

CHECKLIST OF CHAMPION TREES IN THE CZECH REPUBLIC

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ABSTRACT

An increasing number of people all around the world have become interested in remarkable and magnificent trees in recent years. Accessible databases of champion trees are available. Unfortunately, the Czech Republic does not have a single database of remarkable or champion trees. We have old tradition to find and describe an old and monumental trees in our country. In 1899 the first book was issued about it. Many of the biggest specimens are already registered in the Monumental Trees database, which is run by the Nature Conservation Agency of the Czech Republic, registered a total of 25,598 memorable trees in 2017. Not all remarkable or champion trees are designated as memorable. Due too we present the known data on champion trees in an independent checklist. There are shown 116 species of trees with their girth and other information as height, GPS coordinate etc. from various sources. This checklist is a basis for a future one national database. When comparing the champion trees of the Czech Republic with the databases of other European states, particularly that of Monumental Trees, it emerges that we are not far from coming first. The Czech champion tree, Vejda's Lime Tree in Pastviny (*Tilia platyphyllos* Scop.) measured 1,305 cm at girth in 2015. We would like to prepare one integrated Czech database of remarkable trees and champion trees by help of the Professor August Bayer Foundation as soon as possible.

Keywords: remarkable trees, databases trees, champion trees, monumental trees

INTRODUCTION

Trees are an integral part of both nature and the cultural environment of people. Some of them grow to magnificent sizes, others only several meters in height, the conditioning factors being the respective species, age and growth conditions.

Magnificent trees were worshipped already in ancient times by our ancestors who believed that trees house supernatural beings. In modern times locating magnificent trees has become a hobby for many people, a life profession for some. There are groups of tree hunters who strive to discover the mightiest specimens of individual tree species, in some countries even competing with rival groups to discover the biggest trees (www.treehunter.co.uk, www.dendromania.hu). These trees are measured and entered in databases of champion trees, tallest trees and similar.

American Forest Champion Trees National Register (www.americanforests.org) is one of the best-known databases, containing over 700 national champion trees. It was established

back in 1940 and its impressive history inspired many other countries. In Europe, the Tree Register in Great Britain is one of the most important databases (www.treeregister.org). The Tree Register of the British Isles (T.R.O.B.I.) is a registered charity collecting and updating a database of champion trees. Since the 1980s champion trees registers have been established in most European countries, collecting numerous data and publishing some of them. For example, Mitchell *et al.* (1990), Jonson (2003) or Rodger *et al.* (2006) published papers on champion trees in Great Britain, as did Graaf (1991) in Holland or Baudoin *et al.* (1992) or Jacobs (2009) in Belgium. At present, champion trees in Germany are registered under the German Dendrological Society (DDG), with publications released by Kühn *et al.* (2005).

Information on Spanish champion and remarkable trees is provided by Lillo (1997) or later Lerena (2009) or Moya et Moya (2013). The latest publications related to champion trees come from France (Feterman, 2015) or Poland (Borkowski *et al.*, 2016).

An increasing number of people all around the world have become interested in remarkable and magnificent trees in recent years. Accessible databases of champion trees are available even in Hongkong or New Zealand. For several years Europe has held the popular European Tree of the Year contest, which is a follow-up of national contests whose winners are nominated for the European competition. Furthermore, the European Champion Tree Forum (ECTF) was established in 2010. The ECTF is an organization of tree-lovers who take an interest in finding, measuring, documenting and publishing of remarkable, biggest, tallest, oldest “champion trees” in their respective countries as basis for wider activities to protect and preserve these trees. One is unthinkable without the other. The first meeting took place in Wespelaar, Belgium, in 2010, the last one in the Czech Republic in 2016 (www.championtrees.eu).

The development of the Internet has enabled many databases to go on-line, the international database Monumental Trees (www.monumentaltrees.com) being among the most comprehensive and best-known. This worldwide, publicly accessible database contains information on champion trees of many countries and continents. At present, it registers over 30,000 trees. Contrary to this, the paid database Monumental Trees of the World (www.goldencarers.com/monumental-trees-of-the-world) does not contain nearly as much information.

