

# **PREHĽAD FAUNY CHROBÁKOV (COLEOPTERA) ŽIJÚCICH NA DUBOCH NA ÚZEMÍ SLOVENSKA**

## **A SURVEY OF THE BEETLE FAUNA LIVING ON OAKS IN SLOVAKIA**

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**Abstract:** The present paper deals with the published as well as own unpublished data concerning the beetle fauna associated with oaks in Slovakia. Altogether 468 beetle species from 51 families were confirmed. The regular and most numerous occurrence has 49 species (10.47%). All data on the occurrence, trophic groups and bionomics of both adults and larvae are presented in table.

**Keywords:** Coleoptera, Slovakia, oaks

V príspevku uvádzame prehľad publikovaných a vlastných nepublikovaných (zbierkovo doložených) údajov o faune chrobákov žijúcich na duboch na území Slovenska za obdobie posledných 40 rokov.

Prácu sme robili v rámci grantu 1/1141/94 Fauna Slovenska, jej genfond a jeho využitie. Cieľom bolo zhromaždiť údaje o taxocenózach chrobákov žijúcich na duboch na území Slovenska na základe našich výskumov a literárnych údajov.

Materiál bol zozbieraný viacerými metódami - oklepmi, strihaním konárov, použitím stromových lapákov, fotoelektorov, ako aj individuálnym zberom v dreve a pod kôrou. Na duboch bolo celkovo zistených 468 druhov chrobákov, ktoré patrili do 51 čeľadi. Pravidelný a hojný výskyt má 49 druhov (10,47%). Všetky údaje o výskyte, trofických skupinách, bionómii imág i lariev sú uvedené v tabuľke 1.

Nomenklatúru Coleoptera používame podľa práce JELÍNEK et al., 1993. Pri zostavení tabuľky sme vychádzali z prác týchto autorov: BÍLÝ, 1989, HEYROVSKÝ & SLÁMA, 1992, HOLECOVÁ, 1991, KLEINERT, 1980, MAJZLAN, 1978, 1979, PATOČKA et al., 1962, ŠVÁCHA

& DANILEVSKI, 1987, 1988, VIDLIČKA, 1989, ZACH, 1991a, 1991b, 1994, 1995, ZACH & KRIŠTÍN, 1994.

Podrobnejšej faunistickej a ekologickej analýze Coleoptera na duboch Slovenska bude venovaná samostatná štúdia.

Tabuľka 1. Celkový prehľad chrobákov (Coleoptera) zistených na duboch na území Slovenska.

Table 1. General survey of beetles (Coleoptera) found on oaks in Slovakia.

| 1  | 2                      | 3   | 4  | 5                 | 6                |
|--|------------------------|---|--|-------------------|------------------|
| Čeľad' (Family)<br>Druh (Species)                  | Výskyt<br>(Occurrence) | Trofické skupiny<br>)<br>(Trophic groups) | Bližšie údaje o bionómii:<br>(More about bionomy of:)<br>Imága<br>(Adults) | Larvy<br>(Larvae) | Autori (Authors) |
| <b>Carabidae</b>                                   |                        |   |  |                   |                  |
| <i>! Calosoma inquisitor</i> (LINNAEUS, 1758)      | S                      | 2A  | PL   | PL                | P62,V89          |
| <i>! Calosoma sycophanta</i> (LINNAEUS, 1758)      | S                      | 2A  | PL   | PL                | P62              |
| <i>Trechus quadristriatus</i> (SCHRANK, 1781)      | Z                      | 2B  | DP   | DP                | V89              |
| <i>Poecilus cupreus</i> (LINNAEUS, 1758)           | Z                      | 2B  | DP   | DP                | V89              |
| <i>! Lebia humeralis</i> DEJEAN, 1825              | S                      | 2A  | PL   | PL                | V89              |
| <i>Lebia cruxminor</i> (LINNAEUS, 1758)            | S                      | 2B  | DP,M   | DP,M              | M79              |
| <i>Dromius agilis</i> (FABRICIUS, 1787)            | Z                      | 2B  | DP,M   | DP,M              | V89              |
| <i>Philorhizus spilotus</i> (ILLIGER, 1798)        | Z                      | 2B  | DP,M   | DP,M              | K80              |
| <i>Philorhizus notatus</i> (STEPHENS, 1827)        | Z                      | 2B  | DP,M   | DP,M              | P62              |
| <i>Microlestes maurus</i> (STURM, 1827)            | Z                      | 2B  | DP,M   | DP,M              | K80              |
| <b>Hydraenidae</b>                                 |                        |   |  |                   |                  |
| <i>Hydraena palustris</i> ERICHSON, 1837           | Z                      | 1B  | DP   | DP                | V89              |
| <b>Silphidae</b>                                   |                        |   |  |                   |                  |
| <i>! Xylodrepa quadripunctata</i> (LINNAEUS, 1761) | V                      | 2A  | PL   | PL                | P62,M79,V89      |
| <i>Phosphuga atrata atrata</i> (LINNAEUS, 1758)    | Z                      | 2B  | DP   | DP                | P62              |
| <b>Leiodidae</b>                                   |                        |   |  |                   |                  |
| <i>Catops nigricans</i> (SPENCE, 1815)             | Z                      | 3B  | DP   | DP                | V89              |
| <b>Scaphidiidae</b>                                |                        |   |  |                   |                  |
| <i>Scaphidium quadrimaculatum</i> OLIVIER, 1790.   | Z                      | 3A  | PI   | PI                | M79              |
| <i>Scaphisoma agaricinum</i> (LINNAEUS, 1758)      | Z                      | 3A  | PI   | PI                | M79              |
| <b>Staphylinidae</b>                               |                        |   |  |                   |                  |
| <i>Siagonium quadricorne</i> KIRBY & SPENCE, 1815  | V                      | 2C  | SM,R   | SM,R              | Z91a,Z94         |
| <i>Eusphalerum florale</i> (ERICHSON, 1840)        | S                      | 1B  | BT   | U                 | M78              |
| <i>Phloeostiba plana</i> (PAYKULL, 1792)           | S                      | 2B  | PR,R   | PR,R              | V89              |
| <i>Othius punctulatus</i> (GÖEZE, 1777)            | Z                      | 2B  | DP,M   | DP,M              | K80,V89          |
| <i>Othius melanocephalus</i> (GRAVENHORST, 1806)   | Z                      | 2B  | DP,M   | DP,M              | V89              |
| <i>Philonthus cognatus</i> STEPHENS, 1832          | Z                      | 2B  | DP   | DP                | V89              |
| <i>Philonthus nitidus</i> (FABRICIUS, 1787)        | Z                      | 2B  | DP,DT  | DP,DT             | V89              |
| <i>Sepedophilus testaceus</i> (FABRICIUS, 1792)    | Z                      | 2B  | DP,PI  | DP,PI             | V89              |
| <i>Tachyporus nitidulus</i> (FABRICIUS, 1781)      | Z                      | 2B  | DP,PI  | DP,PI             | V89              |
| <i>Tachyporus obtusus</i> (LINNAEUS, 1767)         | Z                      | 2B  | DP   | DP                | M78,M79          |
| <i>Tachyporus solutus</i> ERICHSON, 1839           | Z                      | 2B  | DP,M   | DP,M              | M78,M79          |

