**Supplements**

**Appendix A:** Catalogue of BOLD sequences

Downloaded BOLD sequences were listed according to their reference number and species names.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **BOLD reference number** | **species** | **BOLD reference number** | **species** | **BOLD reference number** | **species** |
| *PREXP043-14* | *Hylaeus leptocephalus* | FBAPC453-10 | *Halictus rubicundus* | ABEE230-17 | *Chelostoma distinctum* |
| BBHYA1576-12 | *Hylaeus leptocephalus* | FBAPC567-11 | *Halictus maculatus* | ABEE230-17 | *Chelostoma distinctum* |
| BBHYA1573-12 | *Hylaeus leptocephalus* | FBAPC566-11 | *Halictus maculatus* | ABEE200-17 | *Chelostoma campanularum* |
| FBAPD821-11 | *Hylaeus leptocephalus* | BCHYM1300-13 | *Halictus sexcinctus* | FBAPD950-11 | *Megachile versicolor* |
| FBAPB597-09 | *Hylaeus moricei* | FBAPB324-09 | *Halictus pollinosus* | ABEE050-17 | *Megachile centuncularis* |
| IBBP095-10 | *Hylaeus communis* | BCHYM1307-13 | *Halictus subauratus* | FBAPC526-11 | *Megachile willughbiella* |
| IBBP094-10 | *Hylaeus communis* | BCHYM1306-13 | *Halictus tumulorum* | FBAPB626-09 | *Megachile willughbiella* |
| IBBP093-10 | *Hylaeus communis* | BCHYM1305-13 | *Halictus tumulorum* | BCHYM1507-13 | *Megachile willughbiella* |
| IBBP092-10 | *Hylaeus communis* | ABEE104-17 | *Halictus quadricinctus* | BCHYM1506-13 | *Megachile willughbiella* |
| GBACU2169-13 | *Hylaeus communis* | FBAPC415-10 | *Lasioglossum zonulum* | ABEE066-17 | *Megachile rotundata* |
| FBAPD463-11 | *Hylaeus communis* | FBAPC385-10 | *Lasioglossum majus* | ABEE064-17 | *Megachile pilidens* |
| FBAPC938-11 | *Hylaeus punctatus* | BEEEE295-16 | *Lasioglossum leucozonium* | ABEE063-17 | *Megachile pilidens* |
| FBAPB617-09 | *Hylaeus punctatus* | BEEEE051-15 | *Lasioglossum leucozonium* | ABEE065-17 | *Megachile rotundata* |
| FBAPC936-11 | *Hylaeus punctatus* | BEEEE100-15 | *Lasioglossum leucozonium* | ABEE059-17 | *Megachile ligniseca* |
| BEECC013-08 | *Hylaeus punctatus* | BCHYM1313-13 | *Lasioglossum leucozonium* | FBAPC795-11 | *Coelioxys elongata* |
| BEEEE046-15 | *Hylaeus hyalinatus* | FBHAP181-09 | *Lasioglossum calceatum* | BCHYM447-13 | *Coelioxys inermis* |
| ABEE229-17 | *Hylaeus hyalinatus* | FBAPD145-11 | *Lasioglossum calceatum* | FBACB687-11 | *Coelioxys conoidea* |
| FBAPC933-11 | *Hylaeus signatus* | FBAPB902-09 | *Lasioglossum nigripes* | ABEE125-17 | *Coelioxys conoidea* |
| ABEE227-17 | *Hylaeus gibbus* | FBAPC1034-11 | *Lasioglossum laticeps* | FBAPB495-09 | *Coelioxys echinata* |
| ABEE111-17 | *Hylaeus sinuatus* | FBAPC1033-11 | *Lasioglossum laticeps* | FBACB710-11 | *Nomada fucata* |
| ABEE042-17 | *Hylaeus pictipes* | FBAPC581-11 | *Lasioglossum laticeps* | FBAPB134-09 | *Nomada armata* |
| FBAPC939-11 | *Hylaeus gredleri* | FBAPC1025-11 | *Lasioglossum laticeps* | FBAPB382-09 | *Xylocopa valga* |
| FBACB718-11 | *Hylaeus gredleri* | FBAPD309-11 | *Lasioglossum malachurum* | FBAPB379-09 | *Xylocopa violacea* |
| FBACB717-11 | *Hylaeus gredleri* | BEEEE132-15 | *Lasioglossum malachurum* | ABEE011-17 | *Ceratina cyanea* |
| ABEE034-17 | *Hylaeus brevicornis* | FBAPC588-11 | *Sphecodes pellucidus* | FBAPD286-11 | *Andrena limata* |
| ABEE091-17 | *Colletes cunicularius* | ABEE088-17 | *Sphecodes rufiventris* | BCHYM409-13 | *Andrena nitida* |
| ABEE090-17 | *Colletes cunicularius* | FBAPC586-11 | *Sphecodes albilabris* | FBAPC680-11 | *Andrena nigroaenea* |
| ABEE016-17 | *Colletes daviesanus* | FBAPC585-11 | *Sphecodes albilabris* | FBAPC844-11 | *Andrena gravida* |
| ABEE015-17 | *Colletes daviesanus* | FBAPC475-10 | *Sphecodes albilabris* | FBAPC684-11 | *Andrena gravida* |
| FBHAP723-09 | *Lasioglossum nitidulum* | FBAPC096-10 | *Sphecodes albilabris* | FBAPC324-10 | *Andrena fulvicornis* |
| ABEE216-17 | *Lasioglossum nitidulum* | FBAPB877-09 | *Lasioglossum laevigatum* | FBAPC308-10 | *Andrena chrysosceles* |
| FBAPC397-10 | *Lasioglossum morio* | FBAPB625-09 | *Macropis fulvipes* | FBAPB004-09 | *Andrena pallitarsis* |
| FBAPC396-10 | *Lasioglossum morio* | FBHAP853-09 | *Bombus terrestris* | FBAPB162-09 | *Andrena dorsata* |
| FBAPC395-10 | *Lasioglossum morio* | FBHAP801-09 | *Bombus lucorum* | BCHYM1470-13 | *Andrena subopaca* |
| BEEEE127-15 | *Lasioglossum morio* | FBAPD608-11 | *Bombus sylvarum* | BCHYM1434-13 | *Andrena minutuloides* |
