



# The InBIO Barcoding Initiative Database: DNA barcodes of Iberian Bees

Thomas James Wood<sup>‡</sup>, Hugo Gaspar<sup>§</sup>, Romain Le Divelec<sup>l</sup>, Andreia Penado<sup>¶</sup>, Teresa Luísa Silva<sup>#,‡</sup>, Vanessa A. Mata<sup>#,‡</sup>, Joana Veríssimo<sup>#,‡</sup>, Denis Michez<sup>«</sup>, Sílvia Castro<sup>§</sup>, João Loureiro<sup>§</sup>, Pedro Beja<sup>#,‡</sup>, Sónia Ferreira<sup>#,‡,»</sup>

‡ Naturalis Biodiversity Center, Leiden, Netherlands

§ Centre for Functional Ecology, Associate Laboratory TERRA, Department of Life Sciences, University of Coimbra, Calçada Martim de Freitas, 3000-456, Coimbra, Portugal

l University of Mons, Research Institute for Biosciences, Laboratory of Zoology, Place du parc 20, 7000, Mons, Belgium

¶ Ciência Viva - Agência Nacional para a Cultura Científica e Tecnológica, Largo José Mariano Gago n.º1, Parque das Nações, 1990-073, Lisboa, Portugal

# BIOPOLIS Program in Genomics, Biodiversity and Land Planning, CIBIO, Campus de Vairão, 4485-661 Vairão, Vila do Conde, Portugal

‡ CIBIO, Centro de Investigação em Biodiversidade e Recursos Genéticos, InBIO Laboratório Associado, Campus de Vairão, Universidade do Porto, 4485-661 Vairão, Vila do Conde, Portugal

« University of Mons, Bruxelles, Belgium

» EBM, Estação Biológica de Mertola, Praça Luis de Camoes, Mertola, Mertola, Portugal

Corresponding author: Sónia Ferreira ([soniaferreira@cibio.up.pt](mailto:soniaferreira@cibio.up.pt))

Academic editor: Dominique Zimmermann

Received: 11 Dec 2023 | Accepted: 14 Feb 2024 | Published: 05 Mar 2024

Citation: Wood T, Gaspar H, Le Divelec R, Penado A, Silva TL, Mata VA, Veríssimo J, Michez D, Castro S, Loureiro J, Beja P, Ferreira S (2024) The InBIO Barcoding Initiative Database: DNA barcodes of Iberian Bees. Biodiversity Data Journal 12: e117172. <https://doi.org/10.3897/BDJ.12.e117172>

## Abstract

## Background

Bees are important actors in terrestrial ecosystems and are recognised for their prominent role as pollinators. In the Iberian Peninsula, approximately 1,100 bee species are known, with nearly 100 of these species being endemic to the Peninsula. A reference collection of DNA barcodes, based on morphologically identified bee specimens, representing 514 Iberian species, was constructed. The "InBIO Barcoding Initiative Database: DNA Barcodes of Iberian bees" dataset contains records of 1,059 sequenced specimens. The species of this dataset correspond to about 47% of Iberian bee species diversity and 21%

of endemic species diversity. For peninsular Portugal only, the corresponding coverage is 71% and 50%. Specimens were collected between 2014 and 2022 and are deposited in the research collection of Thomas Wood (Naturalis Biodiversity Center, The Netherlands), in the FLOWer Lab collection at the University of Coimbra (Portugal), in the Andreia Penado collection at the Natural History and Science Museum of the University of Porto (MHNC-UP) (Portugal) and in the InBIO Barcoding Initiative (IBI) reference collection (Vairão, Portugal).