|  |    |        |        |          |                              |
|--|----|--------|--------|----------|------------------------------|
| <i>Tachyporus hypnorum</i> (FABRICIUS, 1775)                     | Z  | 2B     | DP,M   | DP,M     | K80,V89                      |
| <i>Tachyporus chrysomelinus</i> (LINNAEUS, 1758)                 | Z  | 2B     | DP,M   | DP,M     | M79,V89                      |
| <i>Paederus riparius</i> (LINNAEUS, 1758)                        | Z  | 2B     | DP,M   | DP,M     | K80                          |
| <i>Quedius</i> sp.   | Z  | 2B     | DP     | DP       | P62                          |
| <i>Mycetoporus nigricollis</i> STEPHENS, 1835                    | Z  | 2B     | DP,M   | DP,M     | M79                          |
| <i>Atheta</i> sp.  | Z  | 2B     | DP,M   | DP,M     | K80                          |
| ! <i>Phloeopora corticalis</i> (GRAVENHORST, 1802)               | S  | 2B     | R      | R        | V89                          |
| <i>Oxypoda alternans</i> (GRAVENHORST, 1802)                     | S  | 2B     | DP,PI  | DP,PI    | V89                          |
| Pselaphidae  |    |        |        |          |                              |
| <i>Rybaxis longicornis</i> (LEACH, 1817)                         | Z  | 2B     | DP,M   | DP,M     | K80                          |
| Helodidae  |    |        |        |          |                              |
| <i>Prionocyphon serricornis</i> (P. W. J. MÜLLER, 1821)          | S  | 1A     | GB     | DP       | P62                          |
| <i>Microcara testacea</i> (LINNAEUS, 1767)                       | S  | 1A     | GB     | DP       | K80                          |
| Lucanidae  |    |        |        |          |                              |
| <i>Lucanus cervus</i> (LINNAEUS, 1758)                           | S  | 3A     | DP     | DP       | P62,ZK94                     |
| <i>Dorcus parallelipedus</i> (LINNAEUS, 1758)                    | S  | 3A     | DP     | DP       | P62,ZK94                     |
| <i>Platycerus caprea</i> (DE GEER, 1774)                         | V  | 3A     | DP,GB  | DP       | ZK94                         |
| <i>Aesalus scarabaeoides</i> (PANZER, 1794)                      | S  | 3A     | DP     | DP       | ZK94                         |
| <i>Ceruchus chrysomelinus</i> (HOCHENWARTH, 1785)                | 3A | DP     | DP     | Z        |                              |
| Scarabaeidae   |    |        |        |          |                              |
| <i>Copris lunaris</i> (LINNAEUS, 1758)                           | Z  | 3B     | DT     | DT       | P62                          |
| <i>Onthophagus ovatus</i> (LINNAEUS, 1767)                       | Z  | 3B     | DT     | DT       | M79                          |
| <i>Aphodius fimetarius</i> (LINNAEUS, 1758).                     | Z  | 3B     | DT     | DT       | M79                          |
| ! <i>Rhizotrogus aestivus</i> (OLIVIER, 1789)                    | V  | 1A     | B      | W        | P62                          |
| ! <i>Melolontha melolontha</i> (LINNAEUS, 1758)                  | V  | 1A     | B      | W        | P62,K80,ZK94                 |
| <i>Phyllopertha horticola</i> (LINNAEUS, 1758)                   | S  | 1A     | BT     | W        | M78,M79                      |
| <i>Anisoplia austriaca</i> (HERBST, 1783)                        | Z  | 1B     | BT     | W        | P62                          |
| Buprestidae  |    |        |        |          |                              |
| <i>Acmaeoderina degener</i> (SCOPOLI, 1763)                      | S  | 1A/3A  | BR,GB  | SM,H     | B89                          |
| <i>Acmaeoderella flavofasciata</i> (PILLER & MITTERPACHER, 1783) | S  | 1A/3A  | BR, GB | SM,H     | B89,ZK94                     |
| <i>Eurythyrea quercus</i> (HERBST, 1780)                         | S  | 3A     | GB     | SM,H     | B89,ZK94                     |
| <i>Anthaxia hungarica</i> (SCOPOLI, 1772)                        | S  | 1A/ 3A | BR,GB  | SM,R,H   | B89,Z                        |
| <i>Anthaxia umbellatarum</i> (FABRICIUS, 1787)                   | S  | 1A/ 3A | BR,GB  | T,R,H    | B89                          |
| <i>Anthaxia millefolii</i> (FABRICIUS, 1801)                     | S  | 1A/ 3A | BR, GB | T,R,H    | B89                          |
| <i>Anthaxia salicis</i> (FABRICIUS, 1777)                        | V  | 1A/ 3A | BR,GB  | T,R,H    | B89,ZK94                     |
| <i>Chrysobothris affinis</i> (FABRICIUS, 1794)                   | R  | 1A/ 3A | GB     | SM,R,H   | B89,Z91a,Z94,Z95             |
| <i>Nalanda fulgidicollis</i> (LUCAS, 1849)                       | S  | 1A/ 3A | GB     | T,R,H    | B89,Z91a,Z94,Z95             |
| <i>Coraebus florentinus</i> (HERBST, 1801)                       | S  | 1A/ 3A | GB     | SM,R,(H) | B89,Z                        |
| <i>Coraebus undatus</i> (FABRICIUS, 1787)                        | S  | 1A/3A  | GB     | SM,R     | B89,ZK94                     |
| ! <i>Agrilus biguttatus</i> (FABRICIUS, 1777)                    | V  | 1A/3A  | BT,GB  | R        | P62,K80                      |
| <i>Agrilus cyanescens</i> RATZEBURG, 1837                        | Z  | 1A/ 3A | GB     | T,R,H    | K80                          |
| <i>Agrilus litura</i> KIESENWETTER, 1857                         | S  | 1A/ 3A | GB     | T,R,H    | B89,Z91a                     |
| <i>Agrilus hastulifer</i> RATZEBURG, 1839                        | S  | 1A/ 3A | GB     | T,R,H    | B89                          |
| <i>Agrilus graminis</i> LAPORTE de CASTELNAU & GORY, 1837        | V  | 1A/ 3A | GB     | T,R,H    | B89,Z,Z95                    |
| <i>Agrilus laticornis</i> (ILLIGER, 1803)                        | V  | 1A/ 3A | GB     | T,R,H    | B89                          |
| <i>Agrilus obscuricollis</i> KIESENWETTER, 1857                  | V  | 1A/ 3A | GB     | T,R,H    | B89                          |
| ! <i>Agrilus angustulus</i> (ILLIGER, 1803)                      | R  | 1A/ 3A | GB     | T,R,H    | P62,M79,K80,B89,Z91a,Z94,Z95 |

|  |   |        |        |         |                          |
|--|---|--------|--------|---------|--------------------------|
| <i>Agrilus sulcicollis</i> LACORDAIRE, 1835            | R | 1A/ 3A | GB     | T,SMR,H | M79,B89,Z91a,Z94,<br>Z95 |
| <i>Agrilus viridis</i> (LINNAEUS, 1758)                | V | 1A/ 3A | GB     | T,R,H   | P62,K80,B89,Z            |
| <i>Agrilus roscidus</i> KIESENWETTER, 1857             | S | 1A/ 3A | GB     | T,R,H   | B89                      |
| Elateridae   |   |        |        |         |                          |
| <i>Ampedus sinuatus</i> GERMAR, 1844                   | V | 2A     | BT,DP  | PR      | P62,M78                  |
| <i>Ampedus praeustus</i> (FABRICIUS, 1792)             | S | 2A     | BT,DP  | PR      | P62                      |
| <i>Agriotes pilosellus</i> (SCHÖHERR, 1817)            | V | 1A     | BT     | W       | P62,M78,M79,K80          |
| <i>Agriotes obscurus</i> (LINNAEUS, 1758)              | S | 1B     | BT,DP  | W       | M79                      |
| <i>Adrastus limbatus</i> (FABRICIUS, 1776)             | V | 2A     | BT     | PR,DP   | K80                      |
| <i>Melanotus brunnipes</i> (GERMAR, 1824)              | S | 2A     | BT     | PR      | K80                      |
| <i>Melanotus villosus</i> (FOUCROY, 1785)              | S | 2A     | BT     | PR      | M79                      |
| <i>Melanotus castanipes</i> (PAYKULL, 1800)            | S | 2A     | BT     | PR      | P62                      |
| <i>Agrypnus murinus</i> (LINNAEUS, 1758)               | S | 1B     | BT     | W       | M79                      |
| <i>Prosternon tesselatum</i> (LINNAEUS, 1758)          | V | 2A     | BT     | PR      | P62,M79,K80              |
| <i>Calambus bipustulatus</i> (LINNAEUS, 1767)          | S | 2A     | BT     | PR      | V89                      |
| <i>CiA Adnopus pilosus</i> (LESKE, 1785)               | S | 2A     | BT     | PR      | M79                      |
| <i>Kibunea minuta</i> (LINNAEUS, 1758)                 | S | 2A     | BT     | PR      | M79                      |
| <i>Nothodes parvulus</i> (PANZER, 1799)                | R | 2A     | BT     | PR      | P62,M79,K80,V89          |
| <i>Hemicrepidius hirtus</i> (HERBST, 1784)             | S | 2A     | BT     | PR      | K80                      |
| <i>Athous haemorrhoidalis</i> (FABRICIUS, 1801)        | R | 2A     | BT     | PR      | P62,K80,V89              |
| <i>Athous vittatus</i> (FABRICIUS, 1792)               | R | 2A     | BT     | PR      | P62,M79,V89              |
| <i>Cardiophorus gramineus</i> (SCOPOLI, 1763)          | S | 2A     | BT     | PR      | K80                      |
| <i>Cardiophorus discicollis</i> (HERBST, 1806)         | S | 2A     | BT     | PR      | V89                      |
| Throscidae   |   |        |        |         |                          |
| <i>Trixagus brevicollis</i> (BONVOULOIR, 1859)         | Z | 3A     | DP     | DP      | V89                      |
| Cantharidae  |   |        |        |         |                          |
| <i>Cantharis fusca</i> LINNAEUS, 1758                  | V | 2A     | BT     | PBI     | P62,V89                  |
| <i>Cantharis annularis</i> MÉNÉTRIÉS, 1836             | V | 2A     | BT     | PBI     | M79                      |
| <i>Cantharis rustica</i> FALLÉN, 1807                  | V | 2A     | BT     | PBI     | P62,M78,M79,V89          |
| <i>Cantharis pellucida</i> FABRICIUS, 1792             | V | 2A     | BT     | PBI     | M78,M79                  |
| <i>Cantharis obscura</i> LINNAEUS, 1758                | V | 2A     | BT     | PBI     | P62,M79,K80              |
| <i>Cantharis nigricans</i> (MÜLLER, 1776)              | V | 2A     | BT     | PBI     | P62                      |
| <i>Cantharis livida</i> LINNAEUS, 1758                 | V | 2A     | BT     | PBI     | P62,K80                  |
| <i>Metacantharis discoidea</i> (AHRENS, 1812)          | V | 2A     | BT     | PBI     | P62,K80                  |
| <i>Metacantharis haemorrhoidalis</i> (FABRICIUS, 1792) | V | 2A     | BT     | PBI     | P62                      |
| <i>Rhagonycha lutea</i> (MÜLLER, 1764)                 | S | 2A     | BT     | PBI     | M79                      |
| <i>Rhagonycha fulva</i> (SCOPOLI, 1763)                | S | 2A     | BT     | PBI     | M79                      |
| <i>Rhagonycha lignosa</i> (MÜLLER, 1764)               | R | 2A     | BT     | PBI     | P62,K80                  |
| <i>Rhagonycha elongata</i> (FALLÉN, 1807)              | V | 2A     | BT     | PBI     | M79                      |
| <i>Rhagonycha atra</i> (LINNAEUS, 1767)                | V | 2A     | BT     | PBI     | K80                      |
| <i>Malthinus flaveolus</i> (HERBST, 1786)              | R | 2A     | BT,PBI | PBI     | P62,M79,K80,V89          |
| <i>Malthinus seriepunctatus</i> KIESENWETTER, 1851     | S | 2A     | BT,PBI | PBI     | P62                      |
| <i>Malthinus glabellus</i> KIESENWETTER, 1851          | S | 2A     | BT,PBI | PBI     | P62                      |
| <i>Malthinus biguttatus</i> (PAYKULL, 1800)            | S | 2A     | BT,PBI | PBI     | M79                      |
| <i>Malthodes marginatus</i> (LATREILLE, 1806)          | S | 2A     | BT,PBI | PBI     | P62                      |
| <i>Malthodes brevicollis</i> (PAYKULL, 1798)           | S | 2A     | BT,PBI | PBI     | P62                      |
| Bostrichidae   |   |        |        |         |                          |
| <i>Lycus linearis</i> (GOEZE, 1777)                    | V | 3A     | GB,H   | H       | Z                        |
| <i>Lycus pubescens</i> PANZER, 1793                    | S | 3A     | SM,H   | SM,H    | Z                        |
| <i>Bostrichus capucinus</i> (LINNAEUS, 1758)           | S | 1A/3A  | H      | H       | P62,ZK94,Z95             |

