

Appendice 1. List of saproxylic species recorded in study of heritage trees. Species were classified according to Schmidl & Bußler [45]; Seibold et al. [42]. The threat status: critically endangered (CR), endangered (EN) vulnerable (VU) and near threatened (NT) was used according Red List of Endangered Species of Invertebrates of the Czech Republic Hejda et al., [47]. Larval guilds and adult flower visitors (1 – yes) were classified according [42]. Species are listed alphabetically.

	Threat status	Individuals	Larval guild	Flow. visitors
<i>Abraeus granulum</i> (Erichson, 1839)	VU	3	Wood-Bark	
<i>Abraeus perpusillus</i> (Marsham, 1802)		6	Wood-Bark	
<i>Aesalus scarabaeoides</i> (Panzer, 1794)	NT	2	Wood-Bark	
<i>Agathidium nigripenne</i> (Fabricius, 1792)		1	Wood-Bark	
<i>Agrilus biguttatus</i> (Fabricius, 1776)		4	Wood-Bark	
<i>Agrilus sulcicollis</i> (Lac.Bois. & Lacordaire, 1835)		2	Wood-Bark	
<i>Akimerus schaefferi</i> (Laicharting, 1784)	EN	1	Wood-Bark	1
<i>Allecula morio</i> (Fabricius, 1787)	NT	44	Cavity	
<i>Ampedus balteatus</i> (Linnaeus, 1758)		1	Wood-Bark	
<i>Ampedus cardinalis</i> (Schiödte, 1865)	VU	6	Cavity	
<i>Ampedus glycereus</i> (Herbst, 1784)		1	Wood-Bark	1
<i>Ampedus nigroflavus</i> (Goeze, 1777)		2	Wood-Bark	
<i>Ampedus pomorum</i> (Herbst, 1784)		69	Wood-Bark	
<i>Ampedus sanguinolentus</i> (Schränk, 1776)		3	Wood-Bark	
<i>Ampedus scrofa</i> (Germar, 1844)		1	Wood-Bark	
<i>Anaspis flava</i> (Linnaeus, 1758)		5	Wood-Bark	1
<i>Anaspis frontalis</i> (Linnaeus, 1758)		23	Wood-Bark	1
<i>Anaspis thoracica</i> (Linnaeus, 1758)		6	Wood-Bark	1
<i>Anisandrus dispar</i> (Fabricius, 1792)		3	Wood-Bark	
<i>Anisotoma castanea</i> (Herbst, 1791)		1	Fungi	
<i>Anisotoma humeralis</i> (Fabricius, 1792)		3	Fungi	
<i>Anobium punctatum</i> (De Geer, 1774)		2	Wood-Bark	
<i>Arthrolips obscura</i> (C.R. Sahlberg, 1833)		2	Wood-Bark	
<i>Atomaria bella</i> (Reitter, 1875)		2	Fungi	
<i>Atomaria elongatula</i> (Erichson, 1846)		4	Fungi	
<i>Bitoma crenata</i> (Fabricius, 1775)		1	Wood-Bark	
<i>Brachygonus megerlei</i> (Lacordaire, 1835)	VU	3	Wood-Bark	
<i>Bruchoptinus rufipes</i> (Olivier, 1790)		40	Wood-Bark	
<i>Calambus bipustulatus</i> (Linnaeus, 1767)		9	Wood-Bark	
<i>Cerylon fagi</i> (C. Brisout de Barneville, 1867)		1	Wood-Bark	
<i>Cerylon ferrugineum</i> (Stephens, 1830)		10	Wood-Bark	
<i>Cerylon histeroides</i> (Fabricius, 1792)		31	Wood-Bark	
<i>Cetonia aurata</i> (Linnaeus, 1758)		11	Wood-Bark	1
<i>Cis comptus</i> (Gyllenhal, 1827)		1	Fungi	
<i>Cis fagi</i> (Waltl, 1839)		5	Fungi	