## New information

Of the 514 species sequenced, 75 species from five different families are new additions to the Barcode of Life Data System (BOLD) and 112 new BINs were added. Whilst the majority of species were assigned to a single BIN (94.9%), 27 nominal species were assigned to multiple BINs. Although the placement into multiple BINs may simply reflect genetic diversity and variation, it likely also represents currently unrecognised species-level diversity across diverse taxa, such as *Amegilla albigena* Lepeletier, 1841, *Andrena russula* Lepeletier, 1841, *Lasioglossum leucozonium* (Schrank, 1781), *Nomada femoralis* Morawitz, 1869 and *Sphecodes alternatus* Smith, 1853. Further species pairs of *Colletes*, *Hylaeus* and *Nomada* were placed into the same BINs, emphasising the need for integrative taxonomy within Iberia and across the Mediterranean Basin more broadly. These data substantially contribute to our understanding of bee genetic diversity and DNA barcodes in Iberia and provide an important baseline for ongoing taxonomic revisions in the West Palaearctic biogeographical region.

## Keywords

Hymenoptera, occurrence records, species distributions, peninsular Portugal, peninsular Spain, DNA barcode, cytochrome c oxidase subunit I (COI), pollinator

## Introduction

Bees are a diversified lineage of Hymenopteran insects, with nearly 21,000 species recognised globally (Ascher and Pickering 2023). The greatest bee diversity is found in parts of the world with a Mediterranean to xeric climate (Orr et al. 2021), most clearly south-western Australia, south-western North America, south-western South America, southern Africa and the Old World Mediterranean Basin. Within the Mediterranean Basin, the Iberian Peninsula dominates its western part and is made up of the two countries Portugal (mainland area 89,000 km<sup>2</sup>) and Spain (mainland area 492,000 km<sup>2</sup>). Peninsular Portugal hosts 725 species (Baldock et al. 2018, Wood et al. 2020, Gaspar et al. 2023, Reverté et al. 2023), of which only two bee species are currently recognised as endemic and peninsular Spain hosts approximately 1,100 species (Lhomme et al. 2020, Ortiz-Sánchez 2020).

The total Iberian fauna is represented by approximately 1,100 species belonging to the six major bee families (Apidae, Andrenidae, Colletidae, Halictidae, Megachilidae and Melittidae) with approximately 96 species endemic to the Peninsula (8.7%); these values continue to vary due to ongoing taxonomic revisions which both describe and synonymise taxa, as well as adding new records and exclusions (e.g. Ghisbain et al. (2021b), Cross (2023), Dorchin (2023), Wood (2023), Ghisbain et al. (2023a)). Iberia, therefore, hosts slightly over half of the 2,138 bee species from Europe (Ghisbain et al. 2023b) and around one third of the approximately 3,500 bee species found in the entire West Palaearctic biogeographical region (Rasmont et al. 2017 and subsequent taxonomic works).

Given the large size of the Iberian bee fauna, against the background of widely-reported bee declines (LeBuhn and Vargas Luna 2021, Zattara and Aizen 2021) and the global and regional importance of Iberian bees as pollinators of wild (e.g. Castro et al. (2013), Mendes et al. (2021)) and cultivated plants (e.g. Stefanescu et al. (2018), Gaspar et al. (2022), Mota et al. (2022)), a good understanding of this fauna is highly relevant to ensure appropriate conservation actions (LeBuhn and Vargas Luna 2021, Zattara and Aizen 2021). However, whilst the national totals for Portugal and Spain are now more or less complete, this somewhat masks how patchy the study of Iberian bees has been. Before 2018, knowledge of the Portuguese fauna was seriously incomplete (Baldock et al. 2018) and many taxonomic issues have plagued the understanding of the wider Iberian fauna. Some of the taxonomic issues remained unsolved or simply unresolved for hundreds of years (e.g. Pauly et al. (2019), Litman et al. (2021), Wood and Le Divelec (2022), Dorchin (2023), Praz and Bénon (2023), Wood (2023)) and some were only discovered and resolved much more recently (e.g. Wood et al. (2021), Wood (2022)). Many parts of Iberia remain poorly studied and much work is still required to fully understand the distribution of bees within Iberia (e.g. Álvarez Fidalgo et al. (2022), Gaspar et al. (2023)), certainly when compared to countries in Northern and Central Europe that have a long history of study and a large quantity of validated occurrence data (e.g. Peeters et al. (2012), Else and Edwards (2018), Drossart et al. (2019), Praz et al. (2023)).