|  |   |       |       |          |                  |
|--|---|-------|-------|----------|------------------|
| <i>Xylopertha retusa</i> (OLIVIER, 1790)                     | S | 1A/3A | DP    | DP       | K80,Z94,ZK94,Z95 |
| Anobiidae  |   |       |       |          |                  |
| <i>Ptinomorphus imperialis</i> (LINNAEUS, 1767)              | S | 3A    | DP    | DP       | P62              |
| <i>Dryophilus pusillus</i> (GYLLENHAL, 1808)                 | S | 3A    | DP    | DP       | M78,M79          |
| <i>Xestobium plumbeum</i> (ILLIGER, 1801)                    | S | 3A    | DP    | DP       | M79              |
| <i>Xestobium rufovillosum</i> (DE GEER)                      | V | 3A    | GB    | SM,H     | Z                |
| <i>Oligomerus brunneus</i> (OLIVIER, 1790)                   | V | 3A    | GB    | T,(SM),H | ZK94             |
| <i>Gastrallus immarginatus</i> (P. W. J. MÜLLER)             | V | 3A    | DP    | DP       | P62,K80,V89      |
| <i>Gastrallus laevigatus</i> (OLIVIER, 1790)                 | S | 3A    | DP    | DP       | M79              |
| <i>Anobium punctatum</i> (DE GEER, 1774)                     | V | 3A    | DP    | DP       | P62,M79          |
| <i>Hemicoelus nitidus</i> (HERBST, 1792)                     | S | 3A    | DP    | DP       | V89              |
| <i>Hemicoelus fulvicornis</i> (STURM, 1837)                  | V | 3A    | DP    | DP       | K80              |
| <i>Ptilinus pectinicornis</i> (LINNAEUS, 1758)               | S | 3A    | DP    | DP       | V89,ZK94         |
| <i>Xyletinus laticollis</i> (DUFTSCHMID, 1825)               | Z | 3B    | DT    | DT       | P62              |
| <i>Xyletinus ater</i> (CREUTZER, 1796)                       | S | 3A    | DP    | DP       | K80              |
| <i>Dorcatoma serra</i> PANZER, 1796                          | S | 3A    | DP,PI | DP,PI    | M79              |
| <i>Dorcatoma dresdensis</i> HERBST, 1792                     | S | 3A    | DP,PI | DP,PI    | K80              |
| Ptinidae   |   |       |       |          |                  |
| <i>Ptinus rufipes</i> OLIVIER, 1790                          | V | 3A    | DP    | DP       | M79,K80          |
| <i>Ptinus fur</i> (LINNAEUS, 1758)                           | V | 3A    | DP    | DP       | V89              |
| Cleridae   |   |       |       |          |                  |
| ! <i>Opilo pallidus</i> (OLIVIER, 1795)                      | V | 2A    | H,R   | PR       | P62,V89          |
| ! <i>Opilo mollis</i> (LINNAEUS, 1758)                       | V | 2A    | H,R   | PR       | V89              |
| ! <i>Clerus mutillarius</i> FABRICIUS, 1775                  | S | 2A    | DP    | PR       | P62              |
| <i>Necrobia violacea</i> (LINNAEUS, 1758)                    | Z | 3B    | DT    | DT       | K80              |
| Dasytidae  |   |       |       |          |                  |
| ! <i>Apolcнемus impressus</i> (MARSHAM, 1802)                | S | 2A    | BT    | PR       | V89              |
| ! <i>Dasytes plumbeus</i> (MÜLLER, 1776)                     | V | 2A    | BT    | PR       | K80              |
| ! <i>Dasytes aerosus</i> KIESENWETTER, 1867                  | V | 2A    | BT    | PR       | P62              |
| Malachiidae  |   |       |       |          |                  |
| ! <i>Malachius bipustulatus</i> (LINNAEUS, 1758)             | S | 2A    | BT    | PR       | P62,K80,Z94a     |
| <i>Sphinginus coarctatus</i> (ERICHSOHN, 1840)               | S | 2A    | BT    | ?        | V89              |
| <i>Ebaeus flavicornis</i> ERICHSOHN, 1840                    | Z | 2A    | BT    | N        | P62              |
| ! <i>Axinotarsus ruficollis</i> (OLIVIER, 1790)              | S | 2A    | BT    | PR       | K80,V89          |
| ! <i>Axinotarsus marginalis</i> (LAPORTE de CASTELNAU, 1840) | S | 2A    | BT    | PR       | K80              |
| Lymexylonidae  |   |       |       |          |                  |
| <i>Hylecoetus dermestoides</i> (LINNAEUS, 1761)              | V | 3A    | GB,H  | ST,H     | Z                |
| <i>Lymexylon navale</i> (LINNAEUS, 1758)                     | S | 3A    | GB,H  | SM,R,H   | Z                |
| Nitidulidae  |   |       |       |          |                  |
| <i>Meligethes</i> sp.  | R | 1B    | BT    | BT       | P62,M78,M79,K80  |
| <i>Epurea depressa</i> (ILLIGER, 1798)                       | S | 1B    | BT    | DP       | K80              |
| Rhizophagidae  |   |       |       |          |                  |
| ! <i>Rhizophagus dispar</i> (PAYKULL, 1800)                  | S | 2A    | PR    | PR       | V89              |
| ! <i>Rhizophagus bipustulatus</i> (FABRICIUS, 1792)          | S | 2A    | PR    | PR       | V89              |
| ! <i>Rhizophagus nitidus</i> (FABRICIUS, 1798)               | S | 2A    | PR    | PR       | V89              |
| ! <i>Monotoma</i> sp.  | Z | 3A    | DP    | DP       | K80              |
| Cucujidae  |   |       |       |          |                  |
| ! <i>Uleiota planata</i> (LINNAEUS, 1761)                    | S | 2A    | R     | PR       | V89              |
| <i>Cucujus cinnaberinus</i> (SCOPOLI, 1763)                  | V | 2C    | SM,R  | SM,R     | Z                |
| ! <i>Pediacus depresso</i> (HERBST, 1794)                    | S | 2A    | R     | PR       | V89              |
| ! <i>Placonotus testaceus</i> (FABRICIUS, 1787)              | S | 2A    | R     | PR       | V89              |