<i>Cis fusciclavis</i> (Nyholm, 1954)		1	Fungi	
<i>Cis micans</i> (Fabricius, 1792)		4	Fungi	
<i>Colydium elongatum</i> (Fabricius, 1787)	NT	7	Wood-Bark	

<i>Colyidium filiforme</i> (Fabricius, 1792)	VU	6	Wood-Bark	
<i>Conalia baudii</i> (Mulsant & Rey, 1858)	CR	1	Wood-Bark	
<i>Conopalpus testaceus</i> (Olivier, 1790)	NT	2	Wood-Bark	
<i>Corticarina similata</i> (L. Gyllenhal, 1827)		3	Fungi	
<i>Corticeus fasciatus</i> (Fabricius, 1790)	VU	5	Wood-Bark	
<i>Corticeus unicolor</i> (Piller & Mitterpacher, 1783)	NT	5	Wood-Bark	
<i>Cossonus cylindricus</i> C. R. Sahlberg, 1835		3	Wood-Bark	
<i>Cossonus linearis</i> (Fabricius, 1775)		1	Wood-Bark	
<i>Cossonus parallelepipedus</i> (Herbst, 1795)		3	Wood-Bark	
<i>Cryptarcha strigata</i> (Fabricius, 1787)		1103	Wood-Bark	
<i>Cryptarcha undata</i> (Olivier, 1790)		508	Wood-Bark	
<i>Cryptolestes duplicatus</i> (Waltl, 1839)		31	Wood-Bark	
<i>Cryptolestes ferrugineus</i> (Stephens, 1831)		1	Wood-Bark	
<i>Cryptophagus confusus</i> (Bruce, 1934)		3	Cavity	
<i>Cryptophagus fuscicornis</i> (Sturm, 1845)		1	Cavity	
<i>Cryptophagus labilis</i> (Erichson, 1846)		1	Cavity	
<i>Cryptophagus micaceus</i> (Rey, 1889)		15	Fungi	
<i>Cucujus cinnaberinus</i> (Scopoli, 1763)	VU	1	Wood-Bark	
<i>Dacne bipustulata</i> (Thunberg, 1781)		23	Fungi	
<i>Dendrophilus punctatus</i> (Herbst, 1792)		6	Cavity	
<i>Denticollis linearis</i> (Linnaeus, 1758)		1	Wood-Bark	1
<i>Diaclina fagi</i> (Panzer, 1799)	VU	1	Wood-Bark	
<i>Dissoleucas niveirostris</i> (Fabricius, 1798)		1	Wood-Bark	
<i>Dorcatoma dresdensis</i> (Herbst, 1792)		4	Fungi	
<i>Dorcatoma flavicornis</i> (Fabricius, 1792)		22	Wood-Bark	
<i>Dorcatoma chrysomelina</i> (Sturm, 1837)		56	Wood-Bark	
<i>Dorcus parallelepipedus</i> (Linnaeus, 1758)		13	Wood-Bark	
<i>Dromaeolus barnabita</i> (A. Villa & G. B. Villa, 1838)	VU	2	Wood-Bark	
<i>Dryocoetes autographus</i> (Ratzeburg, 1837)		1	Wood-Bark	
<i>Dryocoetes villosus</i> (Fabricius, 1792)		7	Wood-Bark	
<i>Enicmus atriceps</i> (Hansen, 1962)		3	Fungi	
<i>Enicmus fungicola</i> (C.G. Thomson, 1868)		17	Fungi	
<i>Ennearthron cornutum</i> (Gyllenhal, 1827)		4	Fungi	
<i>Epuraea biguttata</i> (Thunberg, 1784)		432	Wood-Bark	
<i>Epuraea guttata</i> (Olivier, 1790)		231	Wood-Bark	
<i>Epuraea marseuli</i> (Reitter, 1872)		8	Wood-Bark	
<i>Epuraea pallescens</i> (Stephens, 1835)		2	Wood-Bark	1
<i>Ernoporus tiliae</i> (Panzer, 1793)		2	Wood-Bark	
<i>Eucnemis capucinus</i> (Ahrens, 1812)	EN	9	Wood-Bark	
<i>Gasterocercus depressirostris</i> (Fabricius, 1792)	VU	1	Wood-Bark	