In addition to the incomplete study, the Iberian bee fauna has also been seldom studied using genetic techniques as a way to taxonomically delineate its fauna (as opposed to focused population genetic studies or taxonomic studies on specific species, for example, Chávez-Galarza et al. (2015), Cejas et al. (2019), de Sousa et al. (2023)) until very recently (e.g. Ghisbain et al. (2021a), Ghisbain et al. (2021b), Wood et al. (2021), Kasperek et al. (2023), Wood (2023)). These studies have predominantly employed DNA barcodes targeting the cytochrome oxidase I subunit (COI) of the mitochondrial genome, a technique which is widely used in bee taxonomy to delineate species (e.g. Packer and Ruz 2017, Williams et al. 2020, Brasero et al. 2021, McLaughlin et al. 2022, Praz et al. 2022, Wood 2022, Gardner and Gibbs 2023, Praz and Bénon 2023, Wood 2023). However, it is important to note that this approach can produce ambiguous results that do not consistently separate certain taxa or can lead to conflict with morphological characters (e.g. Gibbs (2018)), which can require more powerful analyses to resolve (e.g. Gueuning et al. (2020)).

More broadly, however, the DNA barcoding approach is largely supportive for the majority of existing taxonomic concepts in bees, at least in Europe (Schmidt et al. 2015). Indeed, the work of Schmidt et al. (2015) is one of the few studies to attempt to systematically barcode the entire fauna of an European country, in this case Germany (though see also Magnacca and Brown (2012), Villalta et al. (2021)). In order to meaningfully increase our knowledge of the DNA barcodes of Iberian bees and, hence, also their taxonomic status and presence in Iberia, we attempt to systematically barcode this fauna, with a focus on the species present in peninsular Portugal. We generated barcodes for species representing 46.5% (n = 512) of the bees known from the Peninsula and 20.8% (n = 20) of known endemic Iberian species. This work was conducted within the framework of the InBIO Barcoding Initiative.

## General description

**Purpose:** This dataset aims to provide a contribution to an authoritative DNA barcode sequences library for Iberian bees, documenting biodiversity of this functional group, harbouring relevant pollinators in a Mediterranean hotspot. Such a library aims to enable DNA-based identification of species for both traditional molecular studies and DNA-metabarcoding studies. Furthermore, it constitutes a relevant resource for taxonomic research on Iberian bees and their distributions within and outside the Iberian Peninsula.

**Additional information:** A total of 1,059 bee specimens were sequenced (Suppl. materials 1, 2, 3, 4). Fig. 2 illustrates examples of the diversity of species that are part of the dataset of distribution data and DNA barcodes of Iberian Bees. A full-length barcode of 658 bp was obtained for 1,007 specimens (95%) (Table 1, Suppl. material 2). These specimens represent 514 (46.5%) of the approximately 1,100 described bee species known to occur in the Iberian Peninsula, one species of *Melecta* being identified only to the level of genus. Furthermore, 20 taxa are Iberian endemics, representing 20.8% of the total species endemic to the Iberian Peninsula (n = 96, subject to continuous variation due to ongoing taxonomic revisions and, hence, changing species concepts and distributions, for example, Wood (2023)). For peninsular Portugal, the corresponding values represent 70.8% of the fauna (ca. 725 species) and 50% of the endemic species (one of the only two species endemic to mainland Portugal). The dataset includes specimens from all six bee families known to occur in the Iberian Peninsula (Apidae, Andrenidae, Colletidae, Halictidae, Megachilidae, Melittidae) and 51 of the 56 (91.1%) genera present in the fauna (treating *Eucera* and *Tetralonia* as distinct genera and retaining broad *Halictus* genus including *Seladonia* and *Vestitohalictus*), lacking only *Simpanurgus* (no species in Iberia), *Habropoda* (one species), *Camptopoeum* (one species), *Blastes* (three species) and *Rophites* (two species). These data substantially contribute to our understanding of bee barcodes with 75 species represented by barcodes for the first time in the BOLD database. Currently, 91% of the Portuguese bee species have public DNA barcodes; nevertheless, 64 species remain unrepresented in the DNA barcode reference collections (Suppl. material 5).