|  |   |    |        |        |                      |
|--|---|----|--------|--------|----------------------|
| <i>! Cryptolestes duplicatus</i> (WALTL, 1839)               | S | 2A | R      | PR     | V89                  |
| Phalacridae  |   |    |        |        |                      |
| <i>Phalacrus corruscus</i> (PANZER, 1797)                    | Z | 3A | PI,BT  | PI     | M79                  |
| <i>Olibrus affinis</i> (STURM, 1807)                         | Z | 1B | BT     | BT     | P62,M78,M79          |
| <i>Olibrus bicolor</i> (FABRICIUS, 1792)                     | Z | 1B | BT     | BT     | V89                  |
| <i>Olibrus flavicornis</i> (STURM, 1807)                     | Z | 1B | BT     | BT     | M79                  |
| <i>Olibrus bimaculatus</i> KÜSTER, 1848                      | Z | 1B | BT     | BT     | M79                  |
| Cryptophagidae   |   |    |        |        |                      |
| <i>Atomaria</i> sp.  | Z | 3A | DP,PI  | DP,PI  | P62                  |
| <i>Cryptophagus badius</i> STURM, 1845                       | Z | 3A | DP,PI  | DP,PI  | M78,M79              |
| Byturidae  |   |    |        |        |                      |
| <i>Byturus tomentosus</i> (DE GEER), 1774                    | Z | 1B | BT     | BT     | P62                  |
| <i>Byturus ochraceus</i> (L. G. SCRIBA, 1790)                | Z | 1B | BT     | BT     | P62                  |
| Bothrididae  |   |    |        |        |                      |
| <i>! Bothrideres contractus</i> (FABRICIUS, 1792)            | S | 2A | PR     | PR     | V89                  |
| Cerylonidae  |   |    |        |        |                      |
| <i>! Cerylon histeroides</i> (FABRICIUS, 1792)               | S | 2A | PR     | PR     | P62,V89,Z            |
| <i>! Cerylon fagi</i> BRISOUT de BARNEVILLE, 1867            | S | 2A | PR     | PR     | P62                  |
| Coccinellidae  |   |    |        |        |                      |
| <i>Subcoccinella vigintiquatuorpunctata</i> (LINNAEUS, 1758) | Z | 1B | B      | B      | P62                  |
| <i>! Scymnus apetzi</i> MULSANT, 1846                        | S | 2A | PBI    | PBI    | M78,M79              |
| <i>! Scymnus frontalis</i> (FABRICIUS, 1787)                 | S | 2A | PBI    | PBI    | P62,M79,K80          |
| <i>! Scymnus silesiacus</i> WEISE, 1902                      | S | 2A | PBI    | PBI    | P62,M79              |
| <i>! Scymnus nigrinus</i> KUGELANN, 1794                     | S | 2A | PBI    | PBI    | K80                  |
| <i>! Scymnus rubromaculatus</i> (GOEZE, 1777)                | S | 2A | PBI    | PBI    | M79,V89              |
| <i>! Scymnus auritus</i> THUNBERG, 1795                      | R | 2A | PBI    | PBI    | P62,M78,M79,K80      |
| <i>! Stethorus punctillum</i> WEISE, 1891                    | R | 2A | PBI    | PBI    | P62,M78,M79,K80      |
| <i>! Clitostethus arcuatus</i> (ROSSI, 1794)                 | S | 2A | PBI    | PBI    | K80                  |
| <i>! Chilocorus bipustulatus</i> (LINNAEUS, 1758)            | S | 2A | PBI,PS | PBI,PS | P62,M79              |
| <i>! Brumus quadripustulatus</i> (LINNAEUS, 1758)            | R | 2A | PBI,PS | PBI,PS | P62,K80              |
| <i>! Aphidecta oblitterata</i> (LINNAEUS, 1758)              | S | 2A | PBI    | PBI    | P62                  |
| <i>! Hippodamia tredecimpunctata</i> (LINNAEUS, 1758)        | S | 2A | PBI    | PBI    | P62                  |
| <i>! Tytthaspis sedecimpunctata</i> (LINNAEUS, 1758)         | S | 2A | PBI    | PBI    | K80                  |
| <i>! Adalia decempunctata</i> (LINNAEUS, 1758)               | R | 2A | PBI    | PBI    | P62,M79,V89          |
| <i>! Adalia bipunctata</i> (LINNAEUS, 1758)                  | R | 2A | PBI    | PBI    | P62,M79,K80          |
| <i>! Coccinella septempunctata</i> LINNAEUS, 1758            | R | 2A | PBI    | PBI    | P62,M78,M79,K80, V89 |
| <i>! Coccinella quinquepunctata</i> LINNAEUS, 1758           | S | 2A | PBI    | PBI    | K80,V89              |
| <i>! Coccinilla quatuordecimpustulata</i> (LINNAEUS, 1758)   | S | 2A | PBI    | PBI    | M79,K80              |
| <i>! Oenopia lyncea agnata</i> (ROSENHAUER, 1847)            | V | 2A | PBI    | PBI    | P62                  |
| <i>! Myrrha octodecimguttata</i> (LINNAEUS, 1758)            | S | 2A | PBI    | PBI    | P62                  |
| <i>! Calvia decemguttata</i> (LINNAEUS, 1767)                | S | 2A | PBI    | PBI    | M79                  |
| <i>! Calvia quatuordecimguttata</i> (LINNAEUS, 1758)         | S | 2A | PBI    | PBI    | P62,V89              |
| <i>! Calvia quinquedecimguttata</i> (FABRICIUS, 1777)        | S | 2A | PBI    | PBI    | V89                  |
| <i>! Propylea quatuordecimpunctata</i> (LINNAEUS, 1758)      | R | 2A | PBI    | PBI    | P62,M78,M79,V89      |
| <i>! Myzia oblongoguttata</i> (LINNAEUS, 1758)               | Z | 2A | PBI    | PBI    | P62                  |
| <i>! Anatis ocellata</i> (LINNAEUS, 1758)                    | V | 2A | PBI    | PBI    | P62                  |
| <i>Halyzia sedecimguttata</i> (LINNAEUS, 1758)               | V | 3A | PI     | PI     | P62,K80              |

|   |   |        |        |        |                      |
|---|---|--------|--------|--------|----------------------|
| <i>Psyllobora vigintiduopunctata</i> (LINNAEUS, 1758) | Z | 3A     | PI     | PI     | P62,K80              |
| <b>Corylophidae</b>                                   |   |        |        |        |                      |
| <i>Sericodes lateralis</i> (GYLLENHAL, 1827)          | S | 2B     | DP     | DP     | V89                  |
| <i>Rhypobius ruficollis</i> (DUVAL, 1854)             | S | 2B     | DP     | DP     | V89                  |
| <i>Orthoperus brunnipes</i> (GYLLENHAL, 1808)         | S | 2B     | DP     | DP     | V89                  |
| <b>Lathridiidae</b>                                   |   |        |        |        |                      |
| <i>Lathridius</i> sp.                                 | Z | 3A     | DP,PI  | DP,PI  | K80                  |
| <i>Corticaria serrata</i> (PAYKULL, 1798)             | Z | 3A     | DP,PI  | DP,PI  | V89                  |
| <i>Corticinara gibbosa</i> (HERBST, 1793)             | R | 3A     | DP,PI  | DP,PI  | P62,M79,K80,V89,Z    |
| <i>Corticinara fuscula</i> (GYLLENHAL, 1827)          | S | 3A     | DP,PI  | DP,PI  | M79                  |
| <b>Colydiidae</b>                                     |   |        |        |        |                      |
| <i>Bitoma crenata</i> (FABRICIUS, 1775)               | R | 2C?    | SM,R,  | SM,R   | ZK94                 |
| ! <i>Colydium elongatum</i> (FABRICIUS, 1787)         | V | 2C     | SM,R,H | SM,R,H | ZK94                 |
| <i>Colydium filiforme</i> FABRICIUS, 1792             | S | 2C     | SM,R,H | SM,R,H | Z                    |
| <b>Mycetophagidae</b>                                 |   |        |        |        |                      |
| <i>Mycetophagus quadripustulatus</i> (LINNAEUS, 1767) | Z | 3A     | PI     | PI     | M79,Z                |
| <i>Litargus connexus</i> (FOURCROY, 1785)             | V | 3A     | PI,R   | PI,R   | P62,V89              |
| <b>Cisidae</b>  |   |        |        |        |                      |
| <i>Orthocis pygmaeus</i> (MARSHAM, 1802)              | S | 3A     | PI     | PI     | M79                  |
| <i>Orthocis vestitus</i> (MELLÉ, 1848)                | S | 3A     | PI     | PI     | V89                  |
| <i>Orthocis festivus</i> (GYLLENHAL, 1813)            | S | 3A     | PI     | PI     | V89                  |
| <b>Melandryidae</b>                                   |   |        |        |        |                      |
| <i>Osphyta bipunctata</i> (FABRICIUS, 1775)           | V | 1A     | BT     | DP     | P62,K80              |
| <b>Mordellidae</b>                                    |   |        |        |        |                      |
| <i>Variimorda villosa</i> (SCHRANK, 1781)             | Z | 1B     | BT     | DP     | M79                  |
| <i>Mordella aculeata</i> LINNAEUS, 1758               | Z | 1B     | BT     | DP     | M79,K80              |
| <i>Mordellistena neuwaldeggiana</i> (PANZER, 1796)    | Z | 1B     | BT     | DP     | K80                  |
| <b>Oedemeridae</b>                                    |   |        |        |        |                      |
| <i>Ischnomera coerulea</i> (LINNAEUS, 1758)           | S | 1B     | BT     | DP,S   | K80                  |
| <i>Oedemera podagrariae</i> (LINNAEUS, 1767)          | Z | 1B     | BT     | DP,S   | M79                  |
| <b>Pyrochroidae</b>                                   |   |        |        |        |                      |
| ! <i>Pyrochroa coccinea</i> (LINNAEUS, 1761)          | S | 2A     | BT     | PR     | K80,V89              |
| <b>Anthicidae</b>                                     |   |        |        |        |                      |
| <i>Notoxus monoceros</i> (LINNAEUS, 1761)             | Z | 1B     | BT     | DP     | M78,M79              |
| <b>Scaptiidae</b>                                     |   |        |        |        |                      |
| <i>Anaspis frontalis</i> (LINNAEUS, 1758)             | V | 1B     | BT     | DP     | P62,M78,M79,K80      |
| <i>Anaspis thoracica</i> (LINNAEUS, 1758)             | V | 1B     | BT     | DP     | P62                  |
| <i>Anaspis ruficollis</i> (FABRICIUS, 1792)           | S | 1B     | BT     | DP,T   | P62                  |
| <i>Anaspis rufilabris</i> (GYLLENHAL, 1827)           | S | 1B     | BT     | DP,T   | M79                  |
| <i>Anaspis flava</i> (LINNAEUS, 1758)                 | V | 1B     | BT     | DP,T   | P62                  |
| <b>Salpingidae</b>                                    |   |        |        |        |                      |
| ! <i>Salpingus ruficollis</i> (LINNAEUS, 1761).       | S | 2A     | DP, PR | DP, PR | M79                  |
| ! <i>Vincenzellus ruficollis</i> (PANZER, 1794)       | S | 2A     | DP,PR  | DP,PR  | V89                  |
| <b>Lagriidae</b>                                      |   |        |        |        |                      |
| <i>Lagria hirta</i> (LINNAEUS, 1758)                  | V | 1A     | BT     | DP     | P62,M78,M79,K80, V89 |
| <b>Alleculidae</b>                                    |   |        |        |        |                      |
| <i>Hymenalia rufipes</i> (FABRICIUS, 1792)            | S | 1A/ 3A | BT     | DP     | K80                  |
| <i>Gonodera luperus</i> (HERBST, 1783)                | V | 1A/ 3A | BT     | DP     | P62                  |
| <i>Cteniopus sulphureus</i> (LINNAEUS, 1758)          | S | 1B/ 3A | BT     | DP     | M79                  |