An increased interest in remarkable trees was registered on the territory of Czech lands as early as the turn of the 19th and 20th centuries. In 1899 Jan Evangelista Chadt-Ševětínský published the first survey of remarkable trees in Bohemia. A more detailed list of notable trees was published by the same author in 1908 in the popular and still existing magazine called *Český lid* (Czech People) under the title “Old and Memorable Trees in Bohemia, Moravia and Silesia”, providing the description of 165 remarkable trees and 30 depictions. The emergence of the so-called beautifying societies (the Union of Czech Beautifying Societies in the Bohemian Kingdom was established in Prague on October 30 1904) falls into the same period. After the establishment of the Czechoslovak Republic it was transformed into the Union of Czechoslovak Societies for Beautification and Conservation of Homeland. Starting with 1920, the provision of paragraph 20 of the Allocations Act came into force to conserve remarkable trees. The relationship between people, forests and trees found its legislative basis.

The end of World War 2 marked the beginning of a “Survey of Memorable or Remarkable Trees, Tree Avenues and Forests” which was conducted by volunteers until 1956, using questionnaires of the State Institute of Cultural Heritage and Nature Conservation. Sadly, most of these records were lost. Act No. 40/1956 on State Nature Conservation allowed the designation of selected trees as protected nature monuments. However, their recording on the regional scale was not unified, bordering on confused at times. After the fall of the

communist regime, a new Act No. 114/1992 Coll. on Nature and Landscape Protection has allowed the designation of selected remarkable trees as the so-called memorable trees based on an administrative decision in accordance with paragraph 46.

The Central Register of Nature Conservation, which is run by the Nature Conservation Agency of the Czech Republic, registered a total of 25,598 memorable trees in 2017, almost 80 % of them in the form of solitary trees and the remaining 20 % as tree avenues, tree groups and alleys. However, not only trees of extraordinary dimensions are designated as memorable. They may be remarkable for other reasons, their planting commemorating a special event or for being part of a legend. Out of the total number of solitary trees, 1,560 are lime trees and 1,180 oaks. Tree avenues also consist mainly of lime trees – they contain over 6,000 specimens and approximately 2,000 oaks. The remaining trees are mainly broadleaved, with a small percentage of conifers. All of them are state-protected, their legislative designation referring to them as “memorable trees”.

The Vejda's Lime Tree (Vejdova lípa) in Pastviny in the Orlické Mts. is the mightiest champion - memorable tree in the country, its age estimated at over 700 years. Memorable trees are subject to frequent studies, such as those by Dundychová (1995), Kovařík *et al.* (1996), Hrušková (1999, 2008, 2009) or Hrušková, Úradníček (2016), as well as Svoboda (1975), Donécová, Janočko (2003), Taraba, Navrátilová (2005), Michálek (2006, 2008), Reš, Šůrová (2008), Kyzlík (2011) or Reš (2012). At present, records on memorable trees from 77 districts of the Czech Republic are available (www.cs.wikipedia.org).

Not all remarkable or champion trees are designated as memorable. In the landscape of the Czech Republic there is a number of mighty tree specimens of above-average size within their respective species (Maděra *et al.*, 2000). Apart from the Central Register of Nature Conservation on memorable trees (<http://drusop.nature.cz>), there is also the database of Remarkable Trees of Forests of the Czech Republic, State Enterprise (www.lcr.cz) available. Another database which was run for several years is the database of Remarkable Trees of Military Forests and Farms of the Czech Republic, State Enterprise. At present, it provides on-line records only of memorable trees which grow on the company's land (www.vls.cz). The database of the Professor August Bayer Foundation is one of the oldest Czech databases. It lists the mightiest trees from the known databases, available publications and following their own measurements, partly as findings of the “Looking for Largest Trees” project launched by the Foundation in 1999 (Maděra & Úradníček, 1999; 2000). Many champion trees grow in chateau parks and gardens, as shown by Hieke (1984, 1985) or Krejčířík *et al.* (2015). One of the first publications which also lists other champion trees than memorable trees comes from South Moravia, the Lower Morava Biosphere Reserve (Maděra *et al.*, 2007).

The Czech Republic abounds in ancient castles, imposing chateaux and beautiful churches. However, champion trees which witnessed historical events in real time represent rare historical monuments as well. Compared with monuments created by people, these living natural monuments, very often state-protected memorable trees, have a major advantage on their side: they are alive. Their strength is simultaneously their weakness, as they are subject to the laws of life, ergo the law of decline. While a castle can be restored, a chapel rebuilt, living organisms disappear forever (Hrušková & Úradníček, 2016). That is why we decided to list the monumental trees that grow in the Czech Republic.