<i>Gastrallus laevigatus</i> (Olivier, 1790)		2	Wood-Bark	
<i>Glischrochilus quadriguttatus</i> (Fabricius, 1776)		312	Wood-Bark	
<i>Globicornis nigripes</i> (Fabricius, 1792)		12	Wood-Bark	1

<i>Grammoptera ruficornis</i> (Fabricius, 1781)		1	Wood-Bark	1
<i>Grynocharis oblonga</i> (Linnaeus, 1758)	VU	1	Wood-Bark	
<i>Hadrobregmus pertinax</i> (Linnaeus, 1758)		5	Wood-Bark	
<i>Hemicoelus rufipennis</i> (Duftschmid, 1825)		1	Wood-Bark	
<i>Hylastes brunneus</i> (Erichson, 1836)		1	Wood-Bark	
<i>Hylecoetus dermestoides</i> (Linnaeus, 1761)		5	Wood-Bark	1
<i>Hylesinus crenatus</i> (Fabricius, 1787)		2	Wood-Bark	
<i>Hylesinus varius</i> (Fabricius, 1775)		163	Wood-Bark	
<i>Hypulus bifasciatus</i> (Fabricius, 1792)		1	Wood-Bark	
<i>Ips duplicatus</i> (Sahlberg, 1836)		1	Wood-Bark	
<i>Korynetes caeruleus</i> (De Geer, 1775)		8	Wood-Bark	1
<i>Latridius consimilis</i> (Mannerheim, 1844)		1	Fungi	
<i>Latridius hirtus</i> (Gyllenhal, 1827)		8	Fungi	
<i>Leiopus nebulosus</i> (Linnaeus, 1758)		2	Wood-Bark	
<i>Leptura annularis</i> (Fabricius, 1801)	EN	2	Wood-Bark	1
<i>Leptura quadrifasciata</i> (Linnaeus, 1758)		1	Wood-Bark	1
<i>Litargus balteatus</i> (LeConte, 1856)		1	Fungi	
<i>Litargus connexus</i> (Geoffroy in Fourcroy, 1785)		14	Fungi	
<i>Lymantria coryli</i> (Perris, 1853)		1	Wood-Bark	
<i>Lymexylon navale</i> (Linnaeus, 1758)	VU	117	Wood-Bark	
<i>Magdalis armigera</i> (Geoffroy, 1785)		1	Wood-Bark	
<i>Malachius bipustulatus</i> (Linnaeus, 1758)		4	Wood-Bark	1
<i>Megatoma undata</i> (Linnaeus, 1758)		5	Cavity	
<i>Melandrya barbata</i> (Fabricius, 1792)	EN	2	Wood-Bark	
<i>Melanotus castanipes</i> (Paykull, 1800)		71	Wood-Bark	1
<i>Melanotus villosus</i> (Fourcroy, 1785)		17	Wood-Bark	1
<i>Micrambe abietis</i> (Paykull, 1798)		1	Fungi	
<i>Mordellistena humeralis</i> (Linnaeus, 1758)		5	Wood-Bark	
<i>Mordellochroa abdominalis</i> (Fabricius, 1775)		55	Wood-Bark	1
<i>Mycetochara axillaris</i> (Paykull, 1799)	NT	2	Wood-Bark	
<i>Mycetochara flavipes</i> (Fabricius, 1792)	EN	1	Wood-Bark	
<i>Mycetochara maura</i> (Fabricius, 1792)	NT	15	Wood-Bark	
<i>Mycetophagus fulvicollis</i> (Fabricius, 1792)	VU	2	Fungi	
<i>Mycetophagus piceus</i> (Fabricius, 1777)	NT	58	Fungi	
<i>Mycetophagus populi</i> (Fabricius, 1798)	VU	1	Fungi	
<i>Mycetophagus quadriguttatus</i> (P.W. J. Müller, 1821)		21	Fungi	
<i>Mycetophagus quadripustulatus</i> (Linnaeus, 1761)		2	Fungi	
<i>Nemadus colonoides</i> (Kraatz, 1851)	NT	1	Wood-Bark	
<i>Nemozoma elongatum</i> (Linnaeus, 1761)		2	Wood-Bark	