| FBAPC403-10 | *Lasioglossum villosulum* | FBAPC716-11 | *Bombus humilis* | BCHYM1511-13 | *Melitta leporina* |
| FBAPC401-10 | *Lasioglossum villosulum* | FBAPC715-11 | *Bombus humilis* | FBAPB493-09 | *Coelioxys echinata* |
| BCHYM1310-13 | *Lasioglossum parvulum* | FBAPC714-11 | *Bombus pascuorum* | FBAPB695-09 | *Hoplitis leucomelana* |
| FBAPB930-09 | *Lasioglossum marginatum* | FBHAP781-09 | *Bombus hortorum* | BEEEE042-15 | *Heriades truncorum* |
| FBAPB917-09 | *Lasioglossum politum* | FBHAP827-09 | *Bombus pratorum* | ABEE029-17 | *Heriades truncorum* |
| BCHYM1308-13 | *Lasioglossum politum* | FBHAP789-09 | *Bombus hypnorum* | ABEE220-17 | *Heriades rubicola* |
| FBAPB916-09 | *Lasioglossum politum* | FBAPC718-11 | *Bombus hypnorum* | ABEE089-17 | *Stelis punctulatissima* |
| FBAPD583-11 | *Halictus simplex* | FBAPC709-11 | *Bombus lapidarius* | ABEE078-17 | *Pseudoanthidium* |
| FBAPD582-11 | *Halictus simplex* | FBAPD627-11 | *Bombus vestalis* | FBAPD884-11 | *Eucera chrysopyga* |
| FBAPB338-09 | *Halictus simplex* | FBAPC707-11 | *Bombus rupestris* | BCHYM1515-13 | *Eucera nigrescens* |
| FBAPC454-10 | *Halictus rubicundus* | FBAPD604-11 | *Bombus barbutellus* | FBAPC138-10 | *Nomada integra* |
| ABEE192-17 | *Halictus rubicundus* | FBHAP373-09 | *Anthidium manicatum* | FBAPB138-09 | *Nomada bifasciata* |
| ABEE131-17 | *Anthidium manicatum* | ABEE007-17 | *Ceratina chalybea* | ABEE008-17 | *Ceratina chalybea* |
| FBAPC739-11 | *Anthidium manicatum* | FBAPB439-09 | *Anthophora quadrimaculata* | FBAPB689-09 | *Osmia leaiana* |
| ABEE189-17 | *Anthidium oblongatum* | ABEE194-17 | *Anthophora furcata* | BCHYM1497-13 | *Osmia leaiana* |
| FBHAP295-09 | *Osmia bicolor* | BCHYM1519-13 | *Anthophora plumipes* | FBAPB677-09 | *Osmia cornuta* |
| FBAPD374-11 | *Osmia caerulescens* | BCHYM1518-13 | *Anthophora plumipes* | FBAPB676-09 | *Osmia cornuta* |
| FBAPD373-11 | *Osmia caerulescens* | ABEE123-17 | *Lithurgus cornutus* | ABEE231-17 | *Chelostoma rapunculi* |
| FBAPD532-11 | *Andrena albofasciata* | GBACU1339-12 | *Andrena taraxaci* | FBAPC292-10 | *Andrena humilis* |
| ABEE002-17 | *Andrena haemorrhoa* | FBAPC291-10 | *Andrena taraxaci* |  |  |

**Appendix B:** Catalogue of sequenced specimen

Catalogue showing specimen list used for DNA barcoding: Illumina sequences were submitted to Genebank and Sanger sequences were stored on BOLD. The success of the sequences was categorized as the following: submission number of either NCBI or BOLD; f = failure; n = individual not used for sequencing.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **sequence ID** | **organism** | **collection date** | **collector** | **GPS** | **NCBI Reference ID Illumina midi-barcodes** | **BOLD Reference ID Sanger barcodes** | **NCBI Reference ID 460 bp Illumina barcodes** |
| 7140 | Andrena dorsata (Kirby, 1802) | 02.07.16 | J. Lanner | 48,229381/16,303039 | MH319115 | n | n |
| 7156 | Macropis fulvipes (Fabricius, 1804) | 02.07.16 | J. Lanner | 48,229381/16,303039 | MH319116 | n | n |
| 7160 | Andrena minutuloides Perkins, 1914 | 20.07.16 | J. Lanner | 48,231733/16,393836 | MH319117 | n | n |
| 7704 | Colletes cunicularius (Linnaeus, 1761) | 30.04.16 | U. Neumueller | 48,129179/16,795359 | MH319118 | VWB001-18 | n |
| 7705 | Ceratina cyanea (Kirby, 1802) | 22.06.16 | U. Neumueller | 48,130948/16,811535 | MH319119 | VWB002-18 | n |
| 7706 | Megachile ligniseca (Kirby, 1802) | 02.08.16 | U. Neumueller | 48,136429/16,802757 | MH319120 | n | n |
| 7707 | Hylaeus gibbus Saunders, 1850 | 04.08.16 | U. Neumueller | 48,143063/16,883576 | MH319121 | n | n |
| 7708 | Bombus rupestris (Fabricius, 1793) | 02.08.16 | U. Neumueller | 48,1355/16,726471 | MH319122 | VWB003-18 | f |
| 7709 | Osmia bicolor (Schrank, 1781) | 29.04.16 | U. Neumueller | 48,139852/16,850266 | MH319123 | n | n |
| 7710 | Heriades truncorum (Linnaeus, 1758) | 29.07.16 | U. Neumueller | 48,13888/16,872103 | MH319124 | VWB004-18 | n |
| 7711 | Hylaeus sinuatus (Schenck, 1853) | 02.08.16 | U. Neumueller | 48,1355/16,726471 | MH319125 | n | n |
| 7712 | Bombus haematurus Smith, 1854 | 22.06.16 | U. Neumueller | 48,133139/16,861975 | MH319126 | n | n |
| 7713 | Bombus humilis Illiger, 1806 | 04.08.16 | U. Neumueller | 48,131414/16,674491 | MH319127 | VWB005-18 | n |
| 7714 | Bombus barbutellus (Kirby, 1802) | 29.04.16 | U. Neumueller | 48,143063/16,883576 | MH319128 | n | n |