Unfortunately, the Czech Republic does not have a single database of remarkable or champion trees. Many of the biggest specimens are already registered in the Monumental Trees database, yet a comprehensive database like the Hungarian Dendromania (www.dendromania.hu) or the Tree Register is still lacking. The aim of this paper is to

present the known data on monumental trees in an independent checklist as a basis for a future database.

METHODS

Trees are usually listed in databases based on their girth. In European countries, with the exception of Great Britain and Ireland, it is measured at the height of 1,3 metres above the ground, while in the two countries mentioned above it is 1,5 m above the ground. The measurement is taken perpendicular to the axis of the trunk. This is the method of measuring girth in the trees listed below. Height was measured by a Nikon Forestry Pro laser rangefinder. The trees were also localized (district, cadastre, possibly their GPS coordinates). The information recorded includes the year of measurement and the basic source of the data used.

RESULTS AND DISCUSSION

The table shows a list of trees in alphabetical order of their scientific names. Each species is represented by a single champion specimen based on its girth.

The following data sources (column 7) were used:

- 1 – Database of the Nature Conservation Agency of the Czech Republic (ÚSOP - memorable trees)
- 2 – Database of the Professor August Bayer Foundation
- 3 – Hrušková & Úradníček, 2016 (List of Remarkable Champion Trees of the Czech Republic)
- 4 – Krejčířik *et al.*, 2015 (Trees of the Lednice Chateau Park)
- 5 – Maděra *et al.*, 2017 (Remarkable Trees and other Dendrological Points of Interest of the Lower Morava Biosphere Reserve)
- 6 – Businský & Velebil, 2015 (Pines in the Czech Republic)

Table 1: Champion trees of the Czech Republic – checklist

Scientific name	District	Cadastre	Plot number	Tree height (m)	Girth at 1.3 m (cm)	Source	Measured (year)
<i>Abies alba</i>	Frydek Místek	Mionší		50	560	2	1999
<i>Abies concolor</i>	Liberec	Starý Harcov	520	27	276	2	2008
<i>Abies grandis</i>	Blansko	Křtiny	915/10	37	395	2	2016
<i>Abies homolepis</i>	Šluknov	Šluknov	1329/1	23	198	1	2009
<i>Abies nordmaniana</i>	Blansko	Křtiny	920/2	31	227	2	2016
<i>Abies procera</i>	Děčín	Velký Šenov	1711/2	26	281	1	2009
<i>Acer campestre</i>	Ústí nad Orlicí	Ústí nad Orlicí	43/33	21	500	1	2009
<i>Acer platanoides</i>	Frydek Místek	Krásná pod Lysou horou	1876/1	19	460	1	2009
<i>Acer pseudoplatanus</i>	Třebíč	Horní Vilémovice	197/2	16	758	3	2010
<i>Acer saccharinum</i>	Děčín	Jiríkov	96/1	25	502	1	2009