|   |   |        |          |                  |                           |
|---|---|--------|----------|------------------|---------------------------|
| <i>Omphalus lepturoides</i> (FABRICIUS, 1787)           | S | 1A/ 3A | BT       | DP               | P62,K80                   |
| Tenebrionidae   |   |        |          |                  |                           |
| <i>Corticeus bicolor</i> (OLIVIER, 1790)                | S | 2A     | PR       | PR               | M79                       |
| <i>Stenomax aeneus</i> (SCOPOLI, 1863)                  | S | 3A     | DP,T     | DP,T             | V89                       |
| Cerambycidae  |   |        |          |                  |                           |
| <i>Prionus coriarius</i> (LINNAEUS, 1758)               | V | 3A     | ST,W     | SO,ST,W,H        | ZK94                      |
| <i>Trichoferus pallidus</i> (OLIVIER, 1790)             | S | 3A     | SM       | SM,R,H           | ZK94                      |
| <i>Cerambyx cerdo</i> LINNÆUS, 1758                     | S | 1A/ 3A | SM       | SM,R,H           | P62,ZK94                  |
| <i>Cerambyx scopoli</i> FÜESSLY, 1775                   | V | 1A/3A  | GB       | SM,R,H           | ZK94,Z95                  |
| <i>Axinopalpis gracilis</i> (KRYNICKY, 1832)            | V | 1A/3A  | GB       | T,R,H            | HS92                      |
| <i>Callimoxys gracilis</i> (BRULLÉ, 1832)               | S | 1A/3A  | GB       | T,R,H            | HS92,Z                    |
| <i>Stenopterus rufus</i> (LINNÆUS, 1767)                | R | 1A/3A  | BR,GB    | T,H              | S87,Z91a,ZK94,Z95         |
| <i>Callimellum angulatum</i> (SCHRANK, 1789)            | S | 1A/3A  | BR,GB    | T,SM,H           | P62,S87,Z                 |
| <i>Rhopalopus clavipes</i> (FABRICIUS, 1775)            | S | 1A/3A  | BR,GB    | T,R,H            | HS92                      |
| <i>Rhopalopus spinicornis</i> (ABEILLE DE PERRIN, 1869) | S | 1A/3A  | BR,GB    | T,R,H            | HS92                      |
| <i>Rhopalopus macropus</i> (GERMAR, 1824)               | S | 1A/3A  | BR,GB    | T,R,H            | HS92                      |
| <i>Rhopalopus femoratus</i> (LINNÆUS, 1758)             | S | 1A/3A  | BR,GB    | T,R,H            | HS92,Z                    |
| <i>Pyrrhidium sanguineum</i> (LINNÆUS, 1758)            | R | 1A/3A  | SM,GB    | SM,R,H           | P62,Z91a,Z94,ZK94         |
| <i>Phymatodes testaceus</i> (LINNÆUS, 1758)             | V | 1A/ 3A | SM,GB    | SM,R(H)          | Z91a,Z94,ZK94,Z95         |
| <i>Phymatodes pusillus barbipes</i> KÜSTER, 1847        | S | 1A/3A  | T,GB     | T,R,H            | ZK94,Z95                  |
| <i>Phymatodes alni</i> (LINNÆUS, 1767)                  | V | 1A/ 3A | T,GB     | T,R,H            | Z91a,Z94,Z95              |
| <i>Phymatodes rufipes</i> (FABRICIUS, 1776)             | V | 1A/3A  | T,GB     | T,R,H            | P62,V89                   |
| <i>Anaglyptus mysticus</i> (LINNÆUS, 1758)              | V | 1A/3A  | SM,GB    | SM,H             | M78,M79,Z94,ZK94,Z95      |
| <i>Plagionotus detritus</i> (LINNÆUS, 1758)             | V | 1A/3A  | SM,GB    | SM,R,H           | Z91a,Z94,ZK94,Z95         |
| <i>Plagionotus arcuatus</i> (LINNÆUS, 1758)             | R | 1A/3A  | SM,GB    | SM,R,H           | Z91a,Z94,ZK94,Z95         |
| <i>Xylotrechus antilope</i> (SCHÖNHERR, 1817)           | V | 1A/ 3A | SM,GB    | SM,R,H           | P62,V89,Z91a,Z94,ZK94,Z95 |
| <i>Xylotrechus arvicola</i> (OLIVIER, 1795)             | S | 1A/3A  | SM,GB    | SM,H             | Z                         |
| <i>Chlorophorus figuratus</i> (SCOPOLI, 1763)           | V | 1A/3A  | BR,SM    | SM,H             | S87,ZK94                  |
| <i>Clytus arietis</i> (LINNÆUS, 1758)                   | V | 1A/3A  | SM,GB    | SM,R,H           | S87,ZK94                  |
| <i>Clytus tropicus</i> (PANZER, 1795)                   | S | 1A/3A  | SM       | SM,R,H           | Z                         |
| <i>Rhagium bifasciatum</i> (FABRICIUS, 1775)            | V | 3A     | ST,SM,GB | ST,SM,H          | ZK94                      |
| <i>Rhagium mordax</i> (DE GEER, 1775)                   | V | 3A     | ST,SM,GB | ST,SM,R          | ZK94                      |
| <i>Rhagium sycophanta</i> (SCHRANK, 1781)               | V | 3A     | ST,SM,GB | ST,SM,W,R<br>(H) | P62,Z91                   |
| <i>Stenocorus meridianus</i> (LINNÆUS, 1758)            | V | 3A     | GB       | SO,W,R(H)        | Z                         |
| <i>Stenocorus quercus</i> (GOETZ, 1783)                 | V | 1A/3A  | GB       | SO,W,R(H)        | ZK94                      |
| <i>Dinoptera collaris</i> (LINNÆUS, 1758)               | R | 1A/3A  | BR,GB    | T,W,R            | ZK94                      |
| <i>Cortodera humeralis</i> (SCHALLER, 1783)             | V | 3A     | GB       | SO               | P62,K80,V89,S88,Z<br>K94  |
| <i>Grammoptera ustulata</i> (SCHALLER, 1783)            | V | 1A/3A  | BR,GB    | T(SM),R,H        | P62,S88,ZK94              |
| <i>Pidonia lurida</i> (FABRICIUS, 1792)                 | V | 1A/3A  | BR,GB    | SO,W,R           | V89                       |
| <i>Pedostrangalia revestita</i> (LINNÆUS, 1767)         | S | 1A/ 3A | GB       | SM,H             | ZK94                      |
| <i>Leptura quadrifasciata</i> (LINNÆUS, 1758)           | V | 1A/3A  | BR,GB    | SM,H             | ZK94                      |
| <i>Leptura aurulenta</i> FABRICIUS, 1792                | V | 3A     | GB       | SM,H             | S88,ZK94                  |
| <i>Stictoleptura scutellata</i> (FABRICIUS, 1781)       | V | 1A/3A  | GB       | SM,H             | Z91b                      |
| <i>Anoplodera sexguttata</i> (FABRICIUS, 1775)          | V | 1A/3A  | BR,GB    | SM,H             | S88,Z91b                  |
| <i>Pachytodes cerambyciformis</i> (SCHRANK, 1781)       | V | 1A/3A  | BR,GB    | SO,W,H           | P62,ZK94                  |
| <i>Alosterna tabacicolor</i> (DE GEER, 1775)            | V | 1A/3A  | BR,GB    | SM,R,H           | Z91b                      |
| <i>Strangalia attenuata</i> (LINNÆUS, 1758)             | V | 1A/3A  | BR,GB    | SM,H             | S88,Z                     |