Table 1.

List of species that were collected and DNA barcoded for this project. "IBI code" is the Sample ID, while "BOLD code" is the Process ID attributed by BOLD. In the Species column, # indicates taxa for which no DNA barcode was available prior to this study; in the BOLD BIN column, ' indicates unique BINs.

Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Andrenidae	<i>Andrena aerinifrons</i> Dours, 1873	INV12500	<a href="#">IBIHM471-21</a>	<a href="#">BOLD:ADJ3594</a>	<a href="#">OR795910</a>
Andrenidae	<i>Andrena aerinifrons</i> Dours, 1873	INV12633	<a href="#">IBIHM1034-22</a>	<a href="#">BOLD:AET5046'</a>	<a href="#">OR796236</a>
Andrenidae	<i>Andrena aerinifrons</i> Dours, 1873	INV12827	<a href="#">IBIHM1228-22</a>	<a href="#">BOLD:AET5046'</a>	<a href="#">OR795930</a>
Andrenidae	<i>Andrena afzeliella</i> (Kirby, 1802)	INV12647	<a href="#">IBIHM1048-22</a>	<a href="#">BOLD:AAP2754</a>	<a href="#">OR795919</a>
Andrenidae	<i>Andrena aglissima</i> (Scopoli, 1770)	INV12501	<a href="#">IBIHM472-21</a>	<a href="#">BOLD:AEO1903</a>	<a href="#">OR795937</a>
Andrenidae	<i>Andrena aglissima</i> (Scopoli, 1770)	INV12502	<a href="#">IBIHM473-21</a>	<a href="#">BOLD:AEO1903</a>	<a href="#">OR796727</a>
Andrenidae	<i>Andrena aglissima</i> (Scopoli, 1770)	INV13382	<a href="#">IBIHM952-21</a>	<a href="#">BOLD:AEO1903</a>	<a href="#">OR796085</a>
Andrenidae	<i>Andrena alfkenella</i> Perkins, 1914	INV12503	<a href="#">IBIHM474-21</a>	<a href="#">BOLD:AAK0552</a>	<a href="#">OR796780</a>
Andrenidae	<i>Andrena alfkenella</i> Perkins, 1914	INV13052	<a href="#">IBIHM623-21</a>	<a href="#">BOLD:AAK0552</a>	<a href="#">OR796891</a>
Andrenidae	<i>Andrena alfkenella</i> Perkins, 1914	INV13198	<a href="#">IBIHM769-21</a>	<a href="#">BOLD:AAK0552</a>	<a href="#">OR796142</a>
Andrenidae	<i>Andrena alfkenella</i> Perkins, 1914	INV13199	<a href="#">IBIHM770-21</a>	<a href="#">BOLD:AAK0552</a>	<a href="#">OR796444</a>
Andrenidae	<i>Andrena alluaudi</i> Benoist, 1961#	INV12504	<a href="#">IBIHM475-21</a>	<a href="#">BOLD:AEN9732'</a>	<a href="#">OR796776</a>
Andrenidae	<i>Andrena alluaudi</i> Benoist, 1961#	INV12505	<a href="#">IBIHM476-21</a>	<a href="#">BOLD:AEN9732'</a>	<a href="#">OR796724</a>
Andrenidae	<i>Andrena alma</i> Warncke, 1975	INV12828	<a href="#">IBIHM1229-22</a>	<a href="#">BOLD:AEN9431'</a>	<a href="#">OR796777</a>
Andrenidae	<i>Andrena alma</i> Warncke, 1975	INV12829	<a href="#">IBIHM1230-22</a>	<a href="#">BOLD:AEN9431'</a>	<a href="#">OR796133</a>
Andrenidae	<i>Andrena alma</i> Warncke, 1975	INV13377	<a href="#">IBIHM947-21</a>	<a href="#">BOLD:AEN9431'</a>	<a href="#">OR796746</a>
Andrenidae	<i>Andrena ampla</i> Warncke, 1967	INV13168	<a href="#">IBIHM739-21</a>	<a href="#">BOLD:ABA2611</a>	<a href="#">OR796274</a>
Andrenidae	<i>Andrena ampla</i> Warncke, 1967	INV12635	<a href="#">IBIHM1036-22</a>	<a href="#">BOLD:AES0278'</a>	<a href="#">OR796123</a>
Andrenidae	<i>Andrena angustior</i> (Kirby, 1802)	INV12638	<a href="#">IBIHM1039-22</a>	<a href="#">BOLD:AAE5176</a>	<a href="#">OR796639</a>
Andrenidae	<i>Andrena angustior</i> (Kirby, 1802)	INV13174	<a href="#">IBIHM745-21</a>	<a href="#">BOLD:AAE5176</a>	<a href="#">OR796475</a>
Andrenidae	<i>Andrena angustior</i> (Kirby, 1802)	INV13175	<a href="#">IBIHM746-21</a>	<a href="#">BOLD:AAE5176</a>	<a href="#">OR795960</a>
Andrenidae	<i>Andrena angustior</i> (Kirby, 1802)	INV13176	<a href="#">IBIHM747-21</a>	<a href="#">BOLD:AAE5176</a>	<a href="#">OR796180</a>
Andrenidae	<i>Andrena angustior</i> (Kirby, 1802)	INV13180	<a href="#">IBIHM751-21</a>	<a href="#">BOLD:AAE5176</a>	<a href="#">OR796837</a>
Andrenidae	<i>Andrena angustior</i> (Kirby, 1802)	INV13181	<a href="#">IBIHM752-21</a>	<a href="#">BOLD:AAE5176</a>	<a href="#">OR796285</a>
Andrenidae	<i>Andrena angustior</i> (Kirby, 1802)	INV13182	<a href="#">IBIHM753-21</a>	<a href="#">BOLD:AAE5176</a>	<a href="#">OR796538</a>
Andrenidae	<i>Andrena angustior</i> (Kirby, 1802)	INV13183	<a href="#">IBIHM754-21</a>	<a href="#">BOLD:AAE5176</a>	<a href="#">OR796374</a>

Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Andrenidae	<i>Andrena angustior</i> (Kirby, 1802)	INV13184	<a href="#">IBIHM755-21</a>	<a href="#">BOLD:AAE5176</a>	<a href="#">OR796685</a>
Andrenidae	<i>Andrena angustior</i> (Kirby, 1802)	INV13188	<a href="#">IBIHM759-21</a>	<a href="#">BOLD:AAE5176</a>	<a href="#">OR796929</a>
Andrenidae	<i>Andrena angustior</i> (Kirby, 1802)	INV13192	<a href="#">IBIHM763-21</a>	<a href="#">BOLD:AAE5176</a>	<a href="#">OR796292</a>
Andrenidae	<i>Andrena angustior</i> (Kirby, 1802)	INV13196	<a href="#">IBIHM767-21</a>	<a href="#">BOLD:AAE5176</a>	<a href="#">OR796082</a>
Andrenidae	<i>Andrena angustior</i> (Kirby, 1802)	INV13226	<a href="#">IBIHM797-21</a>	<a href="#">BOLD:AAE5176</a>	<a href="#">OR796580</a>
Andrenidae	<i>Andrena angustior</i> (Kirby, 1802)	INV13227	<a href="#">IBIHM798-21</a>	<a href="#">BOLD:AAE5176</a>	<a href="#">OR796304</a>
Andrenidae	<i>Andrena antigana</i> Pérez, 1895	INV12506	<a href="#">IBIHM477-21</a>	<a href="#">BOLD:AEO4687</a>	<a href="#">OR796250</a>
Andrenidae	<i>Andrena antigana</i> Pérez, 1895	INV12507	<a href="#">IBIHM478-21</a>	<a href="#">BOLD:AEO4687</a>	<a href="#">OR796852</a>
Andrenidae	<i>Andrena assimilis</i> Radoszkowski, 1876	INV12627	<a href="#">IBIHM1028-22</a>	<a href="#">BOLD:AEU3679'</a>	<a href="#">OR796869</a>
Andrenidae	<i>Andrena baetica</i> Wood, 2020	INV12821	<a href="#">IBIHM1222-22</a>	<a href="#">BOLD:AEN8421</a>	<a href="#">OR796472</a>
Andrenidae	<i>Andrena bellidis</i> Pérez, 1895#	INV12824	<a href="#">IBIHM1225-22</a>	<a href="#">BOLD:AET0142'</a>	<a href="#">OR796068</a>
Andrenidae	<i>Andrena bellidis</i> Pérez, 1895#	INV12825	<a href="#">IBIHM1226-22</a>	<a href="#">BOLD:AET0142'</a>	<a href="#">OR796765</a>
Andrenidae	<i>Andrena benoisti</i> Wood, 2021	INV12637	<a href="#">IBIHM1038-22</a>	<a href="#">BOLD:AEO0062</a>	<a href="#">OR796387</a>
Andrenidae	<i>Andrena bicolor</i> Fabricius, 1775	INV13051	<a href="#">IBIHM622-21</a>	<a href="#">BOLD:AAD0135</a>	<a href="#">OR796905</a>
Andrenidae	<i>Andrena bicolorata</i> (Rossi, 1790)	INV12628	<a href="#">IBIHM1029-22</a>	<a href="#">BOLD:AEK9626</a>	<a href="#">OR796512</a>