<i>Aesculus hippocastanum</i>	Bruná	Nová Ves u Rýmařova	96	28	589	1	2009
<i>Ailanthus altissima</i>	Brno-město	Chrlice		22	360	2	2000
<i>Alnus glutinosa</i>	Cheb	Beranovka	627/3	18	624	1	2014
<i>Alnus incana</i>	Nový Jičín			25	140	2	2004
<i>Betula nigra</i>	Opava	Raduň		25	190	2	2002
<i>Betula pendula</i>	Šumperk	Šumperk		27	550	2	2005
<i>Betula pubescens</i>	Nový Jičín	Nový Jičín		22	180	2	2005
<i>Carpinus betulus</i>	Břeclav	Lanžhot	3520/2	16	463	2	2016
<i>Carya ovata</i>	Břeclav	Hlohovec	1882/1	15	157	2	2016
<i>Castanea sativa</i>	Chrudim	Nasavrky	4/2		534	2	2016
<i>Catalpa bignonioides</i>	Hodonín	Strážnice		16	390	2	2003
<i>Catalpa speciosa</i>	Brno - město	Veveří	1237	18	218	1	2009
<i>Cedrus atlantica</i>	Hlavní město Praha	Vysočany	1919/1	20	253	1	2009
<i>Cedrus libanini</i>	Praha - západ	Černošice	674/1	22	340	1	2009
<i>Celtis occidentalis</i>	Brno - venkov	Střelice u Brna	3441/16	15	255	1	2015
<i>Cerasus mahaleb</i>	Mladá Boleslav	Nové Benátky	2/1	12	368	1	2009
<i>Cercidiphyllum japonicum</i>	Nový Jičín	Frenštát pod Radhoštěm	442/1	16	276	1	2011
<i>Corylus colurna</i>	Karviná	Český Těšín	302/1	22	357	1	2009
<i>Cryptomeria japonica</i>	Blansko	Křtiny	915/10	29	225	2	2016
<i>Cunninghamia lanceolata</i>	Brno - město	Veveří	1022/1	14	88	2	2016
<i>Fagus sylvatica</i>	Rychnov nad Kněžnou	Pěčín u Rychnova nad Kněžnou	1834/1	23	655	1	2009
<i>Fraxinus angustifolia</i>	Kroměříž	Litenčice		26	660	5	2006
<i>Fraxinus excelsior</i>	Jindřichův Hradec	Budkov u Střížovic	2	27	802	1	2012
<i>Ginkgo biloba</i>	Brno-město	Staré Brno	8	25	446	2	2016
<i>Gleditsia triacanthos</i>	Břeclav	Lednice	1863	29	372	2	2016
<i>Gymnocladus dioica</i>	Nymburk	Lysá nad Labem	178	16	286	1	2009
<i>Chamaecyparis lawsoniana</i>	Blansko	Křtiny	920/2	21	198	2	2016
<i>Chamaecyparis nootkatensis</i>	Olomouc				159	2	2000
<i>Chamaecyparis obtusa</i>	Blansko	Křtiny	915/10	15	117	2	2016
<i>Chamaecyparis pisifera</i>	Blansko	Křtiny	915/10	21	216	2	2016
<i>Juglans nigra</i>	Kroměříž	Kvasice	152	25	672	1	2007
<i>Juglans regia</i>	Chrudim	Libkov		18	342	2	1999
<i>Juniperus communis</i>	Písek	Kučef	1843	8	135	1	2011

<i>Juniperus virginiana</i>	Břeclav	Lednice	5/4	18	263	2	2016
<i>Kalopanax pictus</i>	Jindřichův Hradec	Nová Bystřice	14	12	316	1	2016
<i>Larix decidua</i>	Ústí nad Labem	Petrovice u Chabařovic	2185	28	683	1	2010
<i>Larix kaempferi</i>	Bruntál	Heřmanovice	724	25	256	1	2009
<i>Liquidambar orientalis</i>	Brno - město	Veveří	1022/1	17	216	2	2016
<i>Liriodendron tulipifera</i>	Kroměříž	Kroměříž	286/1	37	493	1	2012
<i>Magnolia acuminata</i>	Děčín	Kamenická Nová Výška	362	24	282	1	2016
<i>Malus domestica</i>	Přerov	Jezernice		10	220	2	2004
<i>Metasequoia glyptostroboides</i>	Břeclav	Lednice	1865	34	355	4	2014
<i>Morus alba</i>	Přerov	Olšovec	1403/3	11	318	1	2009
<i>Pawlonia tomentosa</i>	Brno-město	Brno-město		17	380	2	1999
<i>Phellodendron Amiense</i>	Semily	Turnov	1818/1	18	423	1	2003
<i>Picea abies</i>	Sokolov	Šindelová	446	36	505	1	2014
<i>Picea pungens</i>	Olomouc	Olomouc		34	215	2	2004
<i>Pinus aristata</i>	Prostějov	Čechy pod Kosířem	153	14	123	6	2010
<i>Pinus armandi</i> Franch.	Hlavní město Praha	Zbraslav	154	10	108	6	2010
<i>Pinus cembra</i>	Jeseník	Ostružná	349	15	168	1	1981
<i>Pinus coulteri</i>	Praha - východ	Kostelec nad Černými lesy	3109/1	16	172	6	2010
<i>Pinus fleklis</i>	Brno	Černá Pole	2/2	20	152	6	2010
<i>Pinus Jeffreyi</i>	Český Krumlov	Pernek	6	23	270	1	2010
<i>Pinus nigra</i>	Turnov			40	497	2	2002
<i>Pinus peuce</i>	Sokolov	Kraslice	5356/1	27	275	1	2014
<i>Pinus pinaster</i>	Hlavní město Praha	Vyšehrad	61/17	11	130	6	2010
<i>Pinus ponderosa</i>	Praha - západ	Průhonice		40	375	6	2010
<i>Pinus rigida</i>	Praha - západ	Průhonice		32	213	6	2009
<i>Pinus strobus</i>	Blansko	Křetín		9	650	2	2004
<i>Pinus sylvestris</i>	Tachov	Lom u Tachova	564	13	481	1	2009
<i>Pinus wallichiana</i>	Šumperk	Šumperk		30	250	2	2004
<i>Platanus orientalis</i>	Nový Jičín	Kopřivnice		22	337	2	2002
<i>Platanus × acerifolia</i>	Nový Jičín	Bartošovice na Moravě	971/2	36	842	2	2000
<i>Platyclusus orientalis</i>	Břeclav	Lednice		26	190	2	2003
<i>Populus alba</i>	Uherské Hradiště	Suchá Loz		28	780	2	2000
<i>Populus nigra</i>	Nymburk	Nymburk	390/5	25	789	2	2016
<i>Populus tremula</i>	Znojmo	Lechovice			430	2	2003