| 7715 | Anthophora crinipes Smith, 1854 | 26.05.16 | U. Neumueller | 48,143063/16,883576 | MH319129 | n | n |
| 7716 | Lasioglossum laticeps (Schenck, 1870) | 28.05.16 | U. Neumueller | 48,129179/16,795359 | n | n | n |
| 7717 | Bombus lapidarius (Linnaeus, 1758) | 22.06.16 | U. Neumueller | 48,14262/16,855278 | MH319130 | VWB006-18 | n |
| 7719 | Bombus terrestris (Linnaeus, 1758) | 29.07.16 | U. Neumueller | 48,130948/16,811535 | MH319131 | n | n |
| 7720 | Anthophora plumipes (Pallas, 1772) | 06.05.16 | U. Neumueller | 48,136574/16,830354 | MH319132 | VWB007-18 | n |
| 7721 | Lasioglossum nigripes (Lepeletier, 1841) | 27.05.16 | U. Neumueller | 48,144269/16,887888 | f | n | n |
| 7722 | Xylocopa valga Gerstaecker, 1872 | 28.05.16 | U. Neumueller | 48,129179/16,795359 | MH319133 | f | f |
| 7723 | Andrena pallitarsis Perez, 1903 | 29.07.16 | U. Neumueller | 48,126484/16,828359 | MH319134 | VWB008-18 | n |
| 7724 | Lasioglossum laevigatum (Kirby, 1802) | 27.05.16 | U. Neumueller | 48,143472/16,685999 | MH319135 | n | n |
| 7725 | Bombus sylvarum (Linnaeus, 1761) | 02.08.16 | U. Neumueller | 48,129179/16,795359 | MH319136 | n | n |
| 7726 | Lasioglossum malachurum (Kirby, 1802) | 02.08.16 | U. Neumueller | 48,136429/16,802757 | MH319137 | n | n |
| 7727 | Lithurgus cornutus (Fabricius, 1787) | 02.08.16 | U. Neumueller | 48,128942/16,720793 | MH319138 | n | n |
| 7728 | Lasioglossum calceatum (Scopoli, 1763) | 04.08.16 | U. Neumueller | 48,143063/16,883576 | MH319139 | VWB009-18 | n |
| 7729 | Halictus rubicundus (Christ, 1791) | 29.07.16 | U. Neumueller | 48,130948/16,811535 | MH319140 | f | n |
| 7730 | Bombus hortorum (Linnaeus, 1761) | 27.05.16 | U. Neumueller | 48,13001/16,678719 | MH319141 | VWB010-18 | n |
| 7731 | Halictus tumulorum (Linnaeus, 1758) | 29.07.16 | U. Neumueller | 48,13708/16,818894 | MH319142 | f | n |
| 7732 | Bombus pascuorum (Scopoli, 1763) | 04.08.16 | U. Neumueller | 48,143472/16,685999 | MH319143 | VWB011-18 | n |
| 7733 | Bombus hypnorum (Linnaeus, 1758) | 27.05.16 | U. Neumueller | 48,143472/16,685999 | MH319144 | VWB012-18 | n |
| 7734 | Bombus vestalis (Geoffroy, 1785) | 21.06.16 | U. Neumueller | 48,1355/16,726471 | MH319145 | VWB013-18 | n |
| 7735 | Nomada armata Herrich-Schäffer, 1839 | 29.05.16 | U. Neumueller | 48,1355/16,726471 | MH319146 | VWB014-18 | n |
| 7736 | Coelioxys inermis (Kirby, 1802) | 29.07.16 | U. Neumueller | 48,130948/16,811535 | MH319147 | VWB015-18 | n |
| 7737 | Andrena hattorfiana (Fabricius, 1775) | 21.06.16 | U. Neumueller | 48,143472/16,685999 | n | VWB016-18 | n |
| 7738 | Osmia adunca (Panzer, 1798) | 29.07.16 | U. Neumueller | 48,139852/16,850266 | n | n | n |
| 7740 | Lasioglossum laticeps (Schenck, 1870) | 29.07.16 | U. Neumueller | 48,139852/16,850266 | MH319148 | f | n |
| 7741 | Andrena limata Smith, 1853 | 04.08.16 | U. Neumueller | 48,143472/16,685999 | MH319149 | f | n |
| 7742 | Andrena humilis Imhoff, 1832 | 28.05.16 | U. Neumueller | 48,128768/16,763714 | MH319150 | f | n |
| 7743 | Chelostoma florisomne (Linnaeus, 1758) | 28.05.16 | U. Neumueller | 48,135479/16,765219 | n | f | n |
| 7744 | Lasioglossum marginatum (Brullé, 1832) | 26.05.16 | U. Neumueller | 48,139852/16,850266 | MH319151 | VWB018-18 | n |
| 7745 | Andrena flavipes Panzer, 1799 | 02.08.16 | U. Neumueller | 48,128942/16,720793 | n | f | n |
| 7746 | Anderna albofasciata Thomson 1970 | 29.07.16 | U. Neumueller | 48,13708/16,818894 | MH319152 | f | n |
| 7747 | Sphecodes pellucidus Smith, 1845 | 02.08.16 | U. Neumueller | 48,131382/16,688479 | MH319153 | VWB019-18 | n |
| 7748 | Andrena minutuloides Perkins, 1914 | 02.08.16 | U. Neumueller | 48,131382/16,688479 | MH319154 | n | n |
| 7749 | Eucera nigrescens Perez, 1879 | 29.04.16 | U. Neumueller | 48,142183/16,868986 | MH319155 | VWB020-18 | n |
| 7750 | Lasioglossum villosulum (Kirby, 1802) | 02.08.16 | U. Neumueller | 48,136429/16,802757 | MH319156 | VWB021-18 | n |
| 7751 | Osmia caerulescens (Linnaeus, 1758) | 27.05.16 | U. Neumueller | 48,139399/16,68856 | MH319157 | VWB022-18 | n |
| 7752 | Megachile centuncularis (Linnaeus, 1758) | 02.08.16 | U. Neumueller | 48,131382/16,688479 | MH319158 | f | n |
| 7753 | Halictus sexcinctus Fabricius, 1775 | 27.05.16 | U. Neumueller | 48,139399/16,68856 | MH319159 | VWB023-18 | n |
