegifolia</i>	BERTOL.	Sal	P caesp aest
<i>Salix</i>	<i>daphnoides</i>	VILL.	Sal	P caesp aest
<i>Salix</i>	<i>eleagnos</i>	SCOP.	Sal	P caesp aest
<i>Salix</i>	<i>foetida</i>	SCHLEICHER	Sal	P caesp aest
<i>Salix</i>	<i>fragilis</i>	L.	Sal	P scap aest fron
<i>Salix</i>	<i>glabra</i>	SCOP.	Sal	P caesp aest
<i>Salix</i>	<i>glandulifera</i>	B. FLOD.	Sal	P caesp aest
<i>Salix</i>	<i>glauca</i>	L.	Sal	P caesp aest
<i>Salix</i>	<i>glaucosericea</i>	B. FLOD.	Sal	P caesp aest
<i>Salix</i>	<i>hastata</i>	L.	Sal	P caesp aest
<i>Salix</i>	<i>hegetschweileri</i>	HEER	Sal	P caesp aest
<i>Salix</i>	<i>helvetica</i>	VILL.	Sal	P caesp aest
<i>Salix</i>	<i>herbacea</i>	L.	Sal	C frut rep aest
<i>Salix</i>	<i>hibernica</i>	RECH.	Sal	P caesp aest
<i>Salix</i>	<i>kitaibeliana</i>	WILLD.	Sal	C frut rep aest
<i>Salix</i>	<i>laggeri</i>	WIMMER	Sal	P caesp aest
<i>Salix</i>	<i>lanata</i>	L.	Sal	P caesp aest
<i>Salix</i>	<i>lapponum</i>	L.	Sal	P caesp aest
<i>Salix</i>	<i>marrubifolia</i>	TAUSCH	Sal	P caesp aest
<i>Salix</i>	<i>mielichhoferi</i>	SAUTER	Sal	P caesp aest
<i>Salix</i>	<i>myrsinites</i>	L.	Sal	C frut rep aest
<i>Salix</i>	<i>myrtilloides</i>	L.	Sal	P caesp aest sob
<i>Salix</i>	<i>nigricans</i>	SM.	Sal	P caesp aest
<i>Salix</i>	<i>pedicellata</i>	DESF.	Sal	P scap aest fron
<i>Salix</i>	<i>pentandra</i>	L.	Sal	P scap aest fron
<i>Salix</i>	<i>phylicifolia</i>	L.	Sal	P caesp aest
<i>Salix</i>	<i>polaris</i>	WAHLENB.	Sal	C frut rep aest
<i>Salix</i>	<i>pulchra</i>	CHAM.	Sal	C frut rep aest
<i>Salix</i>	<i>purpurea</i>	L.	Sal	P caesp aest
<i>Salix</i>	<i>pyrenaica</i>	GOUAN	Sal	C frut rep aest
<i>Salix</i>	<i>pyrolifolia</i>	LEDEB.	Sal	P caesp aest
<i>Salix</i>	<i>repens</i>	L.	Sal	P caesp aest sob
<i>Salix</i>	<i>reptans</i>	RUPR.	Sal	C frut rep aest
<i>Salix</i>	<i>reticulata</i>	L.	Sal	C frut rep hib
<i>Salix</i>	<i>retusa</i>	L.	Sal	C frut rep hib

Fortsetzung Anhang 2. Die Lebensformen der Dendroflora-Arten Europas

Gattung	Art	Verfasser	Familie	Lebensform
<i>Salix</i>	<i>rosmarinifolia</i>	L.	Sal	P caesp aest sob
<i>Salix</i>	<i>rossica</i>	NASAROV	Sal	P caesp aest
<i>Salix</i>	<i>rotundifolia</i>	TRAUTW.	Sal	C frut rep aest
<i>Salix</i>	<i>salvifolia</i>	BROT.	Sal	P caesp aest
<i>Salix</i>	<i>serpyllifolia</i>	SCOP.	Sal	C frut rep aest
<i>Salix</i>	<i>silesiaca</i>	WILLD.	Sal	P caesp aest
<i>Salix</i>	<i>starkeana</i>	WILLD.	Sal	P caesp aest
<i>Salix</i>	<i>stipulifera</i>	B. FLOD.	Sal	P caesp aest
<i>Salix</i>	<i>tarraconensis</i>	PAU	Sal	P caesp aest
<i>Salix</i>	<i>triandra</i>	L.	Sal	P caesp aest
<i>Salix</i>	<i>viminalis</i>	L.	Sal	P caesp aest
<i>Salix</i>	<i>waldsteiniana</i>	WILLD.	Sal	P caesp aest
<i>Salix</i>	<i>wilhelmsiana</i>	BIEB.	Sal	P caesp aest
<i>Salix</i>	<i>xerophila</i>	B. FLOD.	Sal	P caesp aest
<i>Salsola</i>	<i>aegea</i>	RECH.	Chen	C suff caesp
<i>Salsola</i>	<i>arbuscula</i>	PALLAS	Chen	C suff caesp
<i>Salsola</i>	<i>carpatha</i>	P. H. DAVIS	Chen	C suff caesp
<i>Salsola</i>	<i>dendroides</i>	PALLAS	Chen	C suff caesp
<i>Salsola</i>	<i>genistoides</i>	JUSS.	Chen	C suff caesp
<i>Salsola</i>	<i>laricina</i>	PALLAS	Chen	C suff caesp
<i>Salsola</i>	<i>nodulosa</i>	(MOQ.) ILJIN	Chen	C suff caesp
<i>Salsola</i>	<i>papillosa</i>	(COSSON) WILLK.	Chen	C suff caesp
<i>Salsola</i>	<i>vermiculata</i>	L.	Chen	C suff caesp
<i>Salsola</i>	<i>verticillata</i>	SCHOUSBOE	Chen	C suff caesp
<i>Salsola</i>	<i>webbii</i>	MOQ.	Chen	C suff caesp
<i>Salvia</i>	<i>eichlerana</i>	HELDLDR.	Lab	C suff caesp
<i>Salvia</i>	<i>grandiflora</i>	ETLINGER	Lab	C suff caesp
<i>Salvia</i>	<i>lavandulifolia</i>	VAHL	Lab	C suff caesp
<i>Salvia</i>	<i>officinalis</i>	L.	Lab	C suff caesp
<i>Salvia</i>	<i>pomifera</i>	L.	Lab	C suff caesp
<i>Salvia</i>	<i>triloba</i>	L.	Lab	C suff caesp
<i>Sambucus</i>	<i>nigra</i>	L.	Capr	P caesp aest
<i>Sambucus</i>	<i>racemosa</i>	L.	Capr	P caesp aest
<i>Santolina</i>	<i>chamaecyparissus</i>	L.	Com	C suff caesp
<i>Santolina</i>	<i>elegans</i>	BOISS.	Com	C suff rep aest
<i>Santolina</i>	<i>oblongifolia</i>	BOISS.	Com	C suff caesp
<i>Santolina</i>	<i>rosmarinifolia</i>	L.	Com	C suff caesp
<i>Santolina</i>	<i>viscosa</i>	LAG.	Com	C suff caesp
<i>Sarcopoterium</i>	<i>spinosum</i>	(L.) SPACH	Ros	C frut caesp aest
<i>Satureja</i>	<i>salzmannii</i>	P. W. BALL	Lab	C suff caesp
<i>Satureja</i>	<i>spinosa</i>	L.	Lab	C suff caesp
<i>Satureja</i>	<i>thymbra</i>	L.	Lab	C suff caesp
<i>Securinega</i>	<i>tinctoria</i>	(L.) ROTHM.	Euph	P caesp aest
<i>Senecio</i>	<i>ambiguus</i>	(BIV.) DC.	Com	C suff caesp
<i>Senecio</i>	<i>bicolor</i>	(WILLD.) TOD.	Com	C suff caesp
<i>Senecio</i>	<i>gnaphalodes</i>	SIEBER	Com	C suff caesp
<i>Senecio</i>	<i>linifolius</i>	L.	Com	C suff caesp
<i>Senecio</i>	<i>nevadensis</i>	BOISS. et REUTER	Com	C suff caesp
<i>Senecio</i>	<i>quinqueradiatus</i>	BOISS.	Com	C suff caesp
<i>Sesamoides</i>	<i>canescens</i>	(L.) O. KUNTZE	Res	C suff caesp
<i>Sesamoides</i>	<i>pygmaea</i>	(SCHEELE) O. KUNTZE	Res	C suff caesp
<i>Sibiraea</i>	<i>altaiensis</i>	(LAXM.) C. K. SCHNEIDER	Spi	P caesp aest
<i>Sideritis</i>	<i>arborescens</i>	SALZM.	Lab	C suff caesp
<i>Sideritis</i>	<i>foetens</i>	CLEMENTE	Lab	C suff caesp
<i>Sideritis</i>	<i>grandiflora</i>	SALZM.	Lab	C suff caesp

Fortsetzung Anhang 2. Die Lebensformen der Dendroflora-Arten Europas

Gattung	Art	Verfasser	Familie	Lebensform
<i>Silene</i>	<i>dictaea</i>	RECH.	Car	C suff caesp
<i>Silene</i>	<i>fruticosa</i>	L.	Car	C suff caesp
<i>Silene</i>	<i>spinescens</i>	SIBTH. et SM.	Car	C suff caesp
<i>Smilax</i>	<i>aspera</i>	L.	Lil	C suff scand
<i>Smilax</i>	<i>canariensis</i>	WILLD.	Lil	C suff scand
<i>Smilax</i>	<i>excelsa</i>	L.	Lil	C suff scand
<i>Sorbus</i>	<i>aria</i>	(L.) CRANTZ	Malo	P scap aest fron
<i>Sorbus</i>	<i>aucuparia</i>	L.	Malo	P scap aest fron
<i>Sorbus</i>	<i>austriaca</i>	(G. BECK) HEDL.	Malo	P scap aest fron
<i>Sorbus</i>	<i>chamaemespilus</i>	CRANTZ	Malo	P caesp aest
<i>Sorbus</i>	<i>dacica</i>	BORBĽS	Malo	P scap aest fron
<i>Sorbus</i>	<i>domestica</i>	L.	Malo	P scap aest fron
<i>Sorbus</i>	<i>graeca</i>	(SPACH) KOTSCHY	Malo	P scap aest fron
<i>Sorbus</i>	<i>hybrida</i>	L.	Malo	P scap aest fron
<i>Sorbus</i>	<i>intermedia</i>	(EHRH.) PERS.	Malo	P scap aest fron
<i>Sorbus</i>	<i>latifolia</i>	(LAM.) PERS.	Malo	P scap aest fron
<i>Sorbus</i>	<i>margittaiana</i>	(JĽV) KĽRPĽTI	Malo	P caesp aest
<i>Sorbus</i>	<i>meinichii</i>	(LINDEB.) HEDL.	Malo	P scap aest fron
<i>Sorbus</i>	<i>minima</i>	(A. LEY) HEDL.	Malo	P caesp aest
<i>Sorbus</i>	<i>mougeotii</i>	SOYER – WILL. et GODRON	Malo	P scap aest fron
<i>Sorbus</i>	<i>rupicola</i>	(SYME) HEDL.	Malo	P caesp aest
<i>Sorbus</i>	<i>sudetica</i>	(TAUSCH) FRITSCH	Malo	P caesp aest
<i>Sorbus</i>	<i>torminalis</i>	(L.) CRANTZ	Malo	P scap aest fron
<i>Sorbus</i>	<i>umbellata</i>	(DESF.) FRITSCH	Malo	P scap aest fron
<i>Spartium</i>	<i>junceum</i>	L.	Leg	P caesp aest
<i>Spiraea</i>	<i>cana</i>	WALDST. et KIT.	Spi	P caesp aest sob
<i>Spiraea</i>	<i>chamaedryfolia</i>	L.	Spi	P caesp aest sob
<i>Spiraea</i>	<i>crenata</i>	L.	Spi	P caesp aest sob
<i>Spiraea</i>	<i>decumbens</i>	C. KOCH	Spi	C frut rep aest
<i>Spiraea</i>	<i>hypericifolia</i>	L.	Spi	P caesp aest sob
<i>Spiraea</i>	<i>media</i>	FR. SCHMIDT	Spi	P caesp aest sob
<i>Spiraea</i>	<i>salicifolia</i>	L.	Spi	P caesp aest sob
<i>Stachys</i>	<i>glutinosa</i>	L.	Lab	C suff caesp
<i>Stachys</i>	<i>spinosa</i>	L.	Lab	C suff caesp
<i>Stachelina</i>	<i>arborea</i>	SCHREBER	Com	C suff caesp
<i>Stachelina</i>	<i>baetica</i>	DC.	Com	C suff caesp
<i>Stachelina</i>	<i>dubia</i>	L.	Com	C suff caesp
<i>Stachelina</i>	<i>fruticosa</i>	(L.) L.	Com	C suff caesp
<i>Stachelina</i>	<i>uniflosculosa</i>	SIBTH. et SM.	Com	C suff caesp
<i>Staphylea</i>	<i>pinnata</i>	L.	Sta	P caesp aest
<i>Stauracanthus</i>	<i>boivinii</i>	(WEBB.) SAMP.	Leg	C frut caesp aest
<i>Stauracanthus</i>	<i>genistoides</i>	(BROT.) SAMP.	Leg	C frut caesp aest
<i>Styrax</i>	<i>officinalis</i>	L.	Sty	P caesp aest
<i>Suaeda</i>	<i>dendroides</i>	(C. A. MEYER) MOQ.	Chen	C suff caesp
<i>Suaeda</i>	<i>physospora</i>	PALLAS	Chen	C suff caesp
<i>Suaeda</i>	<i>pruinosa</i>	LANGE	Chen	C suff caesp
<i>Suaeda</i>	<i>vera</i>	J. F. GMELIN	Chen	C suff caesp
<i>Syringa</i>	<i>josikaea</i>	JACQ.	Ole	P caesp aest
<i>Syringa</i>	<i>vulgaris</i>	L.	Ole	P caesp aest
<i>Tamarix</i>	<i>africana</i>	POIRET	Tam	P scap aest fron
<i>Tamarix</i>	<i>boveana</i>	BUNGE	Tam	P scap aest fron
<i>Tamarix</i>	<i>canariensis</i>	WILLD.	Tam	P caesp aest
<i>Tamarix</i>	<i>dalmatica</i>	BAUM	Tam	P scap aest fron
<i>Tamarix</i>	<i>gallica</i>	L.	Tam	P caesp aest
<i>Tamarix</i>	<i>gracilis</i>	WILLD.	Tam	P scap aest fron