<i>Populus × canadensis</i>	Strakonice	Strakonice		15	580	2	2001
<i>Populus × canadensis</i>	Uherské Hradiště	Suchá Loz	1206/2	26	715	1	2010
<i>Prunus avium</i>	Trutnov	Hrádeček	350/1	28	423	1	2009
<i>Prunus domestica</i>	Hodonín	Mutěnice		8	142	2	2002
<i>Pseudotsuga menziesii</i>	Strakonice	Čekanice u Blatné		30	474	2	2001
<i>Pyrus communis</i>	Domažlice	Únějovice	934	12	480	1	2009
<i>Pyrus pyraster</i>	Kroměříž	Cvrčovice	100/2	17	390	2	2004
<i>Quercus cerris</i>	Břeclav	Valtice	5449	20	720	2	2005
<i>Quercus frainetto</i>	Brno-město	Černá Pole	3857/1	20	540	2	2008
<i>Quercus macranthera</i>	Nymburk	Mcely	179/2	25	452	1	2009
<i>Quercus petraea</i>	Praha - východ	Myšlín	512/4	18	700	1	2016
<i>Quercus pubescens</i>	Znojmo	Lechovice	330/1	16	647	2	2016
<i>Quercus robur</i>	Třebíč	Náměst nad Oslavou	135/1	20	1030	3	2016
<i>Quercus rubra</i>	Pelhřimov	Proseč - Obořiště	71/1	25	660	1	2009
<i>Robinia pseudoacacia</i>	Hodonín	Strážnice		15	590	2	2005
<i>Salix alba</i>	Brno město	Bosonohy	542	26	820	1	2010
<i>Salix caprea</i>	Šumperk	Rapotín		14	420	2	2005
<i>Salix fragilis</i>	Trutnov	Černý důl	1128	14	540	1	2010
<i>Sciadopitys verticillata</i>	Blansko	Křtiny	915/10	11	90	2	2016
<i>Sequoiadendron giganteum</i>	Uherské Hradiště	Břestek	2444	33	625	1	2010
<i>Sorbus aria</i>	Kladno	Kišice	107	10	277	1	2012
<i>Sorbus domestica</i>	Hodonín	Strážnice na Moravě	4295	17	483	2	2017
<i>Sorbus torminalis</i>	Uherské Hradiště	Vápenice u Starého Hrozenkova	7039/1	18	380	1	2010
<i>Styphnolobium japonicum</i>	Břeclav	Lednice	5/4	20	581	2	2016
<i>Taxodium distichum</i>	Plzeň - jih	Dolní Lukavice	27	19	399	1	2009
<i>Taxus baccata</i>	Brno - venkov	Pernštejn	54	19	463	1	2014
<i>Thuja occidentalis</i>	Blansko	Křtiny	915/10	17	165	2	2016
<i>Thuja plicata</i>	Olomouc	Dalov	112	28	383	1	2015
<i>Thujopsis dolobrata</i>	Blansko	Křtiny	5/1	12	116	2	2016
<i>Tilia cordata</i>	Ústí nad Labem	Český Bukov	381/1	14	925	1	2009
<i>Tilia platyphyllos</i>	Ústí nad Orlicí	Pastviny u Klášterce na Orlicí	499	16	1305	3	2015
<i>Tilia tomentosa</i>	Svitavy	Svitavy předměstí	1916/41	25	345	2	2000