Andrenidae	<i>Andrena bicolorata</i> (Rossi, 1790)	INV12826	<a href="#">IBIHM1227-22</a>	<a href="#">BOLD:AEK9626</a>	<a href="#">OR796382</a>
Andrenidae	<i>Andrena bimaculata</i> (Kirby, 1802)	INV12508	<a href="#">IBIHM479-21</a>	<a href="#">BOLD:AAV9952</a>	<a href="#">OR796913</a>
Andrenidae	<i>Andrena bimaculata</i> (Kirby, 1802)	INV13398	<a href="#">IBIHM968-21</a>	<a href="#">BOLD:AAV9952</a>	<a href="#">OR796445</a>
Andrenidae	<i>Andrena cinerea</i> Brullé, 1832	INV12509	<a href="#">IBIHM480-21</a>	<a href="#">BOLD:AEM8298</a>	<a href="#">OR796689</a>
Andrenidae	<i>Andrena cinerea</i> Brullé, 1832	INV12823	<a href="#">IBIHM1224-22</a>	<a href="#">BOLD:AEM8298</a>	<a href="#">OR796590</a>
Andrenidae	<i>Andrena combinata</i> (Christ, 1791)	INV12634	<a href="#">IBIHM1035-22</a>	<a href="#">BOLD:AAK0530</a>	<a href="#">OR796412</a>
Andrenidae	<i>Andrena combinata</i> (Christ, 1791)	INV12649	<a href="#">IBIHM1050-22</a>	<a href="#">BOLD:AAK0530</a>	<a href="#">OR796847</a>
Andrenidae	<i>Andrena discors</i> Erichson, 1841	INV12546	<a href="#">IBIHM517-21</a>	<a href="#">BOLD:AEI2585</a>	<a href="#">OR796311</a>
Andrenidae	<i>Andrena djelfensis</i> Pérez, 1895	INV12818	<a href="#">IBIHM1219-22</a>	<a href="#">BOLD:AET0920</a>	<a href="#">OR796145</a>
Andrenidae	<i>Andrena dorsana citreola</i> Warncke, 1975	INV12822	<a href="#">IBIHM1223-22</a>	<a href="#">BOLD:AET0918</a>	<a href="#">OR796522</a>
Andrenidae	<i>Andrena fabrella</i> Pérez, 1903	INV12639	<a href="#">IBIHM1040-22</a>	<a href="#">BOLD:AEO4550</a>	<a href="#">OR796649</a>
Andrenidae	<i>Andrena fabrella</i> Pérez, 1903	INV12645	<a href="#">IBIHM1046-22</a>	<a href="#">BOLD:AEO4550</a>	<a href="#">OR796248</a>
Andrenidae	<i>Andrena ferrugineicrus</i> Dours, 1872	INV12512	<a href="#">IBIHM483-21</a>	<a href="#">BOLD:AEN6074</a>	<a href="#">OR795954</a>
Andrenidae	<i>Andrena flavipes</i> Panzer, 1799	INV12513	<a href="#">IBIHM484-21</a>	<a href="#">BOLD:ACX2946</a>	<a href="#">OR796075</a>
Andrenidae	<i>Andrena flavipes</i> Panzer, 1799	INV12817	<a href="#">IBIHM1218-22</a>	<a href="#">BOLD:ACX2946</a>	<a href="#">OR796258</a>

Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Andrenidae	<i>Andrena flavipes</i> Panzer, 1799	INV13161	<a href="#">IBIHM732-21</a>	<a href="#">BOLD:ACX2946</a>	<a href="#">OR796504</a>
Andrenidae	<i>Andrena flavipes</i> Panzer, 1799	INV13162	<a href="#">IBIHM733-21</a>	<a href="#">BOLD:ACX2946</a>	<a href="#">OR796762</a>
Andrenidae	<i>Andrena flavipes</i> Panzer, 1799	INV13163	<a href="#">IBIHM734-21</a>	<a href="#">BOLD:ACX2946</a>	<a href="#">OR796170</a>
Andrenidae	<i>Andrena flavipes</i> Panzer, 1799	INV13164	<a href="#">IBIHM735-21</a>	<a href="#">BOLD:ACX2946</a>	<a href="#">OR796714</a>
Andrenidae	<i>Andrena flavipes</i> Panzer, 1799	INV13165	<a href="#">IBIHM736-21</a>	<a href="#">BOLD:ACX2946</a>	<a href="#">OR796733</a>
Andrenidae	<i>Andrena flavipes</i> Panzer, 1799	INV13392	<a href="#">IBIHM962-21</a>	<a href="#">BOLD:ACX2946</a>	<a href="#">OR796291</a>
Andrenidae	<i>Andrena florea</i> Fabricius, 1793	INV12514	<a href="#">IBIHM485-21</a>	<a href="#">BOLD:AAK0287</a>	<a href="#">OR796059</a>
Andrenidae	<i>Andrena florea</i> Fabricius, 1793	INV13166	<a href="#">IBIHM737-21</a>	<a href="#">BOLD:AAK0287</a>	<a href="#">OR796159</a>
Andrenidae	<i>Andrena florea</i> Fabricius, 1793	INV13169	<a href="#">IBIHM740-21</a>	<a href="#">BOLD:AAK0287</a>	<a href="#">OR796279</a>
Andrenidae	<i>Andrena florea</i> Fabricius, 1793	INV13172	<a href="#">IBIHM743-21</a>	<a href="#">BOLD:AAK0287</a>	<a href="#">OR796755</a>
Andrenidae	<i>Andrena florentina</i> Magretti, 1883	INV12515	<a href="#">IBIHM486-21</a>	<a href="#">BOLD:ADZ9682</a>	<a href="#">OR795967</a>
Andrenidae	<i>Andrena florentina</i> Magretti, 1883	INV13193	<a href="#">IBIHM764-21</a>	<a href="#">BOLD:ADZ9682</a>	<a href="#">OR796604</a>
Andrenidae	<i>Andrena florentina</i> Magretti, 1883	INV13387	<a href="#">IBIHM957-21</a>	<a href="#">BOLD:ADZ9682</a>	<a href="#">OR796889</a>
Andrenidae	<i>Andrena florentina</i> Magretti, 1883	INV13388	<a href="#">IBIHM958-21</a>	<a href="#">BOLD:ADZ9682</a>	<a href="#">OR796719</a>
Andrenidae	<i>Andrena florentina</i> Magretti, 1883	INV13394	<a href="#">IBIHM964-21</a>	<a href="#">BOLD:ADZ9682</a>	<a href="#">OR796136</a>
Andrenidae	<i>Andrena fulica</i> Warncke, 1974	INV12629	<a href="#">IBIHM1030-22</a>	<a href="#">BOLD:AEN6978</a>	<a href="#">OR796196</a>