| 7754 | Halictus subauratus (Rossi, 1792) | 02.08.16 | U. Neumueller | 48,128768/16,763714 | MH319160 | VWB024-18 | n |
| 7755 | Lasioglossum leucozonium (Schrank, 1781) | 04.08.16 | U. Neumueller | 48,139399/16,68856 | MH319161 | f | n |
| 7756 | Xylocopa violacea (Linnaeus, 1758) | 02.08.16 | U. Neumueller | 48,128942/16,720793 | MH319162 | VWB025-18 | n |
| 7757 | Chelostoma distinctum (Stoeckhert, 1929) | 28.05.16 | U. Neumueller | 48,129179/16,795359 | MH319163 | VWB026-18 | n |
| 7758 | Andrena minutula (Kirby, 1802) | 30.04.16 | U. Neumueller | 48,1355/16,726471 | MH319164 | f | n |
| 7759 | Panurgus calcaratus (Scopoli, 1763) | 02.08.16 | U. Neumueller | 48,129179/16,795359 | n | VWB027-18 | n |
| 7760 | Halictus quadricinctus (Fabricius, 1777) | 28.05.16 | U. Neumueller | 48,128768/16,763714 | MH319165 | VWB028-18 | n |
| 7761 | Lasioglossum zonulum (Smith, 1848) | 02.08.16 | U. Neumueller | 48,120961/16,791873 | MH319166 | VWB029-18 | f |
| 7762 | Andrena taraxaci Giraud, 1861 | 29.04.16 | U. Neumueller | 48,144269/16,887888 | MH319167 | VWB030-18 | f |
| 7763 | Andrena gravida Imhoff, 1832 | 28.04.16 | U. Neumueller | 48,139399/16,68856 | MH319168 | f | n |
| 7764 | Sphecodes albilabris (Fabricius, 1793) | 06.05.16 | U. Neumueller | 48,136574/16,830354 | n | f | f |
| 7765 | Osmia cornuta (Latreille, 1805) | 28.04.16 | U. Neumueller | 48,13738/16,696163 | MH319169 | VWB031-18 | f |
| 7766 | Osmia leaiana Kirby, 1802 | 02.08.16 | U. Neumueller | 48,136429/16,802757 | MH319170 | f | f |
| 7767 | Nomada bifasciata Olivier, 1811 | 29.04.16 | U. Neumueller | 48,133139/16,861975 | MH319171 | VWB032-18 | f |
| 7768 | Andrena fulvicorinis Schenck, 1853 | 04.08.16 | U. Neumueller | 48,131414/16,674491 | MH319172 | f | f |
| 7769 | Lasioglossum pauxillum (Schenck, 1853) | 26.05.16 | U. Neumueller | 48,126484/16,828359 | MH319173 | VWB033-18 | n |
| 7770 | Lasioglossum xanthopus (Kirby, 1802) | 29.04.16 | U. Neumueller | 48,144269/16,887888 | n | VWB034-18 | n |
| 7772 | Hylaeus intermedius Förster, 1871 | 29.07.16 | U. Neumueller | 48,126484/16,828359 | MH319174 | f | n |
| 7773 | Bombus lucorum (Linnaeus, 1761) | 26.05.16 | U. Neumueller | 48,143063/16,883576 | MH319175 | f | n |
| 7774 | Bombus ruderarius (Muller, 1776) | 27.05.16 | U. Neumueller | 48,143472/16,685999 | n | VWB035-18 | n |
| 7775 | Lasioglossum politum (Schenck, 1853) | 29.07.16 | U. Neumueller | 48,126484/16,828359 | MH319176 | f | f |
| 7776 | Lasioglossum discum (Smith, 1853) | 02.08.16 | U. Neumueller | 48,126615/16,717575 | f | f | f |
| 7777 | Anthophora furcata (Panzer, 1798) | 21.06.16 | U. Neumueller | 48,128942/16,720793 | MH319177 | VWB036-18 | f |
| 7778 | Andrena ovatula (Kirby, 1802) | 29.04.16 | U. Neumueller | 48,139852/16,850266 | f | VWB037-18 | n |
| 7779 | Andrena chrysosceles (Kirby, 1802) | 26.05.16 | U. Neumueller | 48,133139/16,861975 | MH319178 | n | n |
| 7780 | Andrena nitida (Muller, 1776) | 28.04.16 | U. Neumueller | 48,13738/16,696163 | MH319179 | n | MH458495 |
| 8313 | Halictus rubicundus (Christ, 1791) | 30.06.16 | J. Lanner | 48,221539/16,377622 | MH319180 | n | n |
| 8322 | Heriades truncorum (Linnaeus, 1758) | 29.06.16 | J. Lanner | 48,219158/16,353094 | MH319181 | n | MH458478 |
| 8323 | Heriades truncorum (Linnaeus, 1758) | 29.06.16 | J. Lanner | 48,219158/16,353094 | MH319182 | n | MH458503 |
| 8325 | Lasioglossum morio (Fabricius, 1793) | 02.07.16 | J. Lanner | 48,219158/16,353094 | MH319183 | n | MH458506 |
| 8327 | Lasioglossum morio (Fabricius, 1793) | 29.06.16 | J. Lanner | 48,23015/16,361306 | n | n | n |
| 8329 | Chelostoma rapunculi (Lepeletier, 1841) | 29.06.16 | J. Lanner | 48,219158/16,353094 | MH319184 | n | MH458516 |
| 8330 | Osmia caerulescens (Linnaeus, 1758) | 01.07.16 | J. Lanner | 48,200389/16,368136 | MH319185 | VWB038-18 | n |
| 8331 | Osmia adunca (Panzer, 1798) | 30.06.16 | J. Lanner | 48,231733/16,393836 | f | n | MH458517 |
| 8332 | Stelis punctulatissima (Kirby, 1802) | 02.07.16 | J. Lanner | 48,229381/16,303039 | MH319186 | VWB039-18 | MH458518 |
| 8334 | Lasioglossum leucozonium (Schrank, 1781) | 05.07.16 | J. Lanner | 48,182042/16,418494 | MH319187 | n | MH458482 |
| 8335 | Colletes daviesanus Smith, 1846 | 29.06.16 | J. Lanner | 48,219158/16,353094 | n | n | MH458486 |
| 8337 | Colletes daviesanus Smith, 1846 | 30.06.16 | J. Lanner | 48,221539/16,377622 | MH319188 | n | n |