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Gattung	Art	Verfasser	Familie	Lebensform
<i>Tamarix</i>	<i>hampeana</i>	BOISS. et HELR.	Tam	P scap aest fron
<i>Tamarix</i>	<i>hispidata</i>	WILLD.	Tam	P caesp aest
<i>Tamarix</i>	<i>laxa</i>	WILLD.	Tam	P caesp aest
<i>Tamarix</i>	<i>meyeri</i>	BOISS.	Tam	P caesp aest
<i>Tamarix</i>	<i>parviflora</i>	DC.	Tam	P caesp aest
<i>Tamarix</i>	<i>ramosissima</i>	LEDEB.	Tam	P caesp aest
<i>Tamarix</i>	<i>smyrnensis</i>	BUNGE	Tam	P caesp aest
<i>Tamarix</i>	<i>tetrandra</i>	PALLAS	Tam	P caesp aest
<i>Taxus</i>	<i>baccata</i>	L.	Tax	P scap semp ace
<i>Telephium</i>	<i>imperati</i>	L.	Car	C suff rep aest
<i>Teline</i>	<i>linifolia</i>	(L.) WEBB et BERTH.	Leg	P caesp aest
<i>Teline</i>	<i>monspessulana</i>	(L.) KOCH	Leg	P caesp aest
<i>Tetraclinis</i>	<i>articulata</i>	(VAHL) MASTERS	Cup	P scap semp ace
<i>Teucrium</i>	<i>alpestre</i>	SIBTH. et SM.	Lab	C suff caesp
<i>Teucrium</i>	<i>aragonese</i>	LOSCOS et PARDO	Lab	C suff caesp
<i>Teucrium</i>	<i>aranium</i>	ORPH.	Lab	C frut rep semp
<i>Teucrium</i>	<i>arduini</i>	L.	Lab	C suff caesp
<i>Teucrium</i>	<i>asiaticum</i>	L.	Lab	C suff caesp
<i>Teucrium</i>	<i>brevifolium</i>	SCHREBER	Lab	C frut caesp semp
<i>Teucrium</i>	<i>buxifolium</i>	SCHREBER	Lab	C suff caesp
<i>Teucrium</i>	<i>carthaginese</i>	LANGE	Lab	C suff caesp
<i>Teucrium</i>	<i>chamaedrys</i>	L.	Lab	C suff rep aest
<i>Teucrium</i>	<i>charidemi</i>	SANDWITH	Lab	C suff caesp
<i>Teucrium</i>	<i>compactum</i>	CLEMENTE	Lab	C suff rep aest
<i>Teucrium</i>	<i>cossoni</i>	D. WOOD	Lab	C suff caesp
<i>Teucrium</i>	<i>cuneifolium</i>	SIBTH. et SM.	Lab	C suff caesp
<i>Teucrium</i>	<i>divaricatum</i>	SIEBER	Lab	C suff caesp
<i>Teucrium</i>	<i>eriocephalum</i>	WILLK.	Lab	C suff caesp
<i>Teucrium</i>	<i>flavum</i>	L.	Lab	C suff caesp
<i>Teucrium</i>	<i>fragile</i>	BOISS.	Lab	C suff caesp
<i>Teucrium</i>	<i>francisci-wernerii</i>	RECH.	Lab	C suff caesp
<i>Teucrium</i>	<i>freyunii</i>	REVERCHON	Lab	C suff caesp
<i>Teucrium</i>	<i>fruticans</i>	L.	Lab	P caesp semp cor
<i>Teucrium</i>	<i>gnaphalodes</i>	L'HÉR.	Lab	C suff caesp
<i>Teucrium</i>	<i>haenseleri</i>	BOISS.	Lab	C suff caesp
<i>Teucrium</i>	<i>halacsyanum</i>	HELDL.	Lab	C suff caesp
<i>Teucrium</i>	<i>heliotropifolium</i>	W. BARBEY	Lab	C suff caesp
<i>Teucrium</i>	<i>intricatum</i>	LANGE	Lab	C suff caesp
<i>Teucrium</i>	<i>krymense</i>	JUZ.	Lab	C suff rep aest
<i>Teucrium</i>	<i>lamifolium</i>	D'URV.	Lab	C suff caesp
<i>Teucrium</i>	<i>libanitis</i>	SCHREBER	Lab	C suff caesp
<i>Teucrium</i>	<i>lucidum</i>	L.	Lab	C suff rep aest
<i>Teucrium</i>	<i>marum</i>	L.	Lab	C suff caesp
<i>Teucrium</i>	<i>massiliense</i>	L.	Lab	C suff caesp
<i>Teucrium</i>	<i>microphyllum</i>	DESF.	Lab	C suff caesp
<i>Teucrium</i>	<i>montanum</i>	L.	Lab	C suff rep aest
<i>Teucrium</i>	<i>polium</i>	L.	Lab	C suff caesp
<i>Teucrium</i>	<i>pumilum</i>	L.	Lab	C suff caesp
<i>Teucrium</i>	<i>salviastrum</i>	SCHREBER	Lab	C suff caesp
<i>Teucrium</i>	<i>scorodonia</i>	L.	Lab	C suff caesp
<i>Teucrium</i>	<i>subspinosum</i>	POURRET	Lab	C suff caesp
<i>Teucrium</i>	<i>thymifolium</i>	SCHREBER	Lab	C suff rep aest
<i>Teucrium</i>	<i>turredanum</i>	LOSA et RIVAS	Lab	C suff caesp
<i>Teucrium</i>	<i>webbianum</i>	BOISS.	Lab	C suff rep aest
<i>Thymbra</i>	<i>calostachya</i>	(RECH. f.) RECH.	Lab	C suff caesp

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Gattung	Art	Verfasser	Familie	Lebensform
<i>Thymbra</i>	<i>spicata</i>	L.	Lab	C suff caesp
<i>Thymelaea</i>	<i>broterana</i>	COUTINHO	Thym	C frut caesp semp
<i>Thymelaea</i>	<i>calycina</i>	(LAPEYR.) MEISSNER	Thym	C frut caesp semp
<i>Thymelaea</i>	<i>coridifolia</i>	(LAM.) ENDL.	Thym	C frut caesp semp
<i>Thymelaea</i>	<i>dioica</i>	(GOUAN) ALL.	Thym	C frut caesp semp
<i>Thymelaea</i>	<i>hirsuta</i>	(L.) ENDL.	Thym	C frut caesp semp
<i>Thymelaea</i>	<i>lanuginosa</i>	CEBALLOS et C. VICIOSO	Thym	C frut caesp semp
<i>Thymelaea</i>	<i>myrtifolia</i>	(POIRET) D. A. WEBB	Thym	C frut caesp semp
<i>Thymelaea</i>	<i>nitida</i>	(VAHL) ENDL.	Thym	C frut caesp semp
<i>Thymelaea</i>	<i>procumbens</i>	A. et R. FERNANDES	Thym	C frut rep semp
<i>Thymelaea</i>	<i>ruizii</i>	LOSCOS	Thym	C frut caesp semp
<i>Thymelaea</i>	<i>subrepens</i>	LANGE	Thym	C frut rep semp
<i>Thymelaea</i>	<i>tartonraira</i>	(L.) ALL.	Thym	C frut caesp semp
<i>Thymelaea</i>	<i>tinctoria</i>	(POURRET) ENDL.	Thym	C frut caesp semp
<i>Thymelaea</i>	<i>villosa</i>	(L.) ENDL.	Thym	C frut caesp semp
<i>Thymus</i>	<i>antoniæ</i>	ROUY et COINCY	Lab	C suff caesp
<i>Thymus</i>	<i>aranjuezii</i>	JALAS	Lab	C suff rep hib
<i>Thymus</i>	<i>atticus</i>	CELAKE.	Lab	C suff rep hib
<i>Thymus</i>	<i>aznavourii</i>	VELEN.	Lab	C suff rep hib
<i>Thymus</i>	<i>baeticus</i>	BOISS.	Lab	C suff caesp
<i>Thymus</i>	<i>bracteatus</i>	LANGE	Lab	C suff rep aest
<i>Thymus</i>	<i>bracteosus</i>	VIS.	Lab	C suff rep aest
<i>Thymus</i>	<i>caespitatus</i>	BROT.	Lab	C suff rep aest
<i>Thymus</i>	<i>camphoratus</i>	HOFFMANNS. et LINK	Lab	C suff caesp
<i>Thymus</i>	<i>capitatus</i>	(L.) HOFFMANNS. et LINK	Lab	C suff caesp
<i>Thymus</i>	<i>capitellatus</i>	HOFFMANNS. et LINK	Lab	C suff caesp
<i>Thymus</i>	<i>carnosus</i>	BOISS.	Lab	C suff caesp
<i>Thymus</i>	<i>cephalotos</i>	L.	Lab	C suff caesp
<i>Thymus</i>	<i>cherlerioides</i>	VIS.	Lab	C suff rep aest
<i>Thymus</i>	<i>dolopicus</i>	FORM.	Lab	C suff rep aest
<i>Thymus</i>	<i>granatensis</i>	BOISS.	Lab	C suff rep hib
<i>Thymus</i>	<i>hirtus</i>	WILLD.	Lab	C suff rep aest
<i>Thymus</i>	<i>holosericeus</i>	CELAKE.	Lab	C suff rep hib
<i>Thymus</i>	<i>hyemalis</i>	LANGE	Lab	C suff caesp
<i>Thymus</i>	<i>kirgisorum</i>	DUBJANKY	Lab	C suff rep hib
<i>Thymus</i>	<i>laconicus</i>	JALAS	Lab	C suff rep hib
<i>Thymus</i>	<i>leptophyllus</i>	LANGE	Lab	C suff rep aest
<i>Thymus</i>	<i>longiflorus</i>	BOISS.	Lab	C suff caesp
<i>Thymus</i>	<i>loscosii</i>	WILLK.	Lab	C suff rep aest
<i>Thymus</i>	<i>mastichina</i>	L.	Lab	C suff caesp
<i>Thymus</i>	<i>mastigophorus</i>	LACAITA	Lab	C suff rep aest
<i>Thymus</i>	<i>membranaceus</i>	BOISS.	Lab	C suff caesp
<i>Thymus</i>	<i>parnassicus</i>	HALÁCSY	Lab	C suff rep aest
<i>Thymus</i>	<i>piperella</i>	L.	Lab	C suff rep hib
<i>Thymus</i>	<i>plasonii</i>	ADAMOVIC	Lab	C suff rep hib
<i>Thymus</i>	<i>serpylloides</i>	BORY	Lab	C suff rep aest
<i>Thymus</i>	<i>spinulosus</i>	TEN.	Lab	C suff caesp
<i>Thymus</i>	<i>striatus</i>	VAHL.	Lab	C suff rep hib
<i>Thymus</i>	<i>teucrioides</i>	BOISS. et SPRUNER	Lab	C suff caesp
<i>Thymus</i>	<i>tomentosus</i>	WILLD.	Lab	C suff caesp
<i>Thymus</i>	<i>villosus</i>	L.	Lab	C suff caesp
<i>Thymus</i>	<i>vulgaris</i>	L.	Lab	C suff caesp
<i>Thymus</i>	<i>zygioides</i>	GRISEB.	Lab	C suff rep aest
<i>Thymus</i>	<i>zygis</i>	L.	Lab	C suff caesp
<i>Tilia</i>	<i>cordata</i>	MILLER	Til	P scap aest fron

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Gattung	Art	Verfasser	Familie	Lebensform
<i>Tilia</i>	<i>dasystyla</i>	STEVEN	Til	P scap aest fron
<i>Tilia</i>	<i>platyphyllos</i>	SCOP.	Til	P scap aest fron
<i>Tilia</i>	<i>rubra</i>	DC.	Til	P scap aest fron
<i>Tilia</i>	<i>tomentosa</i>	MOENCH	Til	P scap aest fron sob
<i>Ulex</i>	<i>argenteus</i>	WELW.	Leg	C frut caesp aest
<i>Ulex</i>	<i>densus</i>	WELW.	Leg	C frut caesp aest
<i>Ulex</i>	<i>europaesus</i>	L.	Leg	P caesp aest
<i>Ulex</i>	<i>gallii</i>	PLANCHON	Leg	P caesp aest
<i>Ulex</i>	<i>micranthus</i>	LANGE	Leg	C frut caesp aest
<i>Ulex</i>	<i>minor</i>	ROTH	Leg	P caesp aest
<i>Ulex</i>	<i>parviflorus</i>	POURRET	Leg	P caesp aest
<i>Ulmus</i>	<i>canescens</i>	MELVILLE	Ulm	P scap aest fron
<i>Ulmus</i>	<i>elliptica</i>	C. KOCH	Ulm	P scap aest fron
<i>Ulmus</i>	<i>glabra</i>	HUDSON	Ulm	P scap aest fron
<i>Ulmus</i>	<i>laevis</i>	PALLAS	Ulm	P scap aest fron
<i>Ulmus</i>	<i>minor</i>	MILLER	Ulm	P scap aest fron sob
<i>Ulmus</i>	<i>procera</i>	SALISB.	Ulm	P scap aest fron sob
<i>Vaccinium</i>	<i>arctostaphylos</i>	L.	Eri	P caesp aest
<i>Vaccinium</i>	<i>cylindraceum</i>	SM.	Eri	P caesp aest
<i>Vaccinium</i>	<i>macrocarpon</i>	AITON	Eri	C frut rep semp
<i>Vaccinium</i>	<i>microcarpum</i>	(TURCZ.) SCHMALH.	Eri	C frut rep semp
<i>Vaccinium</i>	<i>myrtilus</i>	L.	Eri	C frut caesp aest sob
<i>Vaccinium</i>	<i>oxycoccus</i>	L.	Eri	C frut rep semp
<i>Vaccinium</i>	<i>uliginosum</i>	L.	Eri	C frut caesp aest sob
<i>Vaccinium</i>	<i>vitis-idaea</i>	L.	Eri	C frut caesp semp sob
<i>Vella</i>	<i>pseudocytisus</i>	L.	Cru	C suff caesp
<i>Vella</i>	<i>spinosa</i>	BOISS.	Cru	C suff caesp
<i>Verbascum</i>	<i>spinosum</i>	L.	Scr	C suff caesp
<i>Viburnum</i>	<i>lantana</i>	L.	Capr	P caesp aest
<i>Viburnum</i>	<i>opulus</i>	L.	Capr	P caesp aest
<i>Viburnum</i>	<i>tinus</i>	L.	Capr	P caesp semp cor
<i>Viola</i>	<i>arborescens</i>	L.	Vio	C suff caesp
<i>Viola</i>	<i>cazorlensis</i>	GAND.	Vio	C suff caesp
<i>Viola</i>	<i>delphinantha</i>	BOISS.	Vio	C suff caesp
<i>Viola</i>	<i>kosaninii</i>	(DEGEN) HAYEK	Vio	C suff caesp
<i>Viola</i>	<i>scorpiuroides</i>	COSSON	Vio	C suff caesp
<i>Viscum</i>	<i>album</i>	L.	Lor	P ep semp
<i>Viscum</i>	<i>cruciatum</i>	SIEBER	Lor	P ep semp
<i>Vitex</i>	<i>agnus-castus</i>	L.	Ver	P caesp aest
<i>Vitis</i>	<i>vinifera</i>	L.	Vit	P scand aest cirr
<i>Withania</i>	<i>frutescens</i>	(L.) PAUQUY	Sol	P caesp aest
<i>Withania</i>	<i>somnifera</i>	(L.) DUNAL	Sol	P caesp aest
<i>Zelkova</i>	<i>abelicea</i>	(LAM.) BOISS.	Ulm	P caesp aest
<i>Ziziphus</i>	<i>lotus</i>	(L.) LAM.	Rham	P caesp aest
<i>Zygophyllum</i>	<i>album</i>	L. f.	Zyg	C suff caesp