Andrenidae	<i>Andrena fulica</i> Warncke, 1974	INV13379	<a href="#">IBIHM949-21</a>	<a href="#">BOLD:AEN6978</a>	<a href="#">OR796041</a>
Andrenidae	<i>Andrena fulvago</i> (Christ, 1791)	INV12516	<a href="#">IBIHM487-21</a>	<a href="#">BOLD:AAK0296</a>	<a href="#">OR795999</a>
Andrenidae	<i>Andrena fuscipes</i> (Kirby, 1802)	INV15655	<a href="#">IBIHY003-22</a>	<a href="#">BOLD:AAE1706</a>	<a href="#">OR796101</a>
Andrenidae	<i>Andrena fuscipes</i> (Kirby, 1802)	INV15677	<a href="#">IBIHY020-22</a>	<a href="#">BOLD:AAE1706</a>	<a href="#">OR796027</a>
Andrenidae	<i>Andrena fuscosa</i> Erichson, 1835	INV12517	<a href="#">IBIHM488-21</a>	<a href="#">BOLD:AEO6270</a>	<a href="#">OR796949</a>
Andrenidae	<i>Andrena granulosa</i> Pérez, 1902	INV12518	<a href="#">IBIHM489-21</a>	<a href="#">BOLD:AAR3409</a>	<a href="#">OR796195</a>
Andrenidae	<i>Andrena haemorrhoea</i> (Fabricius, 1781)	INV12519	<a href="#">IBIHM490-21</a>	<a href="#">BOLD:AAD8891</a>	<a href="#">OR796468</a>
Andrenidae	<i>Andrena hedikae</i> Jaeger, 1934	INV12520	<a href="#">IBIHM491-21</a>	<a href="#">BOLD:AEO3736</a>	<a href="#">OR796737</a>
Andrenidae	<i>Andrena hedikae</i> Jaeger, 1934	INV12521	<a href="#">IBIHM492-21</a>	<a href="#">BOLD:AEO3736</a>	<a href="#">OR796601</a>
Andrenidae	<i>Andrena hedikae</i> Jaeger, 1934	INV13418	<a href="#">IBIHM988-21</a>	<a href="#">BOLD:AEO3736</a>	<a href="#">OR796558</a>
Andrenidae	<i>Andrena hesperia</i> Smith, 1853	INV12836	<a href="#">IBIHM1237-22</a>	<a href="#">BOLD:AEN4997</a>	<a href="#">OR796647</a>
Andrenidae	<i>Andrena hesperia</i> Smith, 1853	INV12841	<a href="#">IBIHM1242-22</a>	<a href="#">BOLD:AEN4997</a>	<a href="#">OR796360</a>
Andrenidae	<i>Andrena hesperia</i> Smith, 1853	INV12842	<a href="#">IBIHM1243-22</a>	<a href="#">BOLD:AEO5653</a>	<a href="#">OR796396</a>
Andrenidae	<i>Andrena hesperia</i> Smith, 1853	INV13376	<a href="#">IBIHM946-21</a>	<a href="#">BOLD:AEO5653</a>	<a href="#">OR796299</a>



Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Andrenidae	<i>Andrena humilis</i> Imhoff, 1832	INV12524	<a href="#">IBIHM495-21</a>	<a href="#">BOLD:AER4065</a>	<a href="#">OR796904</a>
Andrenidae	<i>Andrena hypopolia</i> Schmiedeknecht, 1884	INV12630	