<i>Nosodendron fasciculare</i> (Olivier, 1790)		1	Wood-Bark	1
<i>Oligomerus brunneus</i> (Olivier, 1790)		4	Wood-Bark	
<i>Oligomerus retowskii</i> (Schilsky, 1898)		1	Wood-Bark	
<i>Orchesia fasciata</i> (Illiger, 1798)		1	Wood-Bark	
<i>Orchesia fusiformis</i> (Solsky, 1871)		2	Wood-Bark	

<i>Orchesia micans</i> (Panzer, 1795)		1	Fungi	
<i>Orchesia minor</i> (Walker, 1837)		1	Wood-Bark	
<i>Orchesia undulata</i> (Kraatz, 1853)		4	Wood-Bark	
<i>Orthocis alni</i> (Gyllenhal, 1813)		1	Fungi	
<i>Orthocis lucasi</i> (Abeille de Perrin, 1874)		2	Fungi	
<i>Orthoperus atomus</i> (Gyllenhal, 1808)		18	Fungi	
<i>Orthoperus brunnipes</i> (Gyllenhal, 1808)		25	Fungi	
<i>Orthoperus corticalis</i> (Redtenbacher, 1849)		7	Fungi	
<i>Palorus depressus</i> (Fabricius, 1790)	NT	22	Wood-Bark	
<i>Paracorymbia maculicornis</i> (DeGeer, 1775)		2	Wood-Bark	1
<i>Paranovelsis punctatus</i> (Scopoli, 1772)		5	Wood-Bark	1
<i>Paromalus flavicornis</i> (Herbst, 1792)		21	Wood-Bark	
<i>Pediacus depressus</i> (Herbst, 1794)	VU	18	Wood-Bark	
<i>Pentaphyllus testaceus</i> (Hellwig, 1792)	VU	7	Wood-Bark	
<i>Phymatodes testaceus</i> (Linnaeus, 1758)		4	Wood-Bark	
<i>Pityogenes chalcographus</i> (Linnaeus, 1761)		6	Wood-Bark	
<i>Pityokteines spinidens</i> (Reitter, 1894)		1	Wood-Bark	
<i>Pityophagus ferrugineus</i> (Linnaeus, 1761)		21	Wood-Bark	
<i>Placonotus testaceus</i> (Fabricius, 1787)		1	Wood-Bark	
<i>Plagionotus detritus</i> (Linnaeus, 1758)		6	Wood-Bark	
<i>Platycerus caprea</i> (De Geer, 1774)		2	Wood-Bark	
<i>Platydema violaceum</i> (Fabricius, 1790)	NT	2	Fungi	
<i>Platypus cylindrus</i> (Fabricius, 1792)		13	Wood-Bark	
<i>Platysoma compressum</i> (Herbst, 1783)		2	Wood-Bark	
<i>Plegaderus caesus</i> (Herbst, 1792)		1	Wood-Bark	
<i>Pogonocherus hispidus</i> (Linnaeus, 1758)		1	Wood-Bark	
<i>Priobium carpini</i> (Herbst, 1793)		9	Wood-Bark	
<i>Prionychus ater</i> (Fabricius, 1775)	NT	2	Cavity	
<i>Procræus tibialis</i> (Lac. in Bois. & Lacordaire, 1835)		8	Cavity	
<i>Protaetia marmorata</i> (Fabricius, 1792)		4	Cavity	1
<i>Protaetia speciosissima</i> (Scopoli, 1786)	VU	4	Cavity	1
<i>Pseudeuparius sepicola</i> (Fabricius, 1792)	NT	2	Wood-Bark	
<i>Pseudoptinus coarcticollis</i> (Sturm, 1837)	NT	1	Wood-Bark	
<i>Pteleobius vittatus</i> (Fabricius, 1787)		1	Wood-Bark	
<i>Ptilinus pectinicornis</i> (Linnaeus, 1758)		2	Wood-Bark	
<i>Ptinomorphus imperialis</i> (Linnaeus, 1767)		1	Wood-Bark	1
<i>Ptinus sexpunctatus</i> Panzer, 1795		6	Wood-Bark	
<i>Pyrrhidium sanguineum</i> (Linnaeus, 1758)		5	Wood-Bark	