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Annotated checklist of the Hungarian dendrotaxa

DÉNES BARTHA

Introduction

First scholar checklist of Central-European flora was compiled by EHRENDORFER (1973), in which species and subspecies of Pteridophytes, Gymnospermae and Angiospermae are listed. Presence or absence of each species in Central-European countries were also displayed as additional information. (To be noted, that regions eastward to the river Danube were not included in Central-Europe, therefore the list were not complete in the Hungarian relation.) Checklist of the Hungarian flora was gathered by SOÓ (1980), which is held a synopsis of the critical elaboration of the Hungarian flora (SOÓ, 1964-1973). Only species level taxa are included in this work, with information of their occurrences in Hungary. A simplified

version of this checklist was compiled by PRISZTER (1985). In the 1990's – both inland and abroad – checklists was brought in the centre of interest (BARTHA, 1992-93; HORVÁTH et al., 1995; BORHIDI, 1995), as they help the conservation activities, and electronic data-processing. Present study lists dendrotaxa (trees, shrubs, wooded lianas, sub-shrubs, dwarf scrubs) occurring in actual borders of Hungary. Unified and valid nomenclature are applied, additional information and concrete occurrences are included. The purpose of this list for the future is to cover a greater geographic region, the whole territory of the Carpathian-Pannon region. Marks symbolizing the occurrence status are the same as in European flora-mapping program (JALAS & SUOMINEN, 1972), which are the followings:

Symbols

- + = extinct
- x = probably extinct, or, at least, not recorded since 1950
- = native occurrence
- = introduction (established alien)
- = status unknown or uncertain
- ? = record uncertain as to identification or locality

Present territory of Hungary is covered by six geographic units (partially or wholly), their situations can be seen in Fig. 1., and are listed in Tab. 1.

Rarity of the taxa are also displayed in the checklist. Information on the life form of the species can be found in compilation of BARTHA (1999).

Tab. 1. Major geographical units of the Carpathian-Pannon region

1. Nagyalföld / Vel'ka dunajská nížina / Szerednyedunajska nizovina / Câmpia Dunării de Mijloc / Panonska nizija
2. Kisalföld és peremvidéke / Malá dunajská nížina / Kleine Ungarische Tiefebene
3. Duna-Morva-medence / Donau-Märch Becken / Moravsko-Viedenská kotlina
4. Nyugat-Dunántúl / West-Transdanubien
5. Dél-Dunántúl
6. Dráva-Száva vidék
7. Dunántúli-középhegység
8. Északnyugati-Kárpátok / Západné Karpaty / Karpaty Zachodnie / Westkarpathen
- 8.a. Északi-középhegység / Matransko-slanská hornatina
- 8.b. Belső-Északnyugati Kárpátok / Vnúťorné Západné Karpaty / Wewnetrzne Karpaty Zachodnie
- 8.c. Külső-Északnyugati-Kárpátok / Vonkajšie Západné Karpaty / Zewnętrzne Karpaty Zachodnie
9. Északkeleti-Kárpátok / Východné Karpaty / Karpaty Wschodnie / Szhidni Karpati / Carpații Orientali – grupa nordică
10. Erdélyi-szigethegység / Munții Apuseni
11. Erdélyi-medence / Depresiunea Transilvaniei
12. Keleti-Kárpátok / Carpații Orientali – grupa centrală și sudică
13. Déli-Kárpátok / Carpații Meridionali
14. Bánsági-hegyvidék / Carpații Banatului
15. Elő-Kárpátok / Subcarpații
16. Kárpátmellék / Vněkarpatské sníženiny / Podkarpacie / Prikarpaty
17. Moldvai-hátság / Podișul Moldovei
18. Géta-hátság / Podișul Getic
19. Román-alföld / Câmpia Română
20. Duna-deltavidék / Delta Dunării / Delta Dunaja

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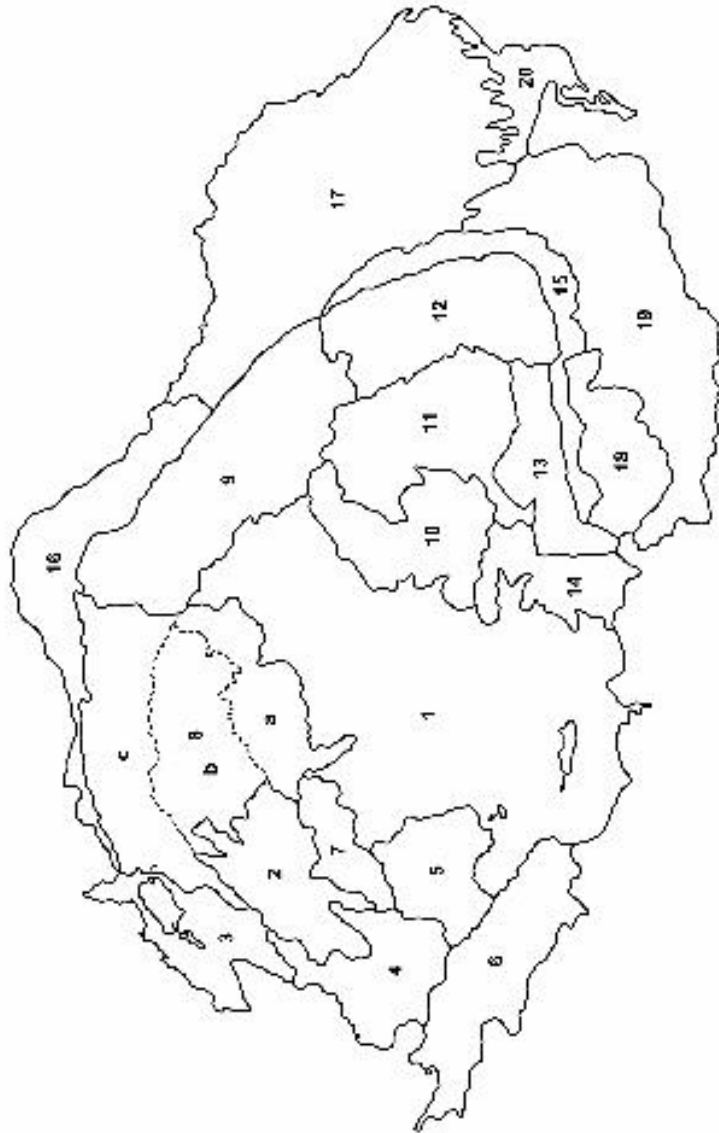


Fig. 1. Major geographical units of the Carpathian-Pannon region

Taxon (species / subspecies)	Region								Notes
	1	2	4	5	7	8a			
<i>Abies alba</i> MILLER			□						
<i>Acer campestre</i> L.	●	●	●	●	●	●	●	●	
<i>Acer negundo</i> L.	○	○	○	○	○	○	○	○	
<i>Acer platanoides</i> L.	○	○	□	●	●	●	●	●	
<i>Acer pseudoplatanus</i> L.	○	○	●	●	●	●	●	●	
<i>Acer tataricum</i> L.	●	●	□	●	●	●	●	●	
<i>Ailanthus altissima</i> (MILL.) SWINGLE	○	○	○	○	○	○	○	○	
<i>Alnus glutinosa</i> (L.) GAERTNER	●	●	●	●	●	●	●	●	
<i>Alnus incana</i> (L.) MOENCH	●	●	●	●	●	●	●	●	
<i>Alnus viridis</i> (CAHIX) DC.			●						
<i>Amelanchier ovalis</i> MEDICUS					●				
<i>Amorpha fruticosa</i> L.	○	○	○	○	○	○	○	○	
<i>Amygdalus nana</i> L.	●			●	●	●	●	●	
<i>Andromeda polifolia</i> L.					+				
<i>Bassia prostrata</i> (L.) A. J. SCOTT	●								
<i>Berberis vulgaris</i> L.	●	●	●	●	●	●	●	●	
<i>Betula pendula</i> ROTH	●	●	●	●	●	●	●	●	
<i>Betula pubescens</i> EHRH.	●	●	●	●	●	●	●	●	
<i>Calluna vulgaris</i> (L.) HULL.			●	●	●	●	●	●	5: rare
<i>Carpinus betulus</i> L.	●	●	●	●	●	●	●	●	1: rare
<i>Carpinus orientalis</i> MILLER					●				7: rare
<i>Castanea sativa</i> MILLER			□	□	○			○	
<i>Celtis occidentalis</i> L.	○	○		○	○			○	
<i>Cerasus avium</i> (L.) MOENCH	●	●	●	●	●	●	●	●	
<i>Cerasus fruticosa</i> (PALLAS) WORONOW	●	●	●	●	●	●	●	●	
<i>Cerasus mahaleb</i> (L.) MILLER					●			●	
<i>Chamaecytisus albus</i> (JACQ.) ROTHM.								●	

Taxon (species / subspecies)	Region								Notes
	1	2	4	5	7	8a			
<i>Chamaecytisus austriacus</i> (L.) LINK	●	●	●	●	●	●	●	●	4: rare
<i>Chamaecytisus ciliatus</i> (WAHLENB.) ROTHM.					●				
<i>Chamaecytisus heuffelii</i> (WIERZB.) ROTHM.				●					
<i>Chamaecytisus hirsutus</i> (L.) LINK		●	●	●	●	●	●	●	
<i>Chamaecytisus ratisbonensis</i> (SCHAEFFER) ROTHM.	●	●	●	●	●	●	●	●	
<i>Chamaecytisus supinus</i> (L.) LINK	●	●	●	●	●	●	●	●	1,2: rare
<i>Chamaespartium sagittale</i> (L.) P. GIBBS.		●	●	●	●	●	●	●	
<i>Chimaphila umbellata</i> (L.) W. BARTON			●						
<i>Clematis alpina</i> (L.) MILLER								●	
<i>Clematis vitalba</i> L.	●	●	●	●	●	●	●	●	
<i>Colutea arborescens</i> L.	?	?	●	●	●	●	●	●	
<i>Cornus mas</i> L.	●	●	●	●	●	●	●	●	
<i>Cornus sanguinea</i> L.	●	●	●	●	●	●	●	●	
<i>Coronilla emerus</i> L.				●	●	●	●	●	5: rare
<i>Coronilla vaginalis</i> LAM.						●			
<i>Corylus avellana</i> L.	●	●	●	●	●	●	●	●	
<i>Cotinus coggygria</i> SCOP.				●	●	●	●	●	
<i>Cotoneaster integerrimus</i> MEDICUS			●	+	●	●	●	●	
<i>Cotoneaster niger</i> (THUNB.) FRIES			?		●	●	●	●	
<i>Cotoneaster tomentosus</i> (AIT.) LINDL.				?		●	●	●	
<i>Crataegus calycina</i> PETERM.			●		●	●	●	●	
<i>Crataegus laevigata</i> (POIRET) DC.	●	●	●	●	●	●	●	●	
<i>Crataegus monogyna</i> JACQ.	●	●	●	●	●	●	●	●	
<i>Crataegus nigra</i> WALDST. et KIT.	●								
<i>Cytisus procumbens</i> (WALDST. et KIT.) SPRENGEL						●	●	●	

Taxon (species / subspecies)	Region								Notes
	1	2	4	5	7	8a			
<i>Daphne cneorum</i> L.									
ssp. <i>arbusculooides</i> (TUZSON) SOÓ			●						
ssp. <i>cneorum</i>	+	●		?			●		2: rare, 8a: rare
<i>Daphne laureola</i> L.							?		
<i>Daphne mezereum</i> L.	●		●	●	●	●	●		1: rare
<i>Elaeagnus angustifolia</i> L.	○	○	○	○	○	○	○		
<i>Ephedra distachya</i> L.	●			?	●				7: rare
<i>Euonymus europaeus</i> L.	●	●	●	●	●	●	●		
<i>Euonymus verrucosus</i> SCOP.	●	●	●	●	●	●	●		
<i>Fagus sylvatica</i> L.	●	●	●	●	●	●	●		1,2: rare
<i>Frangula alnus</i> MILLER	●	●	●	●	●	●	●		
<i>Fraxinus angustifolia</i> VAHL.									
ssp. <i>pannonica</i> Soó et SIMON	●	●		●					
<i>Fraxinus excelsior</i> L.		●	●	●	●	●	●		
<i>Fraxinus ornus</i> L.			○	●	●	●	●		
<i>Fraxinus pennsylvanica</i> MARSH.	○	○	○	○	○	○	○		
<i>Fumana procumbens</i> (DUNAL) GREN. et GODRON	●	●	●	●	●	●	●		
<i>Genista germanica</i> L.		●	●	●	●	●	●		
<i>Genista ovata</i> W. et K.			●	●	●	●	●		
<i>Genista pilosa</i> L.			●	●	●	●	●		
<i>Genista tinctora</i> L.	●	●	●	●	●	●	●		
<i>Globularia cordifolia</i> L.			●						4: only 1 locality
<i>Hedera helix</i> L.	●	●	●	●	●	●	●		
<i>Helianthemum canum</i> (L.) BAUMG.			●	●	●	●	●		
<i>Helianthemum nummularium</i> (L.) MILLER									
<i>Helianthemum ovatum</i> (VIV.) DUN.	●	●	●	●	●	●	●		
<i>Hippophaë rhamnoides</i> L.	●	+	+						1: only 1 locality