|  |   |       |       |          |                          |
|--|---|-------|-------|----------|--------------------------|
| <i>Rutpela maculata</i> (PODA, 1761)                             | R | 1A/3A | BR,GB | SM,H     | ZK94                     |
| <i>Stenurella melanura</i> (LINNAEUS, 1758)                      | R | 1A/3A | BR,GB | T,H      | ZK94                     |
| <i>Stenurella nigra</i> (LINNAEUS, 1758)                         | R | 1A/3A | BR,GB | T,H      | S88,ZK94                 |
| <i>Mesosa nebulosa</i> (FABRICIUS, 1781)                         | V | 3A    | GB    | SM,(T),H | V89,Z91,Z94,ZK94,<br>Z95 |
| <i>Mesosa curculionoides</i> (LINNAEUS, 1761)                    | V | 3A    | GB    | SM,(T),H | V89                      |
| <i>Pityophylus decoratus</i> FAIRMAIRE, 1855                     | Z | 1A/3A | GB    | T,R,H    | P62                      |
| <i>Pogonocherus hispidus</i> (LINNAEUS, 1758)                    | V | 1A/3A | GB    | T,R,H    | ZK94                     |
| <i>Pogonocherus hispidulus</i> (PILLER et<br>MITTERPACHER, 1783) | V | 1A/3A | GB    | T,R,H    | P62,M79,ZK94             |
| <i>Anaesthetis testacea</i> (FABRICIUS, 1781)                    | R | 1A/3A | GB    | T,R,H    | ZK94,Z95                 |
| <i>Leiopus nebulosus</i> (LINNAEUS, 1758)                        | V | 1A/3A | GB    | T,R,H    | V89,ZK94,Z95             |
| <i>Exocentrus adspersus</i> MULSANT, 1846                        | R | 1A/3A | GB    | T,R,H    | K80,ZK94,Z95             |
| <i>Exocentrus lusitanus</i> (LINNAEUS, 1767)                     | V | 1A/3A | GB    | T,R,H    | P62,V89,ZK94             |
| <i>Saperda scalaris</i> (LINNAEUS, 1758)                         | V | 1A/3A | GB    | SM,R,H   | ZK94,Z95                 |
| <i>Tetrops praeusta</i> (LINNAEUS, 1758)                         | R | 1A/3A | GB    | SM,R,H   | P62,ZK94                 |
| Chrysomelidae  |   |       |       |          |                          |
| <i>Orsodacne lineola</i> (PANZER, 1795)                          | V | 1A    | B,BT  | B        | P62,K80,V89              |
| <i>Oulema gallaeciana</i> (HEYDEN, 1870)                         | Z | 1B    | B     | B        | M79,K80                  |
| <i>Oulema melanopus</i> (LINNAEUS, 1758)                         | Z | 1B    | B     | B        | K80,V89                  |
| <i>Clytra laeviuscula</i> RATZEBURG, 1837                        | S | 1A    | B     | MY       | P62                      |
| <i>Smaragdina aurita</i> (LINNAEUS, 1766)                        | S | 1A    | B     | B        | P62                      |
| <i>Pachybrachys tesselatus</i> (OLIVIER, 1791)                   | S | 1A    | B     | B        | M79                      |
| <i>Cryptocephalus schaefferi</i> SCHRANK, 1789                   | S | 1A    | B     | B        | P62                      |
| <i>Cryptocephalus sexpunctatus</i> (LINNAEUS,<br>1758)           | S | 1A    | B     | B        | P62                      |
| <i>Cryptocephalus bipunctatus</i> (LINNAEUS, 1758)               | S | 1A    | B     | B        | P62                      |
| <i>Cryptocephalus sericeus</i> (LINNAEUS, 1758)                  | Z | 1B    | B,BT  | B        | P62                      |
| <i>Cryptocephalus labiatus</i> (LINNAEUS, 1761)                  | S | 1A    | B     | B        | P62                      |
| <i>Cryptocephalus punctiger</i> PAYKULL, 1799                    | S | 1A    | B     | B        | M79                      |
| <i>Cryptocephalus marginatus</i> FABRICIUS, 1781                 | S | 1A    | B     | B        | K80,V89                  |
| <i>Cryptocephalus pussilus</i> FABRICIUS, 1777                   | V | 1A    | B     | B        | M7K80                    |
| <i>Leptinotarsa decemlineata</i> (SAY, 1824)                     | Z | 1B    | B     | B        | K80,V89                  |
| <i>Gastrophysa polygoni</i> (LINNAEUS, 1758)                     | Z | 1B    | B     | B        | P62                      |
| <i>Galerucella lineola</i> (FABRICIUS, 1781)                     | S | 1A    | B     | B        | P62                      |
| <i>Galeruca tanaceti</i> (LINNAEUS, 1758)                        | Z | 1B    | B     | B        | P62                      |
| <i>Luperus longicornis</i> (FABRICIUS, 1781)                     | Z | 1A    | B     | B        | K80                      |
| <i>Phyllotreta vittula</i> (L. REDTENBACHER, 1849)               | R | 1B    | B     | BM       | P62,M79,K80,V89          |
| <i>Phyllotreta nemorum</i> (LINNAEUS, 1758)                      | V | 1B    | B     | BM       | P62,K80                  |
| <i>Phyllotreta atra</i> (FABRICIUS, 1775)                        | V | 1B    | B     | W        | P62,K80                  |
| <i>Phyllotreta nigripes</i> (FABRICIUS, 1775)                    | Z | 1B    | B     | W        | P62,K80                  |
| <i>Aphthona venustula</i> KUTSCHERA, 1861                        | Z | 1B    | B     | B        | P62                      |
| <i>Aphthona euphorbiæ</i> (SCHRANK, 1781)                        | R | 1B    | B     | B        | P62,K80                  |
| <i>Longitarsus pellucidus</i> (FOUDRAS, 1860)                    | V | 1B    | B     | B        | K80                      |
| <i>Longitarsus curtus</i> (ALLARD, 1860)                         | Z | 1B    | B     | B        | K80                      |
| <i>Longitarsus niger</i> (KOCH, 1803)                            | Z | 1B    | B     | B        | M79                      |
| <i>Longitarsus parvulus</i> (PAYKULL, 1799)                      | Z | 1B    | B     | B        | M79                      |
| <i>Longitarsus melanocephalus</i> (DE GEER, 1775)                | Z | 1B    | B     | B        | K80                      |
| <i>Longitarsus absynthii</i> KUTSCHERA, 1862                     | Z | 1B    | B     | B        | V89                      |
| ? <i>Altica quercketorum</i> FOUDRAS, 1859                       | V | 1A    | B     | B        | P62,K80,V89              |
| <i>Altica tamaricis</i> (SCHRANK, 1785)                          | Z | 1A    | B     | B        | P62                      |
| <i>Crepidodera fulvicornis</i> (FABRICIUS, 1792)                 | Z | 1A    | B     | B        | M79                      |

|   |   |    |       |       |                         |
|---|---|----|-------|-------|-------------------------|
| <i>Crepidodera aurata</i> (MARSHAM, 1802)           | Z | 1A | B     | B     | P62                     |
| <i>Epithrix pubescens</i> (KOCHE, 1803)             | Z | 1B | B     | B     | K80                     |
| <i>Chaetocnema concinna</i> (MARSHAM, 1802)         | V | 1B | B     | B     | P62,K80,V89             |
| <i>Psylliodes attenuata</i> (KOCHE, 1803)           | Z | 1B | B     | B     | P62                     |
| <i>Psylliodes chrysocephala</i> (LINNAEUS, 1758)    | Z | 1B | B     | S     | K80,V89                 |
| <i>Cassida nebulosa</i> LINNAEUS, 1758              | Z | 1B | B     | B     | K80                     |
| Bruchidae   |   |    |       |       |                         |
| <i>Bruchus atomarius</i> (LINNAEUS, 1761)           | Z | 1B | BT    | F     | M79,K80                 |
| <i>Bruchus brachialis</i> FAHRAEUS, 1839            | Z | 1B | BT    | F     | P62                     |
| <i>Bruchus luteicornis</i> ILLIGER, 1794            | Z | 1B | BT    | F     | P62                     |
| <i>Bruchidius dispar</i> (GYLLENHAL, 1833)          | Z | 1B | BT    | F     | P62                     |
| <i>Bruchidius ater</i> (MARSHAM, 1802)              | Z | 1B | BT    | F     | P62                     |
| <i>Bruchidius seminarius</i> (LINNAEUS, 1767)       | Z | 1B | BT    | F     | P62                     |
| Anthribidae   |   |    |       |       |                         |
| <i>Platyrhinus retinosus</i> (SCOPOLI, 1763)        | S | 3A | DP,PI | DP,PI | M79                     |
| <i>Dissoleucas niveirostris</i> (FABRICIUS, 1798)   | S | 3A | DP,PI | DP,PI | P62                     |
| <i>Anthribus albinus</i> (LINNAEUS, 1758)           | S | 3A | DP,PI | DP,PI | V89                     |
| <i>Brachytarsus nebulosus</i> (FORSTER, 1771)       | V | 2A | PR    | PR    | P62                     |
| Curculionidae                                       |   |    |       |       |                         |
| <i>Lasiorhynchites sericeus</i> (HERBST, 1797)      | V | 1A | B     | BR    | P62,M79,K80             |
| <i>Lasiorhynchites cavifrons</i> (GYLLENHAL, 1833)  | V | 1A | B     | T     | P62,H91                 |
| <i>Lasiorhynchites olivaceus</i> (GYLLENHAL, 1833)  | V | 1A | B     | T     | V89,H                   |
| <i>Lasiorhynchites praestans</i> (BOHEMAN, 1845)    | S | 1A | B     | T     | H                       |
| <i>Caenorhinus germanicus</i> (HERBST, 1797)        | S | 1A | B     | T     | M78,M79                 |
| <i>Caenorhinus aeneovirens</i> (MARSHAM, 1802)      | V | 1A | B     | K     | P62                     |
| <i>Caenorhinus inter punctatus</i> (STEPHENS, 1831) | V | 1A | B     | T?    | H91                     |
| <i>Caenorhinus aequatus</i> (LINNAEUS, 1767)        | S | 1A | B     | F     | V89                     |
| <i>Rhynchites caeruleus</i> (DE GEER, 1775)         | S | 1A | B     | T     | M79,K80                 |
| <i>Byctiscus betulae</i> (LINNAEUS, 1758)           | V | 1A | B     | BR    | H91                     |
| <i>Deporaus betulae</i> (LINNAEUS, 1758)            | V | 1A | B     | BR    | P62,H91                 |
| <i>Attelabus nitens</i> (SCOPOLI, 1763)             | R | 1A | B     | BR    | P62,M78,M79,K80,<br>H91 |
| <i>Apion malvae</i> (FABRICIUS, 1775)               | Z | 1B | B     | F     | H91                     |
| <i>Apion radiolus</i> (MARSHAM, 1802)               | Z | 1B | B     | F     | P62                     |
| <i>Apion elongatum</i> GERMAR, 1813                 | Z | 1B | B     | S     | H91                     |
| <i>Apion atomarium</i> KIRBY, 1808                  | Z | 1B | B     | S-G   | H91                     |
| <i>Apion seniculus</i> KIRBY, 1808                  | V | 1B | B     | S     | H91                     |
| <i>Apion jaffense</i> DESBROCHERS, 1896             | Z | 1B | B     | U     | M79,H91                 |
| <i>Apion gibbirostre</i> GYLLENHAL, 1813            | Z | 1B | B     | S     | H91                     |
| <i>Apion tenue</i> KIRBY, 1808                      | Z | 1B | B     | S     | H91                     |
| <i>Apion pisi</i> (FABRICIUS, 1801)                 | Z | 1B | B     | S-K   | H91                     |
| <i>Apion aestimatum</i> FAUST, 1890                 | Z | 1B | B     | S-K   | H91                     |
| <i>Apion alcyoneum</i> GERMAR, 1817                 | Z | 1B | B     | K     | P62                     |
| <i>Apion columbinum</i> GERMAR, 1817                | Z | 1B | B     | BR    | H91                     |
| <i>Apion viciae</i> (PAYKULL, 1800)                 | Z | 1B | B     | F     | P62,H91                 |
| <i>Apion ervi</i> KIRBY, 1811                       | Z | 1B | B     | B-K   | H91                     |
| <i>Apion subulatum</i> KIRBY, 1808                  | Z | 1B | B     | F     | P62                     |
| <i>Apion craccae</i> (LINNAEUS, 1767)               | Z | 1B | B     | F     | P62                     |
| <i>Apion opeticum</i> BACH, 1854                    | Z | 1B | B     | F     | P62                     |
| <i>Apion cerdo</i> GERSTÄCKER, 1854                 | Z | 1B | B     | F     | M78,H91                 |
| <i>Apion pomonae</i> (FABRICIUS, 1798)              | V | 1B | B     | F     | P62                     |