| 8338 | Halictus maculatus Smith, 1848 | 30.06.16 | J. Lanner | 48,221539/16,377622 | MH319189 | n | MH458489 |
| 8340 | Lasioglossum calceatum (Scopoli, 1763) | 01.07.16 | J. Lanner | 48,200389/16,368136 | n | n | MH458474 |
| 8341 | Lasioglossum calceatum (Scopoli, 1763) | 05.07.16 | J. Lanner | 48,182042/16,418494 | MH319190 | n | MH458487 |
| 8343 | Lasioglossum laticeps (Schenck, 1870) | 04.07.16 | J. Lanner | 48,184397/16,334264 | f | n | MH458474 |
| 8345 | Halictus subauratus (Rossi, 1792) | 30.06.16 | J. Lanner | 48,231733/16,393836 | f | n | f |
| 8350 | Lasioglossum pauxillum (Schenck, 1853) | 30.06.16 | J. Lanner | 48,241564/16,329992 | f | VWB040-18 | n |
| 8351 | Lasioglossum politum (Schenck, 1853) | 30.06.16 | J. Lanner | 48,221539/16,377622 | MH319191 | n | n |
| 8352 | Lasioglossum politum (Schenck, 1853) | 28.06.16 | J. Lanner | 48,208586/16,345247 | f | n | n |
| 8358 | Halictus rubicundus (Christ, 1791) | 21.07.16 | J. Lanner | 48,226561/16,339253 | MH319192 | VWB041-18 | n |
| 8359 | Halictus subauratus (Rossi, 1792) | 26.07.16 | J. Lanner | 48,28835/16,427611 | MH319193 | n | MH458476 |
| 8360 | Halictus subauratus (Rossi, 1792) | 05.07.16 | J. Lanner | 48,28835/16,427611 | MH319194 | VWB042-18 | MH458475 |
| 8362 | Hylaeus punctatus (Brullé, 1832) | 30.06.16 | J. Lanner | 48,231733/16,393836 | f | n | f |
| 8366 | Halictus maculatus Smith, 1848 | 05.07.16 | J. Lanner | 48,28835/16,427611 | f | n | f |
| 8372 | Halictus simplex Bluethgen, 1923 | 27.07.16 | J. Lanner | 48,229381/16,303039 | MH319195 | n | f |
| 8373 | Halictus simplex Bluethgen, 1923 | 20.07.16 | J. Lanner | 48,231733/16,393836 | MH319196 | n | MH458471 |
| 8374 | Halictus simplex Bluethgen, 1923 | 26.07.16 | J. Lanner | 48,28835/16,427611 | MH319197 | n | MH458472 |
| 8378 | Anthidium septemspinosum Lepeletier, 1841 | 27.07.16 | J. Lanner | 48,229381/16,303039 | MH319198 | n | n |
| 8379 | Anthidium septemspinosum Lepeletier, 1841 | 20.07.16 | J. Lanner | 48,231733/16,393836 | MH319199 | f | n |
| 8380 | Anthidium septemspinosum Lepeletier, 1841 | 15.08.16 | J. Lanner | 48,184397/16,334264 | f | n | f |
| 8381 | Anthidium septemspinosum Lepeletier, 1841 | 16.08.16 | J. Lanner | 48,219158/16,353094 | MH319200 | f | MH458507 |
| 8382 | Anthidium manicatum (Linnaeus, 1758) | 15.08.16 | J. Lanner | 48,184397/16,334264 | MH319201 | n | MH458508 |
| 8383 | Anthidium manicatum (Linnaeus, 1758) | 19.08.16 | J. Lanner | 48,28835/16,427611 | MH319202 | VWB043-18 | MH458509 |
| 8384 | Anthidium septemspinosum Lepeletier, 1841 | 04.07.16 | J. Lanner | 48,184397/16,334264 | MH319203 | n | n |
| 8386 | Anthidium manicatum (Linnaeus, 1758) | 29.06.16 | J. Lanner | 48,219158/16,353094 | MH319204 | n | MH458510 |
| 8387 | Anthidium manicatum (Linnaeus, 1758) | 27.07.16 | J. Lanner | 48,229381/16,303039 | MH319205 | n | f |
| 8388 | Megachile willughbiella (Kirby, 1802) | 28.06.16 | J. Lanner | 48,208586/16,345247 | MH319206 | n | n |
| 8389 | Megachile willughbiella (Kirby, 1802) | 04.07.16 | J. Lanner | 48,184397/16,334264 | MH319207 | VWB044-18 | MH458499 |
| 8390 | Megachile willughbiella (Kirby, 1802) | 20.07.16 | J. Lanner | 48,221539/16,377622 | f | n | MH458500 |
| 8391 | Megachile pilicrus Morawitz, 1877 | 20.07.16 | J. Lanner | 48,221539/16,377622 | MH319208 | f | f |
| 8392 | Megachile versicolor Smith, 1844 | 18.08.16 | J. Lanner | 48,182042/16,418494 | MH319209 | n | n |
| 8393 | Megachile centuncularis (Linnaeus, 1758) | 20.07.16 | J. Lanner | 48,231733/16,393836 | f | f | n |
| 8394 | Megachile circumcincta Kirby, 1802 | 28.06.16 | J. Lanner | 48,208586/16,345247 | f | n | f |
| 8395 | Megachile pilidens Alfken, 1924 | 04.07.16 | J. Lanner | 48,184397/16,334264 | MH319210 | VWB045-18 | n |
| 8397 | Hylaeus signatus (Panzer, 1798) | 30.06.16 | J. Lanner | 48,221539/16,377622 | f | n | n |
| 8401 | Hylaeus signatus (Panzer, 1798) | 20.07.16 | J. Lanner | 48,221539/16,377622 | f | f | n |
| 8403 | Hylaeus signatus (Panzer, 1798) | 30.06.16 | J. Lanner | 48,221539/16,377622 | MH319211 | f | MH458520 |
| 8404 | Hylaeus brevicornis Nylander, 1852 | 16.08.16 | J. Lanner | 48,219158/16,353094 | f | n | MH458521 |
| 8405 | Hylaeus brevicornis Nylander, 1852 | 02.07.16 | J. Lanner | 48,226561/16,339253 | MH319212 | f | f |