Taxon (species / subspecies)	Region								Notes
	1	2	4	5	7	8a			
<i>Juniperus communis</i> L.	●	●	●	●	●	●	●	●	
<i>Krascheniikovia ceratoides</i> (L.) GUEL'DENST.	+								
<i>Laburnum anagyroides</i> MEDICUS			○	□	○	○	○	○	
<i>Larix decidua</i> MILLER			□						
<i>Lembotropis nigricans</i> (L.) GRISEB.	●	●	●	●	●	●	●	●	1,2: rare
<i>Ligustrum vulgare</i> L.	●	●	●	●	●	●	●	●	
<i>Lonicera caprifolium</i> L.			○	●	●	●	●	●	
<i>Lonicera nigra</i> L.									
<i>Lonicera xylosteum</i> L.		●	●	●	●	●	●	●	2: rare
<i>Loranthus europaeus</i> JACQ.	●	●	●	●	●	●	●	●	
<i>Lycium barbarum</i> L.	○	○	○	○	○	○	○	○	
<i>Malus dasyphylla</i> BORKH.	●					●			
<i>Malus sylvestris</i> MILLER	●	●	●	●	●	●	●	●	
<i>Morus alba</i> L.	○	○		○					
<i>Myricaria germanica</i> (L.) DESV.	+	+	+	●					
<i>Ononis arvensis</i> L.	●	●	●	●	●	●	●	●	
<i>Ononis spinosa</i> L.	●	●	●	●	●	●	●	●	
<i>Orthilia secunda</i> (L.) HOUSE	○		●	●	●	●	●	●	
<i>Ostrya carpinifolia</i> SCOP.				+					
<i>Padus avium</i> (L.) MILLER	●	●	●	●	●	●	●	●	
<i>Parthenocissus inserta</i> (KERN.) FRITSCH.	○	○	○	○	○	○	○	○	
<i>Padus serotina</i> (EHRH.) BORKH.	○	○	○	○	○	○	○	○	
<i>Picea abies</i> (L.) KARSTEN	○	○	□	○	○	○	○	○	
<i>Pinus nigra</i> ARNOLD	○	○	○	○	○	○	○	○	
<i>Pinus sylvestris</i> L.	○	○	●	○	○	○	○	○	
<i>Populus alba</i> L.	●	●	●	●	●	●	●	●	
<i>Populus nigra</i> ARNOLD	●	●	●	●	●	●	●	●	

Taxon (species / subspecies)	Region								Notes
	1	2	4	5	7	8a			
<i>Populus tremula</i> L.	●	●	●	●	●	●	●		
<i>Prunus spinosa</i> L.	●	●	●	●	●	●	●		
<i>Ptelea trifoliata</i> L.	○								
<i>Pyrus austriaca</i> A. KERNER			□						
<i>Pyrus magyarica</i> TERPÓ									
<i>Pyrus nivalis</i> JACQ.			●		●	●	●		
<i>Pyrus pyraeaster</i> BURGSD.	●	●	●	●	●	●	●		
<i>Quercus cerris</i> L.	○	●	●	●	●	●	●		
<i>Quercus dalechampii</i> TEN.			●	●	●	●	●		
<i>Quercus frainetto</i> TEN.			○	○	○	○	○		
<i>Quercus petraea</i> (MATTUSCHKA) LIEBL.			●	●	●	●	●		
<i>Quercus polycarpa</i> SCHUR.			●	●	●	●	●		
<i>Quercus pubescens</i> WILLD.	●	●	●	●	●	●	●		1: rare, 2: rare
<i>Quercus robur</i> L.	●	●	●	●	●	●	●		
<i>Quercus virgiliana</i> (TEN.) TEN.	●	●	●	●	●	●	●		1: rare, 2: rare
<i>Rhamnus catharticus</i> L.	●	●	●	●	●	●	●		
<i>Rhamnus saxatilis</i> JACQ.			●						
<i>Ribes alpinum</i> L.							●		
<i>Ribes aureum</i> PURSCH	○								
<i>Ribes nigrum</i> L.	□	●	□	□			□		
<i>Ribes petraeum</i> WULFEN								+	
<i>Ribes rubrum</i> L. ssp. <i>sylvestre</i> (LAM.) SYME	□	□	□	□	□	□	□		
<i>Ribes vva-crispa</i> L.		●	●	●	●	●	●		2: rare
<i>Robinia pseudoacacia</i> L.	○	○	○	○	○	○	○		
<i>Rosa agrestis</i> SAVI	●	●	●	●	●	●	●		
<i>Rosa arvensis</i> HUDS.	●						●		
<i>Rosa caesia</i> SM. ex SOW.	●						●		1: rare

Taxon (species / subspecies)	Region								Notes
	Region								
	1	2	4	5	7	8a			
<i>Rosa canina</i> L.	●	●	●	●	●	●	●	●	
<i>Rosa caryophyllacea</i> BESS.									
<i>Rosa corymbifera</i> BORKH.	●	●	●	●	●	●	●	●	
<i>Rosa dumalis</i> BECHST.	●		●		●	●	●	●	
<i>Rosa elliptica</i> TAUSCH	●				●	●	●	●	
<i>Rosa gallica</i> L.	●	●	●	●	●	●	●	●	
<i>Rosa gizeellae</i> BORB.									8a: only 1 locality
<i>Rosa glauca</i> POURRET									8a: only 1 locality
<i>Rosa hungarica</i> (BORB.) DEGEN									8a: rare
<i>Rosa inodora</i> Fr. em. KLÄST.	●	●	●						4: only 1 locality
<i>Rosa kmeitiana</i> BORB.									8a: only 1 locality
<i>Rosa livescens</i> BESS.	●	●	●	●	●	●	●	●	
<i>Rosa micrantha</i> SM. in SOW.	●	●	●	●	●	●	●	●	1: only 1 locality
<i>Rosa obtusifolia</i> DESV.	?	?	?	?	?	?	?	?	
<i>Rosa pendulina</i> L.			●						
<i>Rosa polyacantha</i> (BORB.) DEGEN				●					5: rare
<i>Rosa rubiginosa</i> L.	●	●	●	●	●	●	●	●	
<i>Rosa scabriuscula</i> SM.									8a: only 1 locality
<i>Rosa sherardii</i> DAVIES	●								1: only 1 locality
<i>Rosa spinosissima</i> L.	●		●	●	●	●	●	●	
<i>Rosa stylosa</i> DESV.									8a: only 1 locality
<i>Rosa subcanina</i> (CHRIST) DALLA TORRE et SARNTH.			?	?	?	?	?	?	
<i>Rosa subcollina</i> (CHRIST) DALLA TORRE et SARNTH.	●		●		●	●	●	●	
<i>Rosa szaboi</i> (BORB.) FACSAR				●	●	●	●	●	5,7: rare
<i>Rosa tomentosa</i> SM.			●	●	●	●	●	●	7: rare
<i>Rosa villosa</i> L. var. <i>sancti-andreae</i> (DEG. et TRTM.)	□							□	1,7: only 1-1 locality
<i>Rosa zagrebienensis</i> VUKOT. et H. BR. ex KERN.			●	●	●	●	●	●	

Taxon (species / subspecies)	Region								Notes
	1	2	4	5	7	8a			
<i>Rosa zalana</i> WIES.			●	●	●	●	●	●	4: rare
<i>Rubus caesius</i> L.	●	●	●	●	●	●	●	●	
<i>Rubus canescens</i> DC.			●	●	●	●	●	●	
<i>Rubus fruticosus</i> L. agg.	●	●	●	●	●	●	●	●	1: rare
<i>Rubus idaeus</i> L.	●	●	●	●	●	●	●	●	1: rare
<i>Rubus saxatilis</i> L.					●	●	●	●	
<i>Ruscus aculeatus</i> L.			+	●	●	●	●	●	
<i>Ruscus hypoglossum</i> L.			●	●	●	●	●	●	
<i>Salix alba</i> L.	●	●	●	●	●	●	●	●	
<i>Salix aurita</i> L.	●	●	●	●	●	●	●	●	
<i>Salix caprea</i> L.	●	●	●	●	●	●	●	●	
<i>Salix cinerea</i> L.	●	●	●	●	●	●	●	●	
<i>Salix elaeagnos</i> SCOP.	●	●	●	●	●	●	●	●	
<i>Salix fragilis</i> L.	●	●	●	●	●	●	●	●	
<i>Salix nigricans</i> SM.	+	+							
<i>Salix pentandra</i> L.	●	+			+	+	+	+	
<i>Salix purpurea</i> L.	●	●	●	●	●	●	●	●	
<i>Salix rosmarinifolia</i> L.	●	●	●	●	●	●	●	●	
<i>Salix triandra</i> L.	●	●	●	●	●	●	●	●	
<i>Salix viminalis</i> L.	●	●	●	●	●	●	●	●	
<i>Sambucus nigra</i> L.	●	●	●	●	●	●	●	●	
<i>Sambucus racemosa</i> L.			●	●	●	●	●	●	5: rare
<i>Sarothamnus scoparius</i> (L.) WIMMER	○	○	□	○	○	○	○	○	
<i>Solanum dulcamara</i> L.	●	●	●	●	●	●	●	●	
<i>Sorbus aria</i> (L.) CRANTZ			●	●	●	●	●	●	
<i>Sorbus aucuparia</i> L.			●	●	●	●	●	●	
<i>Sorbus austriaca</i> (G. BECK) HEDL. ssp. <i>hazslinszkyana</i> SOÓ								●	8a: rare

Taxon (species / subspecies)	Region								Notes
	1	2	4	5	7	8a			
<i>Sorbus domestica</i> L.			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Sorbus graeca</i> (SPACH) KOTSCHY					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<i>Sorbus torminalis</i> (L.) CRANTZ	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1,2: rare
<i>Sorbus torminalis</i> x <i>Sorbus aria-graeca</i>						<input checked="" type="checkbox"/>			
<i>Spiraea crenata</i> L.	+						+		
<i>Spiraea media</i> FR. SCHMIDT	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1: rare
<i>Spiraea salicifolia</i> L.				<input type="checkbox"/>			+		
<i>Staphylea pinnata</i> L.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<i>Syringa vulgaris</i> L.					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Taxus baccata</i> L.						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	7,8a: rare
<i>Teucrium chamaedrys</i> L.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<i>Teucrium montanum</i> L.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1: rare
<i>Teucrium scorodonia</i> L.			<input checked="" type="checkbox"/>						4: only 1 locality
<i>Tilia cordata</i> MILLER	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<i>Tilia platyphyllos</i> SCOP.						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<i>Tilia tomentosa</i> MOENCH	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1: rare
<i>Ulmus glabra</i> HUDSON	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<i>Ulmus laevis</i> PALLAS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<i>Ulmus minor</i> MILLER	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<i>Ulmus procera</i> SALISB.			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<i>Vaccinium myrtillus</i> L.			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<i>Vaccinium oxycoccos</i> L.	<input checked="" type="checkbox"/>						+		
<i>Vaccinium vitis-idaea</i> L.			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<i>Viburnum lantana</i> L.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<i>Viburnum opulus</i> L.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Taxon (species / subspecies)	Region								Notes
	1	2	4	5	7	8a			
<i>Viscum album</i> L.	●	●	●	●	●	●	●		
ssp. <i>abietis</i> (WIESB.) ABROM.									
ssp. <i>album</i>									
ssp. <i>austriacum</i> (WIESB.) VOLLM.									
<i>Vitis riparia</i> MICHX.	○								
<i>Vitis rupestris</i> SCHEELE								○	
<i>Vitis sylvestris</i> C. C. GMELIN	●	●		●	●	●		●	

Floristic, cenologic, ecological and conservation indexes of the Hungarian dendrotaxa

DÉNES BARTHA

Introduction

Summaries of the flora of certain area units (i.e. countries) provide short information to help the statistical analysis, electronic data-processing and as well as the comparison of different areas. Such compilations of the flora of some countries have been recently published (LANDOLT, 1977; ELLENBERG, 1979; ELLENBERG et al., 1992; SOÓ, 1980; FRANK – KLOTZ, 1988). In present work floristic, phytocoenologic, ecological, conservation indexes of tree and shrub species of Hungary are collected.

Nomenclature

The valid scientific names follow the nomenclature of PRISZTER (1983, 1985) and TUTIN et al. (1964-80). The more important synonyms are listed below:

<i>Amygdalus nana</i> L.	= <i>Prunus tenella</i> BATSCH
<i>Betula pendula</i> ROTH	= <i>B. verrucosa</i> EHRH.
<i>Cerasus avium</i> (L.) MOENCH	= <i>Prunus avium</i> L.
<i>C. fruticosa</i> (PALLAS) WORONOW	= <i>P. fruticosa</i> PALLAS
<i>C. mahaleb</i> (L.) MILLER	= <i>P. mahaleb</i> L.
<i>Crataegus laevigata</i> (POIRET) DC.	= <i>C. oxyacantha</i> L. em JACQ.
<i>Lycium barbarum</i> L.	= <i>L. halimifolium</i> MILL.
<i>Padus avium</i> (L.) MILLER	= <i>Prunus padus</i> L.
<i>P. serotina</i> (EHRH.) BORKH.	= <i>P. serotina</i> EHRH.
<i>Rosa caesia</i> SM. ex SOW	= <i>R. coriifolia</i> FR.
<i>R. corymbifera</i> BORKH.	= <i>R. dumetorum</i> ROTHM.
<i>R. dumalis</i> BECHST.	= <i>R. afzeliana</i> FR.
<i>R. livescens</i> BESS.	= <i>R. jundzillii</i> BESS.
<i>Rubus canescens</i> DC.	= <i>R. tomentosus</i> BORKH.
<i>Salix nigricans</i> SM.	= <i>S. myrsinifolia</i> SALISB.
<i>S. rosmarinifolia</i> L.	= <i>S. repens</i> L. ssp. <i>rosmarinifolia</i> (L.) HARTM. f.
<i>Sarothamnus scoparius</i> (L.) WIMMER	= <i>Cytisus scoparius</i> (L.) LINK
<i>Sorbus graeca</i> (SPACH) KOTSCHY	= <i>S. cretica</i> LINDLEY
<i>Tilia tomentosa</i> MOENCH	= <i>T. argentea</i> DC.
<i>Ulmus glabra</i> HUDSON	= <i>U. scabra</i> MILLER
<i>Vaccinium oxycoccos</i> L.	= <i>Oxycoccos palustris</i> PERS.
<i>Vitis riparia</i> MICHX.	= <i>V. vulpina</i> L.
<i>V. sylvestris</i> C. C. GMELIN	= <i>V. vinifera</i> L. ssp. <i>sylvestris</i> (C. C. GMELIN) HEGI

Indigenuity, naturalization

Simplified scales of spontaneous and sub-spontaneous occurrence are applied after TERPÓ (1983). The interpreted categories:

Autochthonous plants	au
Allochthonous plants	
archeophytes	ar
neophytes	ne
epoikophytes	ep

Arealtype (floristic element)

Area types follows SOÓ (1964-73).