|  |   |        |      |      |                             |
|--|---|--------|------|------|-----------------------------|
| <i>Apion fulvipes</i> (FOUCROY, 1785)                          | V | 1B     | B    | F    | P62,M79,H91                 |
| <i>Apion nigritarse</i> KIRBY, 1808                            | V | 1B     | B    | F    | P62,M79,H91                 |
| <i>Apion trifolii</i> (LINNAEUS, 1768)                         | Z | 1B     | B    | F    | M79,H91                     |
| <i>Apion interjectum</i> DESBROCHERS, 1895                     | Z | 1B     | B    | F    | H91                         |
| <i>Apion apricans</i> HERBST, 1797                             | Z | 1B     | B    | F    | P62,M79                     |
| <i>! Otiorhynchus multipunctatus</i> (FABRICIUS, 1792)         | R | 1A     | B    | W    | P62                         |
| <i>Otiorhynchus raucus</i> (FABRICIUS, 1777)                   | Z | 1B     | B    | W    | H91                         |
| <i>Otiorhynchus ovatus</i> (LINNAEUS, 1758)                    | Z | 1B     | B    | W    | P62                         |
| <i>! Otiorhynchus fullo</i> (SCHRANK, 1781)                    | V | 1A     | B    | W    | P62,K80                     |
| <i>! Phyllobius cloropus</i> (LINNAEUS, 1758)                  | V | 1A     | B    | W    | M78,M79,H91                 |
| <i>Phyllobius viridearis</i> (LAICHARTING, 1781)               | S | 1B     | B    | W    | H91                         |
| <i>! Phyllobius oblongus</i> (LINNAEUS, 1758)                  | V | 1A     | B    | W    | P62,K80                     |
| <i>! Phyllobius incanus</i> GYLLENHAL, 1834                    | R | 1A     | B    | W    | P62,H91                     |
| <i>Phyllobius calcaratus</i> (FABRICIUS, 1792)                 | S | 1A     | B    | W    | H91                         |
| <i>! Phyllobius maculicornis</i> GERMAR, 1824                  | R | 1A     | B    | W    | M79                         |
| <i>! Phyllobius pictus</i> (STEVEN, 1829)                      | R | 1A     | B    | W    | P62                         |
| <i>! Phyllobius argentatus</i> (LINNAEUS, 1758)                | R | 1A     | B    | W    | P62,M78,M79,K80,<br>V89,H91 |
| <i>! Phyllobius pyri</i> (LINNAEUS, 1758)                      | R | 1A     | B    | W    | P62,M78,M79,K80,<br>H91     |
| <i>! Phyllobius betulinus</i> BECHSTEIN & SCHARFENBERGER, 1805 | R | 1A     | B    | W    | P62,M78,M79,K80             |
| <i>! Polydrusus impar</i> Des GOZIS, 1882                      | S | 1A     | B    | W    | P62                         |
| <i>! Polydrusus marginatus</i> STEPHENS, 1831                  | R | 1A     | B    | W    | P62,M79,V89,H91             |
| <i>! Polydrusus viridicinctus</i> GYLLENHAL, 1834              | V | 1A     | B    | W    | P62,M79,H                   |
| <i>! Polydrusus cervinus</i> (LINNAEUS, 1758)                  | R | 1A     | B    | W    | P62,K80,V89,H91             |
| <i>! Polydrusus undatus</i> (FABRICIUS, 1781)                  | R | 1A     | B    | W    | P62,M79,K80,V89,H<br>91     |
| <i>! Polydrusus picus</i> (FABRICIUS, 1792)                    | R | 1A     | B    | W    | M79,K80,H91                 |
| <i>! Polydrusus thalassinus</i> GYLLENHAL, 1834                | V | 1A     | B    | W    | K80                         |
| <i>! Polydrusus mollis</i> (STRÖM, 1768)                       | R | 1A     | B    | W    | P62,M79,K80                 |
| <i>Eusomus ovulum</i> GERMAR, 1824                             | Z | 1B     | B    | W    | K80                         |
| <i>Strophosoma melanogrammum</i> (FORSTER, 1771)               | V | 1A     | B    | W    | P62,M79,H91                 |
| <i>Sitona striatellus</i> GYLLENHAL, 1834                      | Z | 1B     | B    | W    | P62                         |
| <i>Sitona ambiguus</i> GYLLENHAL, 1834                         | Z | 1B     | B    | W    | H91                         |
| <i>Sitona suturalis</i> STEPHENS, 1831                         | Z | 1B     | B    | W    | V89                         |
| <i>Sitona sulcifrons</i> (THUNBERG, 1798)                      | Z | 1B     | B    | W    | P62,H91                     |
| <i>Sitona lepidus</i> GYLLENHAL, 1834                          | Z | 1B     | B    | W    | H91                         |
| <i>Sitona macularis</i> (MARSHAM, 1802)                        | Z | 1B     | B    | W    | P62,V89,H91                 |
| <i>Sitona hispidulus</i> (FABRICIUS, 1776)                     | Z | 1B     | B    | W    | V89,H91                     |
| <i>Sitona humeralis</i> STEPHENS, 1831                         | V | 1B     | B    | W    | P62,V89,H91                 |
| <i>Rhyncolus punctatus</i> (BOHEMAN, 1838)                     | S | 1A/ 3A | DP,H | DP,H | V89                         |
| <i>Smicronyx jungermanniae</i> (REICH, 1797)                   | V | 1B     | B    | S-G  | H91                         |
| <i>Lignyodes enucleator</i> (PANZER, 1798)                     | Z | 1A     | B    | F    | K80                         |
| <i>Tychius meliloti</i> STEPHENS, 1831                         | Z | 1B     | B    | F    | H91                         |
| <i>Tychius picirostris</i> (FABRICIUS, 1787)                   | Z | 1B     | B    | F    | H91                         |
| <i>Tychius cuprifer</i> (PANZER, 1759)                         | Z | 1B     | B    | F    | H91                         |
| <i>Anthonomus pedicularius</i> (LINNAEUS, 1758)                | Z | 1A     | B,BT | F,K  | H91                         |
| <i>Bradybatus kellneri</i> BACH, 1854                          | Z | 1A     | B,BT | F    | H91                         |
| <i>! Curculio elephas</i> (GYLLENHAL, 1836)                    | S | 1A     | B    | E    | K80                         |