| 8406 | Hylaeus moricei (Friese, 1898) | 21.07.16 | J. Lanner | 48,219158/16,353094 | MH319213 | n | n |
| 8409 | Hylaeus gredleri Foerster, 1871 | 02.07.16 | J. Lanner | 48,229381/16,303039 | MH319214 | VWB046-18 | n |
| 8410 | Hylaeus gredleri Foerster, 1871 | 30.06.16 | J. Lanner | 48,231733/16,393836 | MH319215 | f | n |
| 8411 | Hylaeus gredleri Foerster, 1871 | 20.07.16 | J. Lanner | 48,221539/16,377622 | MH319216 | f | n |
| 8412 | Hylaeus gibbus Saunders, 1850 | 18.08.16 | J. Lanner | 48,231733/16,393836 | MH319217 | n | n |
| 8413 | Hylaeus sinuatus (Schenck, 1853) | 16.08.16 | J. Lanner | 48,219158/16,353094 | MH319218 | n | n |
| 8414 | Hylaeus hyalinatus Smith, 1842 | 25.07.16 | J. Lanner | 48,200389/16,368136 | MH319219 | n | MH458522 |
| 8415 | Hylaeus hyalinatus Smith, 1842 | 29.06.16 | J. Lanner | 48,219158/16,353094 | f | n | n |
| 8416 | Hylaeus hyalinatus Smith, 1842 | 21.07.16 | J. Lanner | 48,226561/16,339253 | MH319220 | n | n |
| 8420 | Hylaeus punctatus (Brullé, 1832) | 02.07.16 | J. Lanner | 48,226561/16,339253 | MH319221 | VWB047-18 | n |
| 8421 | Hylaeus punctatus (Brullé, 1832) | 30.06.16 | J. Lanner | 48,231733/16,393836 | MH319222 | n | n |
| 8422 | Hylaeus punctatus (Brullé, 1832) | 15.08.16 | J. Lanner | 48,184397/16,334264 | MH319223 | n | n |
| 8423 | Hylaeus punctatus (Brullé, 1832) | 30.06.16 | J. Lanner | 48,231733/16,393836 | MH319224 | n | MH458523 |
| 8424 | Hylaeus communis Nylander, 1852 | 22.07.16 | J. Lanner | 48,241564/16,329992 | MH319225 | n | n |
| 8425 | Hylaeus communis Nylander, 1852 | 19.08.16 | J. Lanner | 48,182042/16,418494 | MH319226 | n | f |
| 8429 | Hylaeus communis Nylander, 1852 | 19.08.16 | J. Lanner | 48,182042/16,418494 | MH319227 | f | n |
| 8430 | Hylaeus communis Nylander, 1852 | 15.08.16 | J. Lanner | 48,229381/16,303039 | MH319228 | n | f |
| 8433 | Hylaeus leptocaphalus (Morawitz, 1870) | 01.07.16 | J. Lanner | 48,200389/16,368136 | MH319229 | n | n |
| 8434 | Hylaeus leptocaphalus (Morawitz, 1870) | 02.07.16 | J. Lanner | 48,226561/16,339253 | MH319230 | n | n |
| 8435 | Hylaeus leptocaphalus (Morawitz, 1870) | 02.07.16 | J. Lanner | 48,226561/16,339253 | MH319231 | n | n |
| 8437 | Hylaeus leptocaphalus (Morawitz, 1870) | 18.08.16 | J. Lanner | 48,231733/16,393836 | MH319232 | f | MH458524 |
| 8438 | Hylaeus pictipes Nylander, 1852 | 25.07.16 | J. Lanner | 48,208586/16,345247 | MH319233 | f | f |
| 8439 | Hylaeus pictipes Nylander, 1852 | 29.06.16 | J. Lanner | 48,219158/16,353094 | MH319234 | n | n |
| 8441 | Hylaeus communis Nylander, 1852 | 28.06.16 | J. Lanner | 48,208586/16,345247 | MH319235 | n | f |
| 8442 | Hylaeus communis Nylander, 1852 | 20.07.16 | J. Lanner | 48,221539/16,377622 | MH319236 | n | f |
| 8443 | Lasioglossum laticeps (Schenck, 1870) | 21.07.16 | J. Lanner | 48,219158/16,353094 | MH319237 | VWB048-18 | n |
| 8444 | Lasioglossum laticeps (Schenck, 1870) | 28.06.16 | J. Lanner | 48,208586/16,345247 | MH319238 | VWB049-18 | n |
| 8445 | Sphecodes albilabris (Fabricius, 1793) | 15.08.16 | J. Lanner | 48,229381/16,303039 | MH319239 | f | n |
| 8446 | Sphecodes albilabris (Fabricius, 1793) | 15.08.16 | J. Lanner | 48,184397/16,334264 | MH319240 | n | MH458490 |
| 8447 | Sphecodes albilabris (Fabricius, 1793) | 16.08.16 | J. Lanner | 48,182042/16,418494 | MH319241 | VWB050-18 | MH458492 |
| 8448 | Sphecodes albilabris (Fabricius, 1793) | 15.08.16 | J. Lanner | 48,184397/16,334264 | MH319242 | n | MH458494 |
| 8449 | Lasioglossum politum (Schenck, 1853) | 30.06.16 | J. Lanner | 48,231733/16,393836 | MH319243 | f | MH458491 |
| 8450 | Lasioglossum morio (Fabricius, 1793) | 21.07.16 | J. Lanner | 48,219158/16,353094 | n | f | MH458493 |
| 8451 | Lasioglossum leucozonium (Schrank, 1781) | 21.07.16 | J. Lanner | 48,219158/16,353094 | MH319244 | VWB051-18 | n |
| 8452 | Lasioglossum leucozonium (Schrank, 1781) | 27.07.16 | J. Lanner | 48,229381/16,303039 | MH319245 | n | n |
| 8453 | Stelis punctulatissima (Kirby, 1802) | 21.07.16 | J. Lanner | 48,226561/16,339253 | f | n | MH458483 |
| 8454 | Halictus rubicundus (Christ, 1791) | 21.07.16 | J. Lanner | 48,241564/16,329992 | f | f | MH458484 |
| 8455 | Lasioglossum majus (Nylander, 1852) | 26.07.16 | J. Lanner | 48,28835/16,427611 | MH319246 | f | n |
| 8456 | Halictus tumulorum (Linnaeus, 1758) | 30.06.16 | J. Lanner | 48,231733/16,393836 | MH319247 | n | n |