Adventive	- Adv
Circumboreal	- Circ
Eurasian	- EuA
European	- Eu
Central European	- CEu
Sub-Boreal	- Bor
Sub-Atlantic	- Atl
Sub-Mediterranean	- Med
Balcanian	- Balc
Continental	- Cont
Pontusian	- Pont
Alpian	- Alp
Carpathian	- Carp
Pannonian	- Pann

Regionality (vertical distribution)

Analysis of the vertical distribution – in a narrow sense – refers to the Carpatho-Pannon region.

	Region	m	–	m
1	– lowland		–	150
2	– colline	150	–	400
3	– submontane	400	–	800
4	– montane	800	–	1200
5	– subalpine	1200	–	1600
6	– alpine	1600	–	

Cenotaxonomical (phytosociological) groups

0.	<i>Indifferent</i>	15.1.	<i>Orno-Cotinetalia</i>
1.	<i>Quercu-Fagea</i>	15.1.1.	<i>Orno-Cotinion</i>
1.1.	<i>Salicetea purpureae</i>	15.1.2.	<i>Quercion farnetto</i>
1.1.1.	<i>Salicetalia purpureae</i>	15.2.	<i>Quercetalia pubescentis</i>
1.1.1.1.	<i>Salicion elaeagni</i>	15.2.1.	<i>Quercion petraeae</i>
1.1.1.2.	<i>Salicion triandrea</i>	15.2.2.	<i>Aceri tatarico-Quercion</i>
1.1.1.3.	<i>Salicion albae</i>	15.3.	<i>Prunetalia</i>
1.2.	<i>Alnetea glutinosae</i>	15.3.1.	<i>Prunion spinosae</i>
1.2.1.	<i>Alnetalia glutinosae</i>	15.3.2.	<i>Prunion fruticosae</i>
1.2.1.1.	<i>Alnion glutinosae</i>	2.	<i>Abieti-Piceea</i>
1.2.2.	<i>Salicetalia auritae</i>	2.1.	<i>Erico-Pinetea</i>
1.2.2.1.	<i>Salicion cinereae</i>	2.1.1.	<i>Erico-Pinetalia</i>
1.3.	<i>Carpino-Fagetea</i>	2.1.1.1.	<i>Erico-Pinion</i>
1.3.1.	<i>Fagetalia</i>	2.2.	<i>Pulsatillo-Pinetea</i>
1.3.1.1.	<i>Alno-Padion</i> or <i>Alno-Ulmion</i>	2.2.1.	<i>Pulsatillo-Pinetalia</i>
1.3.1.1.a.	<i>Ulmion</i>	2.2.1.1.	<i>Festuco vaginatae-Pinion</i>
1.3.1.1.b.	<i>Alnion glutinosae-incanae</i>	2.3.	<i>Vaccinio-Piceeta</i>
1.3.1.2.	<i>Fagion medio-europaeum</i>	2.3.1.	<i>Vaccinio-Piceetalia</i>
1.3.1.2.a.	<i>Asperulo-Fagion</i>	2.3.1.1.	<i>Abieti-Piceion</i>
1.3.1.2.b.	<i>Cephalanthero-Fagion</i>	3.	<i>Oxycocco-Caricea</i>
1.3.1.2.c.	<i>Tilio-Acerion</i>	4.	<i>Molinio-Arrhenathera</i>
1.3.1.2.d.	<i>Carpinion betuli</i>	5.	<i>Festuco-Bromea</i>
1.3.1.3.	<i>Fagion illyricum</i>	5.1.	<i>Festucetea vaginatae</i>
1.4.	<i>Quercetea robori-petraeae</i>	5.2.	<i>Festuco-Brometea</i>
1.4.1.	<i>Pino-Quercetalia</i>	6.	<i>Chenopodio-Scleranthea</i>
1.4.1.1.	<i>Castaneo-Quercion</i>	6.1.	<i>Secalietea</i>
1.4.1.2.	<i>Genisto germanicae-Quercion</i>	6.2.	<i>Galio-Urticetea</i>
1.4.1.3.	<i>Pino-Quercion</i>	6.3.	<i>Bidentetea tripartitae</i>
1.4.1.4.	<i>Deschampsio-Fagion</i>	6.4.	<i>Epilobietea angustifolii</i>
1.5.	<i>Quercetea pubescenti-petraeae</i>	6.5.	<i>Urtico-Sambucetea</i>

Ecological indicator values

Ecological indexes of ZÓLYOMI et al. (1967), SOÓ (1964-80) and BORHIDI (1995) are applied with certain modifications.

a. Temperature figures (T)

- 0 – Indifferent plants
- 1 – Thermophobic plants
- 2 – Mostly thermophobic plants
- 3 – Intermediate plants between 2 and 4
- 4 – Mostly thermophilous plants
- 5 – Thermophilous plants

b. Moisture figures (W)

- 0 – Indifferent plants
- 1 – Xerophilous plants
- 2 – Xeromesophilous plants
- 3 – Mesophilous plants
- 4 – Higromesophilous plants
- 5 – Higrophilous plants

c. Reaktion figures (R)

- 0 – Indifferent plants
- 1 – Acidophilous plants
- 2 – Acidifrequent plants
- 3 – Neutrophilous plants
- 4 – Basifrequent plants
- 5 – Basiphilous plants

d. Nitrogen figures (N)

- 0 – Indifferent plants
- 1 – Plants of habitats extremely poor in nitrogen
- 2 – Plants of oligotrophic habitats
- 3 – Plants of mesotrophic habitats
- 4 – Plants of saprotrophic habitats
- 5 – Plants of habitats extremely rich in nitrogen

Kind of pollination

- e – entomophilous
- an – anemophilous
- ap – apogamous

Kind of fruit- and seed spreading

- z – endozoochorous
- h – hidrochorous
- a – anemochorous

Social behaviour types (SBT)

The social behaviour types of the Hungarian plant species are based on the work of BORHIDI (1995). The categories of the SBT are placed as follows:

I. Competitors	C
II. Stress tolerants	ST
A. Stress tolerants of narrow ecology: Specialists	S
B. Stress tolerants of wide ecology: Generalists	G
III. Ruderals	R
A. Plants of habitats disturbed by natural factors: Natural pioneers	NP
B. Plants of habitats disturbed by human factors	
1. Disturbance tolerant plants of natural habitats	DT
2. Anthropophilous elements of the native flora: native weed species	W
3. Anthropogenic elements alien to the region	
a. Introduced crops running wild	I
b. Adventitious weeds	A
4. Competitors of secondary habitats	
a. Ruderal competitors of the natural flora	RC
b. Alien competitors, aggressive invaders	AC

Nature conservation ranks (NCR)

The categories of the nature conservation ranks of the Hungarian plant species are based on the work of SIMON (1988).

Unique or rare species (endemics, subendemics, relics)	U
Natural species predominating in plant communities	E
Main components, also native to the area	K
Natural pioneer elements	TP
Native species that tolerate disturbance	TZ
Adventives	A
Cultivated plants	G
Cosmopolitan weeds	GY

Symbols:

- ? – doubtful
- † – extinct

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Taxon	Indigenty	Areal type	Regionality	Cenotaxonomical groups	Ecological indicator values				Kind of pollination	Kind of fruit- and seed spreading	SBT	NCR
					T	W	R	N				
<i>Abies alba</i> MILLER	au?	CEu	4-5	2.3.1.1.	2	3	2-3	0	an	a	C	K(G)
<i>Acer campestre</i> L.	au	Eu	1-3	1.3., 1.4., 1.5.	3-4	2-3	3-4	2-3	e	a	G	K
<i>Acer platanoides</i> L.	au	Eu	3-4	1. (1.3.)	3	3	3-4	3-4	e	a	G	K
<i>Acer pseudoplatanus</i> L.	au	CEu-Med	4	1.3. (1.3.1.2.c.)	2-3	3	4	3-4	e	a	S	K
<i>Acer tataricum</i> L.	au	Cont	1-2	1.5. (1.5.2.2.)	4	2	4	1	e	a	S	K
<i>Acer negundo</i> L.	ne	Adv	1	1.1.1.3., 1.3.1.1.a.	3	3-4	3-4	2-3	e	a	AC	GY
<i>Ailanthus altissima</i> (MILL.) SWINGLE	ne	Adv	1	6.	4	1-2	3	3-4	e	a	AC	GY
<i>Alnus glutinosa</i> (L.) GAERTNER	au	Eu	1-4	1.2., 1.3.1.1.b.	2	4-5	2-3	0	an	a, h	C	E
<i>Alnus incana</i> (L.) MOENCH	au	Bor-CEu	1-5	1.1.1.3., 1.3.1.1.b.	1-2	4	4	0	an	a, h	G	K
<i>Alnus viridis</i> (CHAIX) DC.	au	Alp-Carp-Balc	4-6	1.4.1.3.	2	3	2-3	2	an	a	S	K
<i>Amelanchier ovalis</i> MEDICUS	au	CEu-Med	3-4	1.5.1.1.	4	1-2	4-5	1	e	z	C	K

Taxon	Indiginity	Arealtype	Regionality	Cenotaxonomical groups	Ecological indicator values				Kind of pollination	Kind of fruit- and seed spreading	SBT	NCR
					T	W	R	N				
<i>Amorpha fruticosa</i> L.	ne	Adv	1	6.2., 6.3.	4	3-4	3-4	4-5	e	z	AC	GY
<i>Amygdalus nana</i> L.	au	Cont	1-2	1.5.2.2., 1.5.3.2.	3-4	1-2	3-4	2	e	z	S	E
<i>Anchromeda polifolia</i> L.	au†	Circ	4-5	3.	2	4-5	1	1	e	z	S	K
<i>Berberis vulgaris</i> L.	au	CEu-Med	1-3	1.5. (1.5.3.)	4	2	4	2	e	z	G	K
<i>Betula pendula</i> ROTH	au	EuA	1-5	1. (1.4.), 2.	1-2	2-3	2-3	0	an	a	C	TP
<i>Betula pubescens</i> EHRH.	au	EuA	1-5	1.2., 1.4.	1-2	3-4	1-2	2	an	a	S	K
<i>Calluna vulgaris</i> (L.) HULL.	au	Atl-Bor	2-6	1.4., 2.3.1.1.	1-2	2	1	1	e	a	S	K
<i>Carpinus betulus</i> L.	au	CEu	1-3	1.3., 1.4.	3	3	2-4	2	an	a, z	C	E
<i>Carpinus orientalis</i> MÜLLER	au	Balc-Pont	2-3	1.5.1.1.	4	2	5	1	an	a, z	S	U
<i>Castanea sativa</i> MÜLLER	au? ² , ar?	Med	2-3	1.4. (1.4.1.1.)	4	2-3	2	2	e(an)	z	S	K
<i>Celtis occidentalis</i> L.	ne	Adv	1	1.3.1.1.a.	3	3-4	3-4	3-4	an	z	I	A(G)

Taxon	Indigenty	Areal type	Regionality	Cenotaxonomical groups	Ecological indicator values				Kind of pollination	Kind of fruit- and seed spreading	SBT	NCR
					T	W	R	N				
<i>Cerasus avium</i> (L.) MOENCH	au	CEu	1-2	1.3. (1.3.1.2.d.)	4	3	4	3	e	z	S	K
<i>Cerasus fruticosa</i> (PALLAS) WORONOW	au	Cont	1-2	1.5. (1.5.3.2.)	3	1-2	4-5	2	e	z	G	K
<i>Cerasus mahaleb</i> (L.) MILLER	au	EuA-Med	2-3	1.5.	4	1-2	4-5	2-3	e	z	C	K
<i>Clematis alpina</i> (L.) MILLER	au	Alp-Carp	5	1.3.1.2.a.b.c.	1	3	4	3-4	e	a	S	K
<i>Clematis vitalba</i> L.	au	CEu-Med	2-4	1.	3-4	3	3-4	3-4	e	a	DT	K
<i>Colutea arborescens</i> L.	au	Med	2-3	1.5. (1.5.1.1., 1.5.2.2.)	4	2	4-5	1-2	e	z	G	K
<i>Cornus mas</i> L.	au	CEu-Med-Pont	2-3	1.5. (1.5.1.1.)	3-4	2-3	4	3	e	z	G	K
<i>Cornus sanguinea</i> L. ¹	au	CEu-Med	1-3	1.	3-4	3-4	4	3	e	z	G	K
<i>Coronilla emerus</i> L.	au	Med	2-3	1.5.1.1.	4-5	1	5	1	e	z	S	K
<i>Corylus avellana</i> L.	au	Eu	1-3	1.	2-3	2-3	2-4	2	an	z	G	K
<i>Cotinus coggygria</i> SCOP.	au	Pont-Med	3	1.5.1.1.	4-5	2	4-5	2	e	a	S	E