<i>Torreya californica</i>	Břeclav	Lednice	5/4	12	220	5	2006
<i>Torreya nucifera</i>	Brno - město	Veveří	1022/1	18	212	2	2016
<i>Tsuga canadensis</i>	Děčín	Šluknov	1343/1	20	282	1	2009
<i>Tsuga mertensiana</i>	Děčín	Šluknov	327/1	14	97	1	2009
<i>Ulmus glabra</i>	Frýdek Místek	Bukovec u Jablunkova	1350	38	730	1	2012
<i>Ulmus laevis</i>	Jeseník	Velká Kraš	134/1	23	658	1	2009
<i>Ulmus minor</i>	Vsetín	Liptál	221	22	556	1	2007
<i>Zelkova serrata</i>	Břeclav	Hlohovec	1882/1	16	226	2	2014

When comparing the champion trees of the Czech Republic with the databases of other European states, particularly that of Monumental Trees, it emerges that we are not far from coming first. The Czech champion tree, Vejda's Lime Tree in Pastviny (*Tilia platyphyllos* Scop.) measured 1,305 cm at girth in 2015. Compared with the largest specimen of this species, which grows in Germany, it falls short by 234 cm, yet it comes third in European tables. The majestic lime tree in Telecí, which is called the Singing Lime Tree (Zpívající lípa) or Lukas's Lime Tree (Lukášova lípa) (*Tilia platyphyllos*, girth 1,170 cm), is one of the most beautiful lime trees in Europe. It stands next to a traditional house in the highlands style and is one of the very few individual trees in Europe that ever made it on a postage stamp.

The champion oak of the Czech Republic is Žižka's Oak in Náměšť nad Oslavou (*Quercus robur* L., girth 1,030 cm in 2017). It is interesting to note that this remarkable tree was not artificially planted but is a remnant of an original oak forest. Legend has it that the famous commander Žižka set camp under the oak when the Hussite army laid siege to the local castle and that he even tied his horse to it. Many of the cavities of the trunk and branches are covered with elaborate shingle roofs (Hrušková & Úradníček, 2016). When compared with European champion oaks, it may be no match for oaks in Sweden (girth 1,510 cm) or Denmark (girth 1,396 cm) but it can easily compete with champion oaks in Poland – “Dab Chrobry” – 1,004 cm (Zarzynski *et al.*, 2016), Belgium – “Gros Chêne de Liernu” – girth 1,024 cm (Jacobs, 2009) or Lithuania (monumentaltrees.com).

A sycamore maple (*Acer pseudoplatanus* L.), known as the Large Maple in Věstoňovice, with its girth of 758 cm came sixth in the country rating according to www.monumentaltrees.com. It is our largest maple and probably the oldest as well. Records of this remarkable maple tree can be found in expert publications as early as the 19th century (Chadt-Ševětínský, 1899). Over the centuries its trunk has become a living artefact. The hollow trunk is covered by openings resulting from broken-off crown branches, while smaller branches are still alive, covered in leaves. Although it cannot compare with the largest European specimens, e.g. the Italian maple in Pizzo Lipo (girth 1,028 cm) or the German champion maple in Walberg (girth 900 cm), its appearance and a very thin trunk shell walls make it unique within the Czech Republic.

The Adamec Service Tree (*Sorbus domestica* L.), with its girth of 483 cm in 2017, ranks high in European lists. This champion tree is probably the oldest in the country, growing on the Žerotín Hill in Radějov by Strážnice. The estimated age of this tree with a 20-metre crown spread is 400 years. This useful tree is probably a native fruit tree species whose history can be studied in the Service Tree Museum in Tvarožná Lhota (Hrušková & Úradníček, 2016). Only a service tree in Slovakia, “Modranská oskoruše”, with its girth of 500 cm is slightly bigger and beats this Czech champion tree to an honorary second place.

The hedge maple (*Acer campestre* L.), girth 500 cm, which grows in Ústí nad Orlicí, is also the second largest European maple. A bigger specimen can only be found in the Dobrzyca

park, Poland. According to Zarziński *et al.* (2016), the Polish champion tree measured only 460 cm at girth in 2011, yet according to www.monumentaltrees.com it reached 516 cm at repeated measuring, which made it the European champion. Our maple was last measured in 2009 and it is possible that at present it has a bigger girth than the listed European champion maple.