| 8457 | Lasioglossum calceatum (Scopoli, 1763) | 27.07.16 | J. Lanner | 48,229381/16,303039 | MH319248 | n | MH458485 |
| 8458 | Anthidium nanum Mocsary, 1881 | 05.07.11 | J. Lanner | 48,28835/16,427611 | n | n | n |
| 8459 | Anthidium nanum Mocsary, 1881 | 05.07.11 | J. Lanner | 48,28835/16,427611 | MH319249 | f | MH458488 |
| 8460 | Anthidium oblongatum (Illiger, 1806) | 04.07.16 | J. Lanner | 48,184397/16,334264 | MH319250 | VWB052-18 | MH458512 |
| 8461 | Megachile willughbiella (Kirby, 1802) | 22.07.16 | J. Lanner | 48,184397/16,334264 | MH319251 | n | MH458513 |
| 8462 | Megachile versicolor Smith, 1844 | 26.07.16 | J. Lanner | 48,28835/16,427611 | f | n | MH458511 |
| 8463 | Melitta leporina (Panzer, 1799) | 05.07.16 | J. Lanner | 48,28835/16,427611 | MH319252 | f | MH458501 |
| 8464 | Megachile pilidens Alfken, 1924 | 29.06.16 | J. Lanner | 48,219158/16,353094 | MH319253 | f | n |
| 8465 | Coelioxys echinata Foerster, 1853 | 29.06.16 | J. Lanner | 48,219158/16,353094 | MH319254 | n | f |
| 8466 | Coelioxys conoidea (Illiger, 1806) | 19.08.16 | J. Lanner | 48,28835/16,427611 | MH319255 | VWB053-18 | MH458502 |
| 8467 | Coelioxys conoidea (Illiger, 1806) | 18.08.16 | J. Lanner | 48,182042/16,418494 | MH319256 | n | MH458514 |
| 8468 | Coelioxys echinata Foerster, 1853 | 29.06.16 | J. Lanner | 48,219158/16,353094 | MH319257 | n | n |
| 8469 | Halictus maculatus Smith, 1848 | 30.06.16 | J. Lanner | 48,221539/16,377622 | MH319258 | f | n |
| 8470 | Megachile rotundata (Fabricius, 1787) | 25.07.16 | J. Lanner | 48,200389/16,368136 | MH319259 | n | MH458515 |
| 8471 | Megachile rotundata (Fabricius, 1787) | 04.07.16 | J. Lanner | 48,184397/16,334264 | MH319260 | VWB054-18 | MH458473 |
| 8472 | Lasioglossum malachurum (Kirby, 1802) | 26.07.16 | J. Lanner | 48,28835/16,427611 | MH319261 | VWB055-18 | f |
| 8473 | Heriades truncorum (Linnaeus, 1758) | 29.06.16 | J. Lanner | 48,219158/16,353094 | MH319262 | n | n |
| 8474 | Andrena minutula (Kirby, 1802) | 01.07.16 | J. Lanner | 48,200389/16,368136 | MH319263 | n | n |
| 8476 | Andrena minutula (Kirby, 1802) | 30.06.16 | J. Lanner | 48,221539/16,377622 | MH319264 | n | n |
| 8477 | Colletes daviesanus Smith, 1846 | 29.06.16 | J. Lanner | 48,219158/16,353094 | MH319265 | VWB056-18 | n |
| 8479 | Andrena dorsata (Kirby, 1802) | 30.06.16 | J. Lanner | 48,221539/16,377622 | f | n | n |
| 8480 | Megachile rotundata (Fabricius, 1787) | 04.07.16 | J. Lanner | 48,184397/16,334264 | f | n | MH458519 |
| 8484 | Sphecodes rufiventris (Panzer, 1798) | 16.08.16 | J. Lanner | 48,219158/16,353094 | MH319266 | n | n |
| 8486 | Chelostoma campanularum (Kirby, 1802) | 02.07.16 | J. Lanner | 48,226561/16,339253 | MH319267 | n | n |
| 8487 | Osmia leucomelana (Kirby, 1802) | 02.07.16 | J. Lanner | 48,229381/16,303039 | MH319268 | n | n |
| 8488 | Megachile willughbiella (Kirby, 1802) | 30.06.16 | J. Lanner | 48,221539/16,377622 | MH319269 | n | MH458504 |
| 8489 | Heriades rubicola Perez, 1890 | 30.06.16 | J. Lanner | 48,231733/16,393836 | MH319270 | n | MH458505 |
| 8490 | Heriades crenulatus Nylander, 1856 | 30.06.16 | J. Lanner | 48,221539/16,377622 | MH319271 | n | f |
| 8493 | Heriades rubicola Perez, 1890 | 26.07.16 | J. Lanner | 48,28835/16,427611 | MH319272 | n | MH458497 |
| 8495 | Heriades truncorum (Linnaeus, 1758) | 21.07.16 | J. Lanner | 48,226561/16,339253 | MH319273 | n | MH458498 |
| 8496 | Halictus tumulorum (Linnaeus, 1758) | 25.07.16 | J. Lanner | 48,200389/16,368136 | MH319274 | n | f |
| 8498 | Lasioglossum morio (Fabricius, 1793) | 22.07.16 | J. Lanner | 48,184397/16,334264 | MH319275 | n | MH458496 |
| 8499 | Lasioglossum morio (Fabricius, 1793) | 16.08.16 | J. Lanner | 48,208586/16,345247 | f | n | n |
| 8500 | Lasioglossum nitidulum (Fabricius, 1804) | 17.08.16 | J. Lanner | 48,241564/16,329992 | MH319276 | n | n |
| 8501 | Lasioglossum morio (Fabricius, 1793) | 21.07.16 | J. Lanner | 48,219158/16,353094 | MH319277 | n | MH458480 |
| 8502 | Lasioglossum nitidulum (Fabricius, 1804) | 21.07.16 | J. Lanner | 48,226561/16,339253 | MH319278 | n | n |
| 8503 | Lasioglossum pygmaeum (Schenck, 1853) | 25.04.17 | J. Lanner | 48,219158/16,353094 | MH319279 | f | MH458479 |
| 8504 | Andrena nitida (Muller, 1776) | 25.04.17 | F. Gaulhofer | 48,241564/16,329992 | n | f | MH458481 |
| 8505 | Bombus hypnorum (Linnaeus, 1758) | 25.04.17 | F. Gaulhofer | 48,229381/16,303039 | MH319280 | f | n |