Taxon	Indiginity	Arealtype	Regionality	Cenotaxonomical groups	Ecological indicator values				Kind of pollination	Kind of fruit- and seed spreading	SBT	NCR
					T	W	R	N				
<i>Cotoneaster integerrimus</i> MEDICUS	au	Eu	2-5	1.5. (1.5.1.1.)	4	1-2	4	1	e	z	S	K
<i>Cotoneaster niger</i> (THUNB.) FRIES ²	au	Cont	3-4	1.5.2.2.	3	1-2	4	1	e	z	G	K
<i>Cotoneaster tomentosus</i> (AIT.) LINDL.	au	Med	3-4	1.5.1.1.	4	1-2	5	1	e	z	C	K
<i>Crataegus laevigata</i> (POIRET) DC	au	CEu-Atl-Balc	2-4	1.	3	3	3-4	2	e	z	G	K
<i>Crataegus monogyna</i> JACQ. ³	au	Eu	1-4	1. (1.5.3.1.)	3	2-3	3-4	2	e	z	G	K
<i>Crataegus nigra</i> WALDST et KIT.	au	Pann-Balc	1	1.1.1.3., 1.3.1.1.a.	4	3-4	4	2	e	z	S	K
<i>Daphne creorum</i> L.	au	CEu							e	z	S	K
subsp. <i>creorum</i>	au		1-5	5.2.	3-4	1-2	5	1				
subp. <i>arbusculoides</i> (TUZSON) SOÓ	au		2-5	1.4.	3	2-3	2	1				K
<i>Daphne laureola</i> L.	au	Atl-Med	3-4	1.3.1.2., 1.3.1.3., 1.5.1.1.	4-5	3	4	2	e	z	S	K
<i>Daphne mezereum</i> L.	au	EuA	3-5	1.3., 1.4., 2.3.	3	3	3-4	2	e	z	S	K

Taxon	Indiginity	Arealtype	Regionality	Cenotaxonomical groups	Ecological indicator values				Kind of pollination	Kind of fruit- and seed spreading	SBT	NCR
					T	W	R	N				
<i>Elaeagnus angustifolia</i> L.	ne	Adv	1	6.	4	2	4	4	e	z	I	A(G)
<i>Ephedra distachya</i> L.	au	Cont	1-3	5.	4	1	5	1	an	z	S	U
<i>Euonymus europaeus</i> L.	au	Eu	1-4	1.	3-4	2-3	3-4	2-3	e	z	G	K
<i>Euonymus verrucosus</i> SCOP.	au	Cont	2-3	1.3., 1.4., 1.5.	4	2	4	3	e	z	G	K
<i>Fagus sylvatica</i> L.	au	CEu	3-4	1.3.1.2., 1.3.1.3., 1.4.1.4.	2-3	3	2-3	2-3	an	z	C	E
<i>Frangula alnus</i> MILLER	au	EuA	1-4	1. (1.2., 1.3.1.1., 1.4.)	3-4	3-4	2-3	2	e	z	G	K
<i>Fraxinus angustifolia</i> V AHL. subsp. <i>pannonica</i> SOÓ et SIMON	au	Pann-Balc	1-2	1.2.1.1., 1.3.1.1.A.	4	4	3-4	2	an	a	C	E
<i>Fraxinus excelsior</i> L.	au	Eu	1-4	1.3.	3	2-4	4	3-4	an	a	C	K
<i>Fraxinus ornus</i> L.	au	Med	2-3	1.5.1.	4	2	4-5	2	e	a	C	E
<i>Fraxinus pennsylvanica</i> MARSH.	ne	Adv	1	1.1.1.3., 1.3.1.1.a.	4	3-4	3-4	3	an	a	AC	GY
<i>Hedera helix</i> L.	au	Atl-Med	3-5	1. (1.3., 2.3.)	4	3	3	2	e	z	G	K

Taxon	Indigenty	Areal type	Regionality	Cenotaxonomical groups	Ecological indicator values				Kind of pollination	Kind of fruit- and seed spreading	SBT	NCR
					T	W	R	N				
<i>Hippophaë rhamnoides</i> L.	au	EuA	1-4	1.1.1.1., 5.1.	3	0	4-5	3-4	an(e)	z	C	K
<i>Juniperus communis</i> L.	au	Circ	1-5	0.	0	1-2	0	1-2	an	z	DT	TZ
<i>Laburnum anagyroides</i> MEDICUS	au, ne	Alp-Balc	3-5	1.5. (1.5.1.1.)	3	2	4-5	1	e	z	S	K
<i>Larix decidua</i> MILLER	au?	CEu	5	1.4.	2	3	3	2	an	a	I	K(G)
<i>Ligustrum vulgare</i> L.	au	Atl-Med	1-3	1.3., 1.4., 1.5.	4	2-3	4	2	e	z	G	K
<i>Lonicera caprifolium</i> L.	au, ne	CEu-Med	2-4	1.3.1.3., 1.5.1.1.	4	2-3	4	2	e	z	G	K
<i>Lonicera nigra</i> L.	au	CEu	4-5	1.4.1.4.	2	3	2-3	2	e	z	S	K
<i>Lonicera xylosteum</i> L.	au	EuA	2-5	1.3., 1.5.	2-3	2-3	4	3	e	z	G	K
<i>Loranthus europaeus</i> JACQ.	au	Pann-Balc	1-3	1.3.1.1.a., 1.3.1.2.d., 1.4.,	-	-	-	-	e	z	G	GY
<i>Lycium barbarum</i> L.	ne	Adv	1-2	1.5.3.	4	3	3	3-4	e	z	AC	GY
<i>Malus sylvestris</i> MILLER	au	Eu-Med	1-3	1. (1.5.)	3	3	3-4	2-3	e	z	G	K

Taxon	Indigenty	Areal type	Regionality	Cenotaxonomical groups	Ecological indicator values				Kind of pollination	Kind of fruit- and seed spreading	SBT	NCR
					T	W	R	N				
<i>Morus alba</i> L.	ne	Adv	1	1.3.1.1.a.	4	3-4	3-4	2-3	an	z	I	G
<i>Myricaria germanica</i> (L.) DESV.	au	Bor-CEu	1-5	1.1.1.1.	2	4-5	4	0	e	a	C	K
<i>Ostrya carpinifolia</i> SCOP.	au†	Med	2-3	1.5.1.2.	4-5	2	4	2-3	an	z, a	S	K
<i>Pactus avium</i> (L.) MILLER	au	EuA	1-5	1.3.1.1.	2	4	2-3	2	e	z	S	K
<i>Pactus serotina</i> (EHRH.) BORKH.	ep	Adv	1-2	1.5.2.2.	3	2-3	3	3-4	e	z	AC	GY
<i>Parthenocissus inserta</i> (KERN.)FRITSCH.	ne	Adv	1-3	6.2.	3	4	2-4	4	e	z	AC	GY
<i>Picea abies</i> (L.) KARSTEN	au?	EuA	4-5	2.3.	2	2-3	2-3	1-2	an	a	I	E(G)
<i>Pinus nigra</i> ARNOLD	au?	Alp-Med	4-5	2.1.	4	1-2	4-5	1	an	a	I	E(G)
<i>Pinus sylvestris</i> L.	au	EuA	2-5	1.4.1.3., 2.1., 2.2.	1-2	0	2-4	1	an	a	C	E(G)
<i>Populus alba</i> L.	au	EuA-Med	1	1.1.1.3., 1.3.1.1.a., 1.5.2.2.	4	0	4	3	an	a, h	C	E
<i>Populus nigra</i> L.	au	EuA-Med	1	1.1., 1.3.1.1.a.	3-4	4	4	3-4	an	a, h	C	E

Taxon	Indigenty	Areal type	Regionality	Cenotaxonomical groups	Ecological indicator values				Kind of pollination	Kind of fruit- and seed spreading	SBT	NCR
					T	W	R	N				
<i>Populus tremula</i> L.	au	EuA	1-5	1. (1.4.)	2	0	2	2-3	an	a	G	TZ
<i>Prunus spinosa</i> L.	au	Eu-Med	1-3	1.5. (1.5.3.1.)	3	1-2	3-4	2-3	e	z	C	TZ
<i>Ptelea trifoliata</i> L.	ep	Adv	1	1.3.1.2.d., 1.5.2.2.	3	3	3	3-4	e	a	I	GY
<i>Pyrus magyarica</i> TERPÓ	au	Pann	2	1.5.2.1.	4	2	3-4	2	e	z	G	U
<i>Pyrus nivalis</i> JACQ.	au	CEu-Balc	2-3	1.4., 1.5.1.1., 1.5.2.1.	4	2	3-4	2	e	z	G	
<i>subsp. nivalis</i>												U
<i>subsp. salvifolia</i> (DC.) SCH. et TH.												K
<i>Pyrus pyraeaster</i> BURGSD.	au	Eu-Med	1-3	1. (1.5.)	4	2	3-4	2	e	z	G	K
<i>Quercus cerris</i> L.	au	Med	2-3	1.4., 1.5. (1.5.1.2., 1.5.2.1.)	4	2-3	2-4	2-3	an	z	C	E
<i>Quercus frainetto</i> (TEN.) TEN.	au?	Balc	2-3	1.5.1.2.	4	2-3	3-4	2	an	z	S	U(G)
<i>Quercus petraea</i> agg.												

Taxon	Indigenty	Areal type	Regionality	Cenotaxonomical groups	Ecological indicator values				Kind of pollination	Kind of fruit- and seed spreading	SBT	NCR
					T	W	R	N				
<i>Quercus dalechampii</i> TEN.	au	Med-Balc	2-4	1.4., 1.5. (1.5.1.2., 1.5.2.1.)	4	2-3	3	2-3	an	z	C	E
<i>Quercus petraea</i> (MATTUSCHKA) LIEBL.	au	CEu	2-4	1.3. (1.3.1.2.d.), 1.4.	3	3	2-3	2-3	an	z	C	E
<i>Quercus polycarpa</i> SCHUR	au	Balc	2-3	1.5. (1.5.1.1., 1.5.2.)	4	2	4	2-3	an	z	C	E
<i>Quercus pubescens</i> WILLD.	au	Med	2-3	1.5.	4	2	4-5	2-3	an	z	C	E
<i>Quercus robur</i> L.	au	Eu	1-2	1.3.1.1.a., 1.3.1.2.d., 1.5.2.2.	3	2-3	2-4	2-3	an	z	C	E
<i>Quercus virgiliana</i> (TEN.) TEN.	au	Med	2-3	1.5.1.1., 1.5.2.2.	4	2	4	2-3	an	z	S	K
<i>Rhamnus catharticus</i> L.	au	EuA	1-4	1.	3	2-3	3-4	2	e	z	G	K
<i>Rhamnus saxatilis</i> JACO.	au	CEu	3-5	1.5.1.1.	3-4	2	5	1	e	z	S	K
<i>Ribes alpinum</i> L.	au	CEu	4-5	1.3.1.2.a.c.	2	3	4	2	e	z	S	U
<i>Ribes aureum</i> PURSCH	ne	Adv	1-2	1.5.2.2.	3-4	2	3	2-3	e	z	I	G
<i>Ribes nigrum</i> L.	au	EuA	1	1.2.1., 1.3.1.1.a.	3	4	2-3	2	e	z	S	K

Taxon	Indigenty	Areal type	Regionality	Cenotaxonomical groups	Ecological indicator values				Kind of pollination	Kind of fruit- and seed spreading	SBT	NCR
					T	W	R	N				
<i>Ribes petraeum</i> WULFEN	au†	CEu	4-5	1.3.1.2.a.	2-3	3	2-3	2	e	z	S	U
<i>Ribes rubrum</i> L. subsp. <i>sylvestre</i> (LAM.) SYME	au? ne?	Atl-CEu	1-2	1.1.1.3., 1.2., 1.3.1.1.a.	3	4	3	2-3	e	z	S	K
<i>Ribes uva-crispa</i> L.	au	EuA	3-5	1.3.1.2.	3	2-3	3-4	3	e	z	G	K
<i>Robinia pseudoacacia</i> L.	ne	Adv	1-3	1.5.2.2., 6.	3	2-3	2-3	3-4	e	z, a	AC	E(G)
<i>Rosa agrestis</i> SAVI	au	Med	2-5	1.5.	4	2	4-5	1	e	z	DT	TZ
<i>Rosa arvensis</i> HUDS.	au	Atl-Med	2-5	1.3. (1.3.1.3.)	4	2	3-4	2-3	e	z	G	K
<i>Rosa caesia</i> SM. ex SOW.	au	Eu	1-6	1.5. (1.5.3.)	2	2	4-5	1	e	z	DT	TZ
<i>Rosa canina</i> L.	au	Eu	1-5	1.5. (1.5.3.)	3	2-3	3-5	2	e	z	DT	TZ
<i>Rosa caryophyllacea</i> BESS.	au	Pann-Pont	2-4	1.5.	4	2	4-5	1	e	z	DT	TZ
<i>Rosa corymbifera</i> BORKH.	au	EuA	1-5	1.5. (1.5.3.)	3-4	2	3-5	1	e	z	DT	TZ
<i>Rosa dumalis</i> BECHST.	au	Eu	1-6	1., 6.4.	1-2	2-3	3-5	2	e	z	DT	TZ

Taxon	Indiginity	Arealtype	Regionality	Cenotaxonomical groups	Ecological indicator values				Kind of pollination	Kind of fruit- and seed spreading	SBT	NCR
					T	W	R	N				
<i>Rosa elliptica</i> TAUSCH	au	CEu	2-5	1.5.	3-4	2	4-5	1	e	z	DT	TZ
<i>Rosa gallica</i> L.	au	CEu-Med	1-4	1.5. (1.5.3.)	4	1-2	3-4	2	e	z	G	K
<i>Rosa livescens</i> BESS.	au	Cont	2-4	1.5.	4	2	4	1	e	z	DT	K
<i>Rosa micrantha</i> SM. in SOW.	au	CEu-Med	2-5	1.5.	4	2	4-5	1	e	z	DT	TZ
<i>Rosa obtusifolia</i> DESV.	au	Atl-Med	2-5	1.5.	3-4	2	4-5	1	e	z	DT	TZ
<i>Rosa pendulina</i> L.	au	CEu	4-6	1.3.1.2.	2	3	4	2	e	z	S	K
<i>Rosa rubiginosa</i> L.	au	Eu	2-5	1.5.	3-4	2	4-5	1	e	z	DT	TZ
<i>Rosa spinosissima</i> L.	au	EuA	1-5	1.5. (1.5.3.)	3	1-2	4-5	1-2	e	z	G	K
<i>Rosa stylosa</i> DESV.	au	Atl-Med	2-4	1.5.2.	4	2	5	1	e	z	S	K
<i>Rosa tomentosa</i> SM.	au	Eu	1-5	1.5.	3	2-3	4	1	e	z	G	K
<i>Rosa villosa</i> L. var. <i>sancti-andreae</i> (DEG. et TRTM.)SOÓ	au? ne?	?	?	?	?	?	?	?	e	z	G	U