|  |   |        |        |           |                          |
|--|---|--------|--------|-----------|--------------------------|
| <i>Curculio propinquus</i> (DESBROCHERS, 1868)               | S | 1A     | B      | E         | H                        |
| <i>Curculio pellitus</i> (BOHEMAN, 1843)                     | R | 1A     | B      | E         | M79,V89,H91              |
| <i>Curculio villosus</i> FABRICIUS, 1781                     | S | 1A     | B      | G         | P62                      |
| <i>Curculio venosus</i> (GRAVENHORST, 1807)                  | R | 1A     | B      | E         | P62,M79,V89,H91          |
| <i>Curculio nucum</i> LINNAEUS, 1758                         | S | 1A     | B      | F         | M79,K80                  |
| <i>Curculio glandium</i> MARSHAM, 1802                       | R | 1A     | B      | E         | P62,M78,M79,K80,<br>H91  |
| <i>Curculio pyrrhoceras</i> MARSHAM, 1802                    | R | 1A     | B      | G         | P62,V89,H91              |
| <i>Magdalis ruficornis</i> (LINNAEUS, 1758)                  | Z | 1A     | B      | H         | H91                      |
| <i>Magdalis barbicornis</i> (LATREILLE, 1804)                | Z | 1A     | B      | H         | H91                      |
| <i>Magdalis flavicornis</i> (GYLLENHAL, 1836)                | S | 1A     | B      | H         | P62,H91                  |
| <i>Magdalis fuscicornis</i> DESBROCHERS, 1870                | S | 1A     | B      | H         | P62                      |
| <i>Magdalis cerasi</i> (LINNAEUS, 1758)                      | Z | 1A     | B      | H         | P62,M79,H91              |
| <i>Magdalis exarata</i> BRISOUT DE BARNEVILLE,<br>1862       | V | 1A     | B      | H         | P62,M79                  |
| <i>Magdalis linearis</i> (GYLLENHAL, 1827)                   | S | 1A     | B      | H         | M79                      |
| <i>Liparus coronatus</i> (GOEZE, 1777)                       | Z | 1B     | B      | W         | P62                      |
| <i>Hypera viciae</i> (GYLLENHAL, 1813)                       | Z | 1B     | B      | B         | V89                      |
| <i>Acallocrates denticollis</i> (GERMAR, 1824)               | S | 1A/ 3A | H,DP   | H,DP      | V89                      |
| <i>Coeliodes dryados</i> (GMELIN, 1790)                      | S | 1A     | B      | K,BT      | H                        |
| <i>Coeliodes trifasciatus</i> BACH, 1854                     | S | 1A     | B      | K,BT      | V89,H91                  |
| <i>Coeliodes proximus</i> SCHULTZE, 1895                     | S | 1A     | B      | K,BT      | H                        |
| <i>Coeliodes erythroleucus</i> (GMELIN, 1790)                | S | 1A     | B      | K,BT      | P62,H91                  |
| <i>Coeliodes siculus</i> SCHULTZE, 1901                      | S | 1A     | B      | K,BT      | H                        |
| <i>Ceutorhynchus syrites</i> GERMAR, 1824                    | Z | 1B     | B      | F         | P62                      |
| <i>Ceutorhynchus pallidactylus</i> (MARSHAM,<br>1802)        | Z | 1B     | B      | BM,S      | P62                      |
| <i>Ceutorhynchus parvulus</i> BRISOUT de<br>BARNEVILLE, 1869 | Z | 1B     | B      | F         | M78,M79                  |
| <i>Ceutorhynchus floralis</i> (PAYKULL, 1792)                | Z | 1B     | B      | F         | H91                      |
| <i>Glocianus punctiger</i> (GYLLENHAL, 1837)                 | Z | 1B     | B      | F         | P62                      |
| <i>Neydus quadrimaculatus</i> (LINNAEUS, 1758)               | Z | 1B     | B      | W         | M79                      |
| <i>Gymnetron tetricum</i> (FABRICIUS, 1801)                  | Z | 1B     | B      | F         | H91                      |
| <i>Rhynchaenus pilosus</i> (FABRICIUS, 1781)                 | V | 1A     | B      | BM        | P62,H91                  |
| <i>Rhynchaenus quercus</i> (LINNAEUS, 1758)                  | S | 1A     | B      | BM        | H                        |
| <i>Rhynchaenus erythropus</i> (GERMAR, 1821)                 | S | 1A     | B      | BM        | H                        |
| <i>Rhynchaenus signifer</i> (CREUTZER, 1799)                 | S | 1A     | B      | BM        | P62                      |
| <i>Rhynchaenus subfasciatus</i> GYLLENHAL, 1836              | S | 1A     | B      | BM        | P62                      |
| <i>Rhynchaenus sparsus</i> FAHRAEUS, 1843                    | S | 1A     | B      | BM        | H                        |
| <i>Rhynchaenus hungaricus</i> HAJOSS, 1938                   | S | 1A     | B      | BM        | H                        |
| <i>Rhynchaenus fagi</i> (LINNAEUS, 1758)                     | V | 1A     | B      | BM        | P62                      |
| <i>Rhynchaenus stigma</i> (GERMAR, 1827)                     | Z | 1A     | B      | BM        | K80                      |
| <i>Rhamphus oxyacanthae</i> MARSHAM, 1802                    | Z | 1A     | B      | BM        | H91                      |
| <i>Rhamphus subaeneus</i> ILLIGER, 1807                      | Z | 1A     | B      | BM        | H91                      |
| Scolytidae   |   |        |        |           |                          |
| <i>Scolytus intricatus</i> (RATZEBURG, 1837)                 | R | 1A/ 3A | GB     | T,SM,R(H) | P62,V89,Z91a,Z94,<br>Z95 |
| <i>Xyloterus signatus</i> (FABRICIUS, 1787)                  | V | 1A/3A  | SM,H   | SM,H      | Z                        |
| <i>Xyloterus domesticus</i> (LINNAEUS, 1758)                 | R | 1A/3A  | SM,H   | SM,H      | Z                        |
| <i>Dryocoetes villosus</i> (FABRICIUS, 1792)                 | V | 1A/3A  | SM,R   | SM,R      | M79,ZK94                 |
| <i>Xyleborus dispar</i> (FABRICIUS, 1792)                    | V | 1A/3A  | SM,R,H | SM,H,(R)  | Z94,Z95                  |
| <i>Xyleborus monographus</i> (FABRICIUS, 1792)               | R | 1A/3A  | SM,R,H | SM,H(R)   | P62,K80,V89,ZK94.        |

|  |   |       |        |         | Z95          |
|--|---|-------|--------|---------|--------------|
| <i>Xyleborus saxeseni</i> (RATZEBURG, 1837)      | V | 1A/3A | SM,R,H | SM,H(R) | P62          |
| ! <i>Xyleborus dryographus</i> (RATZEBURG, 1837) | V | 1A/3A | SM,R,H | SM,H(R) | V89,Z        |
| Platypodidae                                     |   |       |        |         |              |
| ! <i>Platypus cylindrus</i> (FABRICIUS, 1792)    | R | 1A/3A | SM,GB  | SM,H    | Z91a,Z94,Z95 |

### Vysvetlivky - Legend:

Stĺpec 1: ! pred názvom druhu: dôležitý škodca alebo užitočný predátor na duboch

Column 1: ! before the species name: important pest or useful predator on oaks

Stĺpec 2: R - pravidelný, V - jednotlivý, S - zriedkavý, Z - náhodný

Column 2: R - regular, V - individual, S - rare, Z - accidental

Stĺpec 3:

Column 3:

1A = arborikolný fytofág [arboricolous phytophag]

1B = herbikolný fytofág [herbicolous phytophag]

2A = arborikolný predátor žijúci najmä v korunách stromov [arboricolous predator living mainly in tree crowns]

2B = herbikolný predátor žijúci hlavne v bylinnom podraste alebo na povrchu pôdy [herbicolous predator living mainly in the herbage undergrowth or on the soil surface]

2C = predátor žijúci pod kôrou a (alebo) v dreve [predator living under the bark and (or) in the wood]

3A = fytosaprofág a mycetofág [phytosaprophag and mycophag]

3B = zoosaprofág (koprophág a nekrofág) [zoosaprophag (coprophag and necrophag)]

Stĺpce 4, 5:

Columns 4, 5:

B = listožravý [leaf-eating], BM = minujúci na listoch [leaf-mining], BT = antofilný alebo antofágny [flower visitor or anthophagous],

DP = v rastlinných zvyškoch, v mŕtvom dreve a kôre [in plant rests, in dead wood and bark], DA = v živočíšnych zvyškoch [in animal rests], E = v žaludoch [in acorns], F = v plodoch iných rastlín [in fruits of other plants], G = v hálkach [in galls], GB = na kroch a stromoch [on shrubs and trees], H = v dreve [in wood], K =

v listových a kvetných pukoch [in leaf and flower buds], KP = na bylinách a trávach [on herbs and grasses], M = na a v machu [on and in the moss], MY = myrmekofilný alebo myrmekofágny [myrmecophilous or myrmecophagous], N = v hniezdach včiel [in nests of bees], Pbl = predátor živiaci sa hlavne voškami [predator feeding mainly on aphids], Pi = na a v hubách [on and in fungi], PL = predátor živiaci sa hlavne larvami a kuklami listožravého hmyzu [predator feeding mainly on larvae and pupae of leaf-eating insects], PR = predátor živiaci sa hlavne červcami [predator feeding mainly on scale insects], R = v a (alebo) pod kôrou [in and (or) under the bark], S =

v stonkách rastlín [in the stalks of plants], SM = v kmeňoch a hrubších konároch [in the tree stems and thicker branches], SO = in soil], ST = v pňoch [in stumps], T = vo výhonkoch a tenkých vetvičkách [in shoots and thin branches], U = bionómia nie je známa [bionomy unknown], W = na (v) koreňoch [on(in) the roots], ? = otázny [questionable], () = druh sa v danom prostredí nevyskytuje veľmi často [the species does not occur very often in the present habitat]

### Stĺpec 6:

Column 6: B89 = Bílý (1989), HS92 = Heyrovský, Sláma (1992), H = Holecová, not published, H91 = Holecová (1991), K80 = Kleinert (1980), M78 = Majzlan (1978), M79 = Majzlan (1979), P62 = Patocka et al. (1962), S87 = Švácha, Danilevski (1987), S88 = Švácha, Danilevski (1988), V89 = Vidlička (1989), Z = Zach, not published, Z91a = Zach (1991a), Z91b = Zach (1991b), Z94 = Zach (1994), Z95 = Zach (1995), ZK94 = Zach, Krištín (1994)

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