<i>Rhagium mordax</i> (DeGeer, 1775)		1	Wood-Bark	1
<i>Rhagium sycophanta</i> (Schränk, 1781)		17	Wood-Bark	1
<i>Rhizophagus bipustulatus</i> (Fabricius, 1792)		51	Wood-Bark	
<i>Rhizophagus fenestralis</i> (Linnaeus, 1758)		32	Wood-Bark	
<i>Rhizophagus perforatus</i> (Erichson, 1845)	NT	17	Wood-Bark	
<i>Rhyncolus punctatulus</i> (Boheman, 1838)		3	Wood-Bark	
<i>Salpingus planirostris</i> (Fabricius, 1787)		1	Wood-Bark	
<i>Salpingus ruficollis</i> (Linnaeus, 1761)		1	Wood-Bark	

<i>Saperda scalaris</i> (Linnaeus, 1758)		1	Wood-Bark	1
<i>Scolytus carpini</i> (Ratzeburg, 1837)		1	Wood-Bark	
<i>Scolytus mali</i> (Bechstein, 1805)		1	Wood-Bark	
<i>Scolytus multistriatus</i> (Marsham, 1802)		4	Wood-Bark	
<i>Scolytus scolytus</i> (Fabricius, 1775)		1	Wood-Bark	
<i>Scraptia fuscula</i> (P.W. J. Müller, 1821)		6	Wood-Bark	
<i>Silvanus bidentatus</i> (Fabricius, 1792)		1	Wood-Bark	
<i>Silvanus unidentatus</i> (Olivier, 1790)		1	Wood-Bark	
<i>Stenocorus meridianus</i> (Linnaeus, 1758)		2	Wood-Bark	1
<i>Stenostola dubia</i> (Laicharting, 1784)		1	Wood-Bark	
<i>Stephostethus alternans</i> (Mannerheim, 1844)		1	Fungi	
<i>Stereocorynes truncorum</i> (Germar, 1824)		5	Wood-Bark	
<i>Symbiotes gibberosus</i> (Lucas, 1849)	NT	2	Cavity	
<i>Synchita humeralis</i> (Fabricius, 1792)		1	Wood-Bark	
<i>Taphrorychus bicolor</i> (Herbst, 1793)		1	Wood-Bark	
<i>Tetrops starkii</i> Chevrolat, 1859		1	Wood-Bark	
<i>Thanasimus formicarius</i> (Linnaeus, 1758)		7	Wood-Bark	
<i>Tillus elongatus</i> (Linnaeus, 1758)		1	Wood-Bark	1
<i>Tomoxia bucephala</i> (Costa, 1854)		5	Wood-Bark	1
<i>Trachodes hispidus</i> (Linnaeus, 1758)		1	Wood-Bark	
<i>Trinodes hirtus</i> (Fabricius, 1781)		7	Cavity	
<i>Tritoma bipustulata</i> (Fabricius, 1775)		4	Fungi	
<i>Trypodendron laeve</i> (Eggers, 1939)		1	Wood-Bark	
<i>Trypophloeus asperatus</i> (Gyllenhal, 1813)		1	Wood-Bark	
<i>Uleiota planatus</i> (Linnaeus, 1761)		2	Wood-Bark	
<i>Uloma culinaris</i> (Linnaeus, 1758)	NT	13	Wood-Bark	
<i>Valgus hemipterus</i> (Linnaeus, 1758)		1	Wood-Bark	1
<i>Vincenzellus ruficollis</i> (Panzer, 1794)		1	Wood-Bark	
<i>Xestobium plumbeum</i> (Illiger, 1801)		1	Wood-Bark	1
<i>Xestobium rufovillosum</i> (De Geer, 1774)		8	Wood-Bark	1
<i>Xyleborinus alni</i> (Nijjima, 1909)		4	Wood-Bark	
<i>Xyleborinus saxesenii</i> (Ratzeburg, 1837)		99	Wood-Bark	
<i>Xyleborus dryographus</i> (Ratzeburg, 1837)		30	Wood-Bark	
<i>Xyleborus monographus</i> (Fabricius, 1792)		115	Wood-Bark	
<i>Xylosandrus germanus</i> (Blandford, 1894)		3	Wood-Bark	