Taxon	Indigity	Arealtype	Regionality	Cenotaxonomical groups	Ecological indicator values				Kind of pollination	Kind of fruit- and seed spreading	SBT	NCR
					T	W	R	N				
<i>Rubus caesius</i> L.	au	EuA	1-5	1.1., 1.2., 1.3.,	3	3-5	0	5	e	z	DT	TZ
<i>Rubus canescens</i> DC.	au	CEu-Med	2-4	1.5.	4	2	3-4	2-3	e	z	DT	TZ
<i>Rubus fruticosus</i> L. agg.	au	Atl-CEu	3-4	1.3., 6.4., 6.5.	2-3	2-3	2-4	2-4	e, ap	z	DT	TZ
<i>Rubus idaeus</i> L.	au	Circ	3-5	1.3.1.2., 6.4., 6.5.	2	3	0	4	e	z	DT	TZ
<i>Rubus saxatilis</i> L.	au	EuA	4-5	1.3.1.2.b.c.	2	3	4	2	e	z	S	K
<i>Ruscus aculeatus</i> L.	au	Atl-Med	1-4	1.3.1.3., 1.5.1.2.	4-5	3	4	2-3	e	z	G	K
<i>Ruscus hypoglossum</i> L.	au	Med	2-4	1.3.1.3., 1.5.1.2.	4-5	3	4	2-3	e	z	S	K
<i>Salix alba</i> L.	au	EuA-Med	1	1.1.1.3., 1.3.1.1.a.	3	4	4	3-4	e (an)	a, h	C	K
<i>Salix aurita</i> L.	au	Eu	1-5	1.2.2., 1.4., 3.	2	3-4	1-2	2	e (an)	a	S	E
<i>Salix caprea</i> L.	au	EuA	1-5	1., 6.5.	2-3	3	3	0	e (an)	a	DT	TZ
<i>Salix cinerea</i> L.	au	EuA	1-3	1.2. (1.2.2.1.), 1.3.1.1.	2-3	4	2-3	2	e (an)	a	C	E

Taxon	Indigency	Areatype	Regionality	Cenotaxonomical groups	Ecological indicator values				Kind of pollination	Kind of fruit- and seed spreading	SBT	NCR
					T	W	R	N				
<i>Salix elaeagnos</i> SCOP.	au	CEu-Med	1-5	1.1.1.1.	3	4-5	4-5	2	e (an)	a, h	C	K
<i>Salix fragilis</i> L.	au	EuA	1-3	1.1.1.3., 1.3.1.1.	3	4	2-3	3	e (an)	a, h	G	K
<i>Salix nigricans</i> SM.	au†	Bor-CEu	1-6	1.2.1.1.	2	4-5	2-3	1-2	e (an)	a	S	U
<i>Salix pentandra</i> L.	au	EuA-Bor	1-6	1.2. (1.2.2.1.)	2	3-4	2-3	2	e (an)	a	S	K
<i>Salix purpurea</i> L.	au	EuA-Med	1-4	1.1. (1.1.1.2.)	3	4-5	4	3	e (an)	a, h	C	E
<i>Salix rosmarinifolia</i> L.	au	Cont	1-3	4., 5.1.	2	3-4	4	2	e (an)	a	C	K
<i>Salix triandra</i> L.	au	EuA	1-4	1.1.1.2.	3	4-5	4	3	e (an)	a, h	C	K
<i>Salix viminalis</i> L.	au	EuA	1-4	1.1.1.2.	2-3	4-5	4	3	e (an)	a, h	G	E
<i>Sambucus nigra</i> L.	au	Eu	1-5	0. (6.5.)	3	3	3-4	4-5	e	z	DT	GY
<i>Sambucus racemosa</i> L.	au	CEu-Med	4-5	1.3.1.2., 6.5.	2-3	3	3	4	e	z	G	K
<i>Sarothamnus scoparius</i> (L.) WIMMER	au, ne	All-CEu	2-4	1.4.	3	2	1-2	1-2	e	z	AC	K

Taxon	Indigenty	Arealtype	Regionality	Cenotaxonomical groups	Ecological indicator values				Kind of pollination	Kind of fruit- and seed spreading	SBT	NCR
					T	W	R	N				
<i>Sorbus aria</i> (L.) CRANTZ	au	CEu	3-5	1.3.1.2.B.c., 2.3.1.1.	3	2-3	4	2	e	z	G	K
<i>Sorbus aucuparia</i> L.	au	Eu-Bor	4-5	1.3.1.2., 1.4., 2.3.	2-3	3	2-3	2	e	z	G	K
<i>Sorbus austriaca</i> (G. BECK) HEDL. subsp. <i>hazslinszkyana</i> SOÓ	au	Carp	4	1.5.2.2.	3	2-3	4	2	e	z	G	U
<i>Sorbus domestica</i> L.	au, ar	Atl-Med	2-3	1.5.	4	2-3	4	2	e	z	S	K
<i>Sorbus graeca</i> (SPACH) KOTSCHY	au	Med	2-4	1.5.1.1.	4	2-3	4	2	e	z	S	K
<i>Sorbus torminalis</i> (L.) CRANTZ	au	CEu-Med	2-3	1.3., 1.4., 1.5.	4	3	4	2-3	e	z	G	K
<i>Sorbus aria</i> x <i>S. torminalis</i> ⁴	au	Pann	2-3	1.5.1.1.	4	2-3	4	2	ap	z	G	U
<i>Spiraea crenata</i> L.	au†	Cont	1-2	1.5.2.2.	3-4	2	3-4	2-3	e	z	C	K
<i>Spiraea media</i> FR. SCHMIDT	au	Cont	4	1.5.2.2.	3	1-2	3-4	2-3	e	z	C	E
<i>Spiraea salicifolia</i> L.	au	EuA	2-4	1.2.	2	4	2-3	4	e	z	S	K
<i>Staphylea pinnata</i> L.	au	CEu-Balc	2-4	1.3., 1.4., 1.5.	3-4	3	4	2-3	e	z	S	K

Taxon	Indigentity	Arealtype	Regionality	Cenotaxonomical groups	Ecological indicator values				Kind of pollination	Kind of fruit- and seed spreading	SBT	NCR
					T	W	R	N				
<i>Syringa vulgaris</i> L.	au	Adv	2-3	1.5.	4	2	4	1-2	e	z	AC	G
<i>Taxus baccata</i> L.	au	Atl-Med	4-5	1.3.1.2.b., 1.5.1.1.	2	3	4	2	an	z	S	U
<i>Tilia cordata</i> MILLER	au	Eu	1-3	1.3. (1.3.1.2.d.)	3	2-3	2-4	3	e	a	G	K
<i>Tilia platyphyllos</i> SCOP.	au	CEu-Balc	3-4	1.3. (1.3.1.2.c.)	3	2-3	3-4	3-4	e	a	C	K
<i>Tilia tomentosa</i> MOENCH	au	Pann-Balc	1-2	1.3.1.3., 1.5.1.	4	2-3	4	2	e	a	C	K
<i>Ulmus campestris</i> agg.												
<i>Ulmus minor</i> MILLER	au	CEu-Med	1-3	1.3.1.1.a.	3	3-4	4	3-4	an	a	G	K
<i>Ulmus procera</i> SALISB.	au	Atl-CEu	2-3	1.5.2	3-4	2-3	4	2	an	a	G	K
<i>Ulmus glabra</i> HUDSON	au	Eu	4-5	1.3. (1.3.1.2.c.)	2	3-4	3-4	3-4	an	a	G	K
<i>Ulmus laevis</i> PALLAS	au	Cont	1-2	1.1.1.3., 1.3.1.1.a.	3	3-4	4	3-4	an	a	S	K
<i>Vaccinium myrtillus</i> L.	au	EuA	3-6	1.4., 2.3.	1	2-3	1-2	2	e	z	S	K

Taxon	Indiginity	Arealtype	Regionality	Cenotaxonomical groups	Ecological indicator values				Kind of pollination	Kind of fruit- and seed spreading	SBT	NCR
					T	W	R	N				
<i>Vaccinium oxycoccos</i> L.	au	Circ	1-5	3.	1	4-5	1	1	e	z	S	U
<i>Vaccinium vitis-idaea</i> L.	au	Circ	3-6	1.4.	1	2-3	1-2	2	e	z	S	K
<i>Viburnum lantana</i> L.	au	Med	2-3	1.5.	4	2	4	2	e	z	G	K
<i>Viburnum opulus</i> L.	au	EuA	1-4	1.1.1.3., 1.2., 1.3.1.1.	3	3-4	3-4	2-3	e	z	G	K
<i>Viscum album</i> L.	au	EuA	1-4		-	-	-	-	e	z	G	TZ
subsp. <i>album</i>	au			1.								
subsp. <i>austriacum</i> (WIESB.) VOLLM.	au			2.1., 2.2.								
subsp. <i>abietis</i> (WIESB.) ABROM.	au			2.3.								
<i>Vitis riparia</i> MICHX.	ep	Adv	1	1.1.1.3.	3-4	4	4	3	e	z	A	A
<i>Vitis rupestris</i> SCHEELE	ep	Adv	1-3	1.1.1.3., 1.5.3.	4	4	4	3	e	z	A	A
<i>Vitis sylvestris</i> C. C. GMELIN	au	Pont-Med	1-3	1.1., 1.3.1.1.a.b.	4-5	4	4	3	e	z	S	K

Notes:

- 1) incl. subsp. *hungarica* (KÁRP.) SOÓ
- 2) incl. *C. x matrensis* DOMOKOS
- 3) incl. *C. curvisepala* LINDMAN
- 4) agamospecies between *Sorbus aria* agg. x *S. torminalis*: *S. adamii* KÁRP., *S. andrenszkyana* KÁRP., *S. bakonyensis* (JÁV.) KÁRP., *S. balatonica* KÁRP., *S. barthae* KÁRP., *S. borosiana* KÁRP., *S. decipientiformis* KÁRP., *S. degenii* JÁV., *S. eugenii-kelleri* KÁRP., *S. gayeriana* KÁRP., *S. gerecseensis* BOROS et KÁRP., *S. karpatii* BOROS, *S. latissima* KÁRP., *S. pseudobakonyensis* KÁRP., *S. pseudolatifolia* BOROS, *S. pseudo-semiincisa* BOROS, *S. pseudovertesensis* BOROS, *S. redliana* KÁRP., *S. semiincisa* BOROS, *S. simonkaiana* KÁRP., *S. vertesensis* BOROS

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Threatened dendrotaxa of Hungary

DÉNES BARTHA

Introduction

Red Lists and Red Data Books have been compiled throughout the World either for different areas or taxonomic groups since the mid-sixties. The purpose of these documents is to give an account of the level of threat as well as to draw the conservationists' attention to the endangered species. The Red Book of the Hungarian Flora and Fauna was published in 1989 (RAKONCZAY ed., 1989) and the endangered tree and shrub species (BARTHA, 1991, 1992) were also issued in a separate book.

The threat categories applied in these books were based on the international recommendations, but also certain national characteristics were respected. In 1994, with the aim to standardize the categories, these were revised by the World Conservation Union Species Survival Commission (IUCN, 1994) and the criteria were completed with quantitative terms. On the basis of the new categories two global scale lists were compiled: The Red List of Threatened Plants (WALTERS & GILLET, 1998) and The World List of Threatened Trees (OLDFIELD et al., 1998). The review of the threat categories and the criteria has been completed (IUCN/SCC Criteria Review Working Group, 1999) and the recommendation for their adaptation at regional and national level has been prepared (GÄRDENFORS et al., 1999) recently. The present paper was drafted with the consideration of the new review. As the extinction of the species is regarded as a stochastic probability process, in fact, classification into the categories corresponds to an estimation of the extinction risk. The threat category shows the probability of the extinction of the species in the given area.

Material and Methods

The applied threat categories (IUCN, 1994 modified by IUCN/SCC Criteria Review Working Group, 1999) are as it follows:

Extinct (EX): A taxon is Extinct when there is no reasonable doubt that the last individual has died.

Regionally Extinct (RE): A taxon is Regionally Extinct when there is no reasonable doubt that the last individual potentially capable of reproduction within the region has died or disappeared from the region.

Extinct in the Wild (EW): A taxon is Extinct in the Wild when it is known only to survive in cultivation, in captivity or as a naturalised population (or populations) well outside the past range. A taxon is presumed Extinct in the Wild when exhaustive surveys known and/or expected habitat, at appropriate times (diurnal, seasonal, annual), throughout its historic range have failed to record an individual. Surveys should be over a time frame appropriate to the taxon's life cycle and life form.

Critically endangered (CR): A taxon is Critically Endangered when it is facing an extremely high risk of extinction in the wild in the immediate future.

Endangered (EN): A taxon is Endangered when it is not Critically Endangered but is facing a very high risk of extinction in the wild in the near future.

Vulnerable (VU): A taxon is Vulnerable when it is not Critically Endangered or Endangered but is facing a high risk of extinction in the wild in the medium-term future.

Lower Risk (LR): A taxon is Lower Risk when it has been evaluated, does not satisfy the criteria for any of the categories Critically Endangered, Endangered or Vulnerable. Taxa included in the Lower Risk category can be separated into three subcategories:

- **Conservation Dependent (CD):** Taxa which are the focus of a continuing taxon-specific or habitat-specific conservation programme targeted towards the taxon in question, the cessation of which would result in the taxon qualifying for one of the threatened categories above within a period of five years.
- **Near Threatened (NT):** Taxa which do not qualify for Conservation Dependent, but which are close to qualifying for Vulnerable.
- **Least Concern (LC):** Taxa which do not qualify for Conservation Dependent or Near Threatened.

Data Deficient (DD): A taxon is when there is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status. A taxon in this category may be well studied, and its biology well known, but appropriate data on abundance and/or distribution is lacking.

Not Evaluated (NE): A taxon is Not Evaluated when it is has not yet been assessed against the criteria.

The recommendation of the IUCN/SCC Criteria Review Working Group (1999) suggests cancelling the category 'Conservation Dependent', simultaneously, after GÄRDENFORS et al. (1999), the categories have been completed with the category 'Regionally Extinct'.