According to www.monumentaltrees.com the wild pear tree (*Pyrus pyraeaster* (L.) Burgsd.) which grows in Kroměříž and whose girth is 390 cm is the third biggest in Europe. It will probably not grow bigger than the European champion tree from Poland, which grew to 560 cm in girth in Tarnowskie Góry.

A monumental pubescent oak (*Quercus pubescens* L.) which is living its last days in the Lechovice chateau park has a girth of 647 cm. In the ranking of countries where trees are measured and the readings are listed on-line it comes fourth. It may not be an equal match to trees growing in warmer countries, such as Spain (girth 821 cm), Italy (723 cm) or Croatia (660 cm), but it is an unexpectedly monumental tree for the Central European conditions.

As for conifers, we should note the Petrovice larch (*Larix decidua* Mill.) which measured 683 cm in girth in 2010. This ranks the Czech Republic third in Europe, surpassed only by Switzerland (girth 1,120 cm) and Italy (girth 891 cm) according to www.monumentaltrees.com.

We will conclude the list with a European champion tree according to www.monumentaltrees.com, the wych elm tree (*Ulmus glabra* Huds.) and its girth of 726 cm measured in 2012. This elm in Bukovec is called the “Border Guard” and is the largest elm in the Czech Republic. Its mighty trunk has strong root swellings, it branches at the height of eight metres and its crown is 35 metres high. It grows at the end of the village, a kilometre from the Czech-Polish border on the left bank of the Olše River, hence the name Border Guard. It is particularly valuable as it is the last large elm of the original six in our country which has survived the epidemic of Dutch elm disease. This elm is healthy, having received arborist treatment in 1996, when its cavity was roofed. Its estimated age is 350-500 years (Hrušková & Úradníček, 2016). This specimen is a mere 3 cm larger in girth than the wych elm on the Brahan Estate in Great Britain which reached 723 cm in girth in 2013. However, the question remains whether the British elm's girth measured at 1.3 m above ground would not be bigger. The Tree Register database lists an even more monumental elm, the “Bishop Burton” with a girth of 928 cm. However, the entry dates from 2011 and it is unclear whether the tree is still alive, as www.monumentaltrees.com would probably have listed it otherwise.

Apart from trees, there is an interesting specimen of the only native evergreen climber, the common ivy (*Hedera helix* L.), whose girth measured 97 cm in 2015. This specimen growing in South Moravia in the Pavlovské Hills is probably the largest in Europe. Its girth exceeds the Belgian champion ivy by 2 cm (girth 95 cm, measured in 2012) as well as the Slovak champion (girth 90 cm) – see www.monumentaltrees.com.

There are many other promising trees in the Czech Republic which have the potential of reaching monumental dimensions. But whether they get the possibility to achieve their full potential and reach an advanced age will depend primarily on people and their relationship to trees.

CONCLUSION

Interest in trees in the Czech Republic has been triggered by the documentary series “Memory of Trees” produced by the Czech Television, as well as many publications representing remarkable trees mostly on a regional level. Moreover, in 2000 the Tree of the Year contest was launched as well. However, the making of a central database of remarkable

trees of the Czech Republic will still require considerable effort. Firstly, an independent portal (championtrees.cz) will need to be created and known, albeit not yet published data will have to be entered in it. The groundwork has been done – the table shown above and the remarkable trees database run by the Professor August Bayer Foundation. What remains is to expand and complement the data in the shortest possible time.

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ELECTRONICAL SOURCES (WWW)

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- <http://dendromania.hu/index.php>
- <http://drusop.nature.cz/ost/chrobjekty/pstromy/>
- <https://lesy.cz/pece-o-les/ochrana-prirody-u-lcr/vyznamne-stromy/>
- <https://www.vls.cz/cs/pro-verejnost/pamatne-stromy>
- <http://www.championtrees.eu/>

<http://www.treeregister.org/>

<http://www.treehunter.co.uk/>

<http://www.americanforests.org/explore-forests/americas-biggest-trees/champion-trees-national-register/>

<http://www.monumentaltrees.com/en/europe> - Monumental trees in Europe

<https://www.monumentaltrees.com/en/> - Monumental trees

<https://www.goldencarers.com/monumental-trees-of-the-world/4648/> - Monumental Trees Of The World.