| 8506 | Lasioglossum parvulum (Schenck, 1853) | 24.04.17 | F. Gaulhofer | 48,231733/16,393836 | MH319281 | f | n |
| 8507 | Andrena subopaca Nylander, 1848 | 24.04.17 | F. Gaulhofer | 48,231733/16,393836 | MH319282 | f | n |
| 8508 | Halictus seladonius (Fabricius, 1794) | 22.05.17 | F. Gaulhofer | 48,221539/16,377622 | MH319283 | f | n |
| 8509 | Osmia cornuta (Latreille, 1805) | 25.04.17 | F. Gaulhofer | 48,221539/16,377622 | MH319284 | VWB057-18 | n |
| 8510 | Andrena taraxaci Giraud, 1862 | 24.04.17 | F. Gaulhofer | 48,231733/16,393836 | MH319285 | f | n |
| 8511 | Andrena nigroaenea (Kirby, 1802) | 25.04.17 | J. Lanner | 48,219158/16,353094 | MH319286 | f | n |
| 8512 | Andrena gravida Imhoff, 1832 | 01.05.17 | F. Gaulhofer | 48,184397/16,334264 | MH319287 | f | n |
| 8513 | Osmia caerulescens (Linnaeus, 1758) | 01.05.17 | F. Gaulhofer | 48,182042/16,418494 | MH319288 | f | n |
| 8514 | Andrena minutula (Kirby, 1802) | 01.05.17 | F. Gaulhofer | 48,182042/16,418494 | n | f | n |
| 8515 | Andrena danuvia Stoeckhert, 1950 | 25.04.17 | J. Lanner | 48,219158/16,353094 | MH319289 | f | n |
| 8516 | Andrena haemorrhoa (Fabricius, 1781) | 24.04.17 | F. Gaulhofer | 48,23015/16,361306 | MH319290 | f | n |
| 8517 | Anthophora quadrimaculata (Panzer, 1798) | 22.05.17 | F. Gaulhofer | 48,231733/16,393836 | MH319291 | f | n |
| 8518 | Hylaeus punctatus (Brullé, 1832) | 23.05.17 | F. Gaulhofer | 48,200389/16,368136 | MH319292 | f | n |
| 8519 | Hylaeus leptocaphalus (Morawitz, 1870) | 23.05.17 | F. Gaulhofer | 48,241564/16,329992 | MH319293 | f | n |
| 8520 | Osmia leaiana Kirby, 1802 | 19.05.17 | J. Lanner | 48,219158/16,353094 | MH319294 | VWB058-18 | n |
| 8521 | Hylaeus gibbus Saunders, 1850 | 22.05.17 | F. Gaulhofer | 48,182042/16,418494 | n | f | n |
| 8522 | Bombus pratorum (Linnaeus, 1761) | 19.05.17 | J. Lanner | 48,219158/16,353094 | MH319295 | VWB059-18 | n |
| 8523 | Anthophora plumipes (Pallas, 1772) | 25.04.17 | F. Gaulhofer | 48,229381/16,303039 | MH319296 | f | n |
| 8524 | Chelostoma rapunculi (Lepeletier, 1841) | 19.05.17 | J. Lanner | 48,219158/16,353094 | MH319297 | f | n |
| 8525 | Ceratina chalybea Chevrier, 1872 | 22.05.17 | F. Gaulhofer | 48,221539/16,377622 | MH319298 | f | n |
| 8526 | Ceratina chalybea Chevrier, 1872 | 26.05.17 | F. Gaulhofer | 48,28835/16,427611 | MH319299 | f | n |
| 8527 | Ceratina cyanea (Kirby, 1802) | 22.04.17 | F. Gaulhofer | 48,221539/16,377622 | n | f | n |
| 8528 | Halictus pollinosus Sichel, 1860 | 26.05.17 | F. Gaulhofer | 48,28835/16,427611 | MH319300 | f | n |
| 8529 | Coelioxys elongata Lepeletier, 1841 | 25.04.17 | J. Lanner | 48,219158/16,353094 | MH319301 | f | n |
| 8530 | Nomada integra Brullé, 1832 | 24.04.17 | F. Gaulhofer | 48,231733/16,393836 | MH319302 | VWB060-18 | n |
| 8531 | Lasioglossum morio (Fabricius, 1793) | 01.05.17 | F. Gaulhofer | 48,182042/16,418494 | MH319303 | VWB061-18 | n |
| 8532 | Osmia bicornis (Linnaeus, 1758) | 22.05.17 | F. Gaulhofer | 48,23015/16,361306 | n | f | n |
| 8533 | Colletes cunicularius (Linnaeus, 1761) | 29.03.17 | F. Gaulhofer | 48,221539/16,377622 | MH319304 | VWB062-18 | n |
| 8534 | Halictus simplex Bluethgen, 1923 | 23.05.17 | F. Gaulhofer | 48,200389/16,368136 | n | VWB063-18 | n |
| 8535 | Nomada fucata Panzer, 1798 | 25.04.17 | F. Gaulhofer | 48,229381/16,303039 | MH319305 | VWB064-18 | n |
| 8536 | Eucera chrysopyga Perez, 1879 | 26.05.17 | F. Gaulhofer | 48,28835/16,427611 | MH319306 | VWB065-18 | n |
| 8537 | Lasioglossum xanthopus (Kirby, 1802) | 26.04.17 | F. Gaulhofer | 48,28835/16,427611 | n | f | n |
| 8538 | Bombus humilis Illiger, 1806 | 01.05.17 | F. Gaulhofer | 48,184397/16,334264 | MH319307 | VWB066-18 | n |
| 8539 | Lasioglossum nigripes (Lepeletier, 1841) | 23.05.17 | F. Gaulhofer | 48,200389/16,368136 | MH319308 | f | n |
| 8540 | Lasioglossum lineare (Schenck, 1869) | 31.03.17 | F. Gaulhofer | 48,208586/16,345247 | MH319309 | f | n |

**Appendix C:** Phylogenetic approach

Specimens, with presented a specific and readable sequence, were listed and for each species one additional full-length DNA barcode was downloaded from BOLD (marked in green). Bootstrap values of 100 were replaced by symbols. The tree was split into two parts A and B, whereas the scheme of the complete tree is presented in the black box.