To classify the species into these above mentioned threatened categories (CD, EN, VU) quantified criteria (ranging A to E) are used. Each taxon must be assessed by all the criteria, but it's enough to satisfy a single criterion to classify a taxon to any of the categories. The applied criteria are the following (IUCN, 1994):

A) Population reduction in the form of either of the following:

1. An observed, estimated, inferred or suspected reduction of at least 80% (CR), 50% (EN), 20% (VU) over the last 10 years or three generations, whichever is the longer, based on (and specifying) any of the following:

- (a) direct observation
- (b) an index of abundance appropriate for the taxon
- (c) a decline in area of occupancy, extent of occurrence and/or quality of habitat
- (d) actual or potential levels of exploitation
- (e) the effects of introduced taxa, hybridisation, pathogens, pollutants, competitors or parasites.

2. A reduction of at least 80% (CR), 50% (EN), 20% (VU) projected or suspected to be met within the next ten years or three generations, whichever is the longer, based on (and specifying) any of (b), (c), (d) or (e) above.

B) Extent of occurrence estimated to be less than 100 km² (CR), 5000 km² (EN), 20000 km² (VU) or area of occupancy estimated to be less than 10 km² (CR), 500 km² (EN), 2000 km² (VU) and estimates indicating any two of the following:

- 1. Severely fragmented or known to exist at only a single location.
- 2. Continuing decline, observed, inferred or projected, in any of the following:
 - (a) extent of occurrence
 - (b) area of occupancy
 - (c) area, extent and/or quality of habitat
 - (d) number of locations or subpopulations
 - (e) number of mature individuals.
- 3. Extreme fluctuations in any of the following:
 - (a) extent of occurrence
 - (b) area of occupancy
 - (c) number of locations or subpopulations
 - (d) number of mature individuals.

C. Population estimated to number less than 250 (CR), 2500 (EN), 10000 (VU) mature individuals and either:

- 1. An estimated continuing decline of at least 25% (CR), 20% (EN), 10% (VU) within 3 years or one generation, whichever is longer or
- 2. A continuing decline, observed, projected, or inferred, in numbers of mature individuals and population structure in the form of either:
 - (a) severely fragmented (i.e. no subpopulation estimated to contain more than 50 (CR), 250 (EN), 1000 (VU) mature individuals)
 - (b) all individuals are in a single subpopulation.

D. Population estimated to number less than 50 (CR), 250 (EN), 1000 (VU) mature individuals.

E. Quantitative analysis showing the probability of extinction in the wild is at least 50% within 10 years or 3 generations (CR), 20% within 20 years or 5 generations (EN), 10% within 100 years (VU) whichever is the longer.

Regional and national Red Lists must contain the ratio of the regional (national) population, which means the total number of individuals of the taxon living in a given place – in this case – in Hungary, to the global population, which means the total number of individuals of the taxon living in the wild. After the recommendations of GÄRDENFORS et al., (1999) on the basis of the ratio of the regional (national) population to the global population five categories are created:

I.	< 2,5%
II.	2,6 – 10,0 %
III.	10,1 – 25,0%
IV.	25,1 – 50,1%
V.	> 50,1%

In the Red List of the Hungarian tree and shrub species the following features are indicated (See Appendix):

- The threatened categories applied at national level referring to Hungary (TC)
- Relevant ratio of the national (regional) population to the global population (nP/gP)
- Sources of danger, endangering factors.

Sources of danger, endangering factors:

- A. Factors endangering the habitats
 - I. Changes in the cultivation methods
 1. Mining, raw material exploitation
 2. Grassland ploughing
 3. Orchard, vineyard planting
 4. Afforestation
 5. Land parcelling, road construction
 - II. Changes in the habitat conditions
 6. Drainage, turf-cutting
 7. Clear cutting, rough forest management methods
 8. Intensive grassland management, over sewing
 9. Karstwater, groundwater lifting
 10. Spontaneous forestation, over scrubbing
 11. Forestation with alien species
 12. Invasion of alien weeds
 13. Overpopulated game-stock
 - III. Mechanical damage to the habitat and vegetation
 14. Intensive tourism
 15. Military activity
 16. Trampling caused by motocross, hang-glider or mountain bike
- B. Factors endangering the plants directly
 17. Flower picking, plant collecting, trade
 18. Introgressive hybridization, gene erosion
 19. Reproduction, regeneration problems
 20. Burning, fire
 21. Shrub clearing

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Appendix

Table 1. – Pink List: Tree and shrub taxa of Hungary having high probability to become endangered in near future

<i>Alnus incana</i> (L.) MÖNCH	NT	<i>Rosa agrestis</i> SAVI	NT
<i>Calluna vulgaris</i> (L.) HULL.	LC	<i>Rosa caesia</i> SM. in SOW.	NT
<i>Castanea sativa</i> MILL.	NT	<i>Sambucus racemosa</i> L.	NT
<i>Cerasus fruticosa</i> PALL.	LC	<i>Ulmus glabra</i> HUDS.	NT
<i>Cerasus mahaleb</i> (L.) MILL.	LC	<i>Ulmus minor</i> MILL.	NT
<i>Colutea arborescens</i> L.	LC	<i>Ulmus procera</i> SALISB.	LC
<i>Lonicera xylosteum</i> L.	LC	<i>Vaccinium myrtillus</i> L.	LC
<i>Padus avium</i> (L.) MILLER	LC	<i>Viscum album</i> L.	
<i>Ribes uva-crispa</i> L.	LC	subsp. <i>abietis</i> ABROM.	NT
		subsp. <i>austriacum</i> VOLLM.	LC

Table 2. – Threatened tree and shrub species in Hungary, and their endangering factors

Taxa	TC	nP/gP	Endangering factors
GYMNOSPERMAE			
<i>Ephedra distachya</i> L.	EN	I	1-4, 8, 10, 12, 15, 17, 19, 20
<i>Taxus baccata</i> L.	EN	II	11, 13, 17, 19
ANGIOSPERMAE			
<i>Acer acuminatilobum</i> J. PAPP	CR	V	19
<i>Alnus viridis</i> (CHAIX in VILL.) DC.	VU	I	1, 7, 10, 15, 21
<i>Amelanchier ovalis</i> MEDIK.	VU	I	1, 10, 11, 13, 15, 20
<i>Amygdalus nana</i> L.	EN	I	1, 10, 11, 13, 15, 17, 20, 21
<i>Andromeda polifolia</i> L.	RE		(6)
<i>Betula pubescens</i> EHRH.	EN	I	4, 6, 7, 9, 10, 18
<i>Carpinus orientalis</i> MILL.	EN	I	13, 19
<i>Clematis alpina</i> (L.) MILL.	VU	II	7, 11, 17, 21
<i>Cornus sanguinea</i> L. subsp. <i>hungarica</i> (KÁRP.) SOÓ	DD	?	?
<i>Coronilla emerus</i> L.	VU	I	1, 7, 13, 21
<i>Cotoneaster integerrimus</i> MEDIK.	VU	I	7, 11, 13
<i>Cotoneaster niger</i> (WAHLBG.) FRIES	VU	I	7, 11, 13
<i>Cotoneaster tomentosus</i> (AIT.) LINDLEY	VU	II	7, 11, 13
<i>Crataegus monogyna</i> JACQ. subsp. <i>curvisepala</i> (LINDM.) SOÓ	DD	?	?
<i>Crataegus nigra</i> W. et K.	EN	II	7, 11, 13, 18, 21

Taxa	TC	nP/gP	Endangering factors
<i>Daphne cneorum</i> L. subsp. <i>cneorum</i> subsp. <i>arbusculoides</i> (TUZSON) SOÓ	VU VU	II V	7, 10, 11, 12, 13, 14, 16, 17, 20
<i>Daphne laureola</i> L.	VU	I	1, 7, 11, 13
<i>Daphne mezereum</i> L.	VU	I	7, 11, 17
<i>Hippophaë rhamnoides</i> L.	CR	I	1, 6, 10, 11, 15
<i>Lonicera caprifolium</i> L.	VU	I	7, 11, 14, 17, 21
<i>Lonicera nigra</i> L.	CR	I	1, 7, 13
<i>Malus dasyphylla</i> BORKH.	VU	?	7, 11, 18
<i>Myricaria germanica</i> (L.) DESV.	CR	I	1, 6, 10
<i>Ostrya carpinifolia</i> SCOP.	RE		(3, 5, 7) ?
<i>Populus nigra</i> L.	EN	I	6, 7, 11, 18
<i>Pyrus magyarica</i> TERPÓ	CR	V	5, 18, 19
<i>Pyrus nivalis</i> JACQ.	EN	I	3, 5, 18, 19, 20
<i>Pyrus austriaca</i> KERN.	EN	V?	3, 5, 19
<i>Rhamnus saxatilis</i> JACQ.	EN	I	4, 7, 10, 11, 18, 21
<i>Ribes alpinum</i> L.	EN	I	1, 7, 13
<i>Ribes nigrum</i> L.	EN	I	6, 11
<i>Ribes petraeum</i> WULF. in JACQ.	RE		(7)
<i>Ribes rubrum</i> L. agg.	VU	I	7, 11, 12
<i>Rosa arvensis</i> HUDS.	VU	I	4, 11, 12, 21

Taxa	TC	nP/gP	Endangering factors
<i>Rosa gizellae</i> BORB.	VU	I	21
<i>Rosa glauca</i> POURRET	DD	I	21
<i>Rosa hungarica</i> (BORB.) DEGEN	VU	II	2, 7, 11, 21
<i>Rosa inodora</i> FR. em. KLÁST.	VU	I	7, 11, 21
<i>Rosa kmetiana</i> BORB.	CR	I	21
<i>Rosa livescens</i> BESS.	VU	I	2, 3, 4, 5, 10, 16, 21
<i>Rosa pendulina</i> L.	VU	I	7, 11, 21
<i>Rosa polyacantha</i> (BORB.) DEGEN	VU	I	2, 7, 11, 21
<i>Rosa scabriuscula</i> SM. em. H. BR.	CR	I	7, 21
<i>Rosa sherardi</i> DAVIES	CR	I	7, 11, 21
<i>Rosa stylosa</i> DESV.	RE?	I	
<i>Rosa szaboi</i> (BORB.) FACSAR	EN	I	7, 21
<i>Rosa tomentosa</i> SM.	VU	I	7, 11, 21
<i>Rubus senticosus</i> KOEHLER ex W. et GR.	DD	?	?
<i>Ruscus aculeatus</i> L.	VU	I	7, 11, 17
<i>Ruscus hypoglossum</i> L.	VU	I	7, 11, 13, 17
<i>Salix aurita</i> L.	VU	I	6, 7, 9, 18, 21
<i>Salix elaeagnos</i> SCOP.	EN	I	1, 6, 21
<i>Salix nigricans</i> SM.	EN	I	5, 6, 10
<i>Salix pentandra</i> L.	EN	I	6, 9, 11, 21

Taxa	TC	nP/gP	Endangering factors
<i>Sorbus aria</i> (L.) CR.	VU	I	1, 7, 11, 18
<i>Sorbus domestica</i> L.	VU	II	3, 5, 7, 11
<i>Sorbus graeca</i> (SPACH) LODD.	VU	II	1, 7, 11, 18
<i>Sorbus hazslinszkyana</i> (SOÓ) MÁJOVSKÝ	CR	I	7, 18, 19
Transition between sections <i>Aria</i>			
<i>Sorbus buekkensis</i> SOÓ em. KÁRP.	VU	V	7, 11, 18
<i>Sorbus danubialis</i> (JÁV.) KÁRP.	VU	V	7, 11, 18
<i>Sorbus javorkae</i> (SOÓ) KÁRP.	VU	V	7, 11, 18
<i>Sorbus pannonica</i> KÁRP.	VU	V	7, 11, 18
<i>Sorbus sooi</i> (MÁTHÉ) KÁRP.	VU	V	7, 11, 18
<i>Sorbus aria</i> section x <i>S. torminalis</i> microspecies			
<i>Sorbus adami</i> KÁRP.	EN	V	7, 11
<i>Sorbus andreanszkyana</i> KÁRP.	DD	V	7, 11
<i>Sorbus bakonyensis</i> JÁV. em. KÁRP.	EN	V	7, 11
<i>Sorbus balatonica</i> KÁRP.	VU	V	7, 11
<i>Sorbus barthae</i> KÁRP.	EN	V	7, 11
<i>Sorbus borosiana</i> KÁRP.	CR	V	7, 11, 13, 19
<i>Sorbus decipientiformis</i> KÁRP.	DD	V	7, 11
<i>Sorbus degenii</i> JÁV.	VU	V	7, 11
<i>Sorbus eugenii-kelleri</i> KÁRP.	VU	V	7, 11

Taxa	TC	nP/gP	Endangering factors
<i>Sorbus gáyeriana</i> KÁRP.	DD	V	7, 11
<i>Sorbus gerecseensis</i> BOROS et KÁRP.	EN	V	7, 11
<i>Sorbus karpatii</i> BOROS	VU	V	7, 11
<i>Sorbus latissima</i> KÁRP.	EN	V	7, 11
<i>Sorbus pseudobakonyensis</i> KÁRP.	VU	V	7, 11
<i>Sorbus pseudolatifolia</i> BOROS	VU	V	7, 11
<i>Sorbus pseudosemiincisa</i> BOROS	EN	V	7, 11
<i>Sorbus pseudovertesensis</i> BOROS	VU	V	7, 11
<i>Sorbus redliana</i> KÁRP.	EN	V	7, 11
<i>Sorbus semiincisa</i> BORB.	VU	V	7, 11
<i>Sorbus simonkaiana</i> KÁRP.	VU	V	7, 11
<i>Sorbus vertesensis</i> BOROS	VU	V	7, 11
<i>Sorbus x rotundifolia</i> (BECHST.) HEDL.	CR	I	7, 11
<i>Spiraea crenata</i> L.	RE		(3, 4, 5, 11, 21)
<i>Spiraea media</i> FR. SCHM.	VU	I	10, 11, 14, 13, 17, 21
<i>Spiraea salicifolia</i> L.	VU	I	6, 7, 13, 21
<i>Vaccinium oxycoccos</i> L.	EN	I	6
<i>Vaccinium vitis-idaea</i> L.	VU	I	1, 7, 14
<i>Vitis sylvestris</i> C. C. GMEL.	EN	I	6, 7, 11, 19, 21

Adventive dendrotaxa of Hungary

DÉNES BARTHA

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 sub-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 dendrotoxa 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. quinquafolia* (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 x purpusii</i> REHD.	4
<i>Lycium chinense</i> MILL.	4
<i>Machura 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 x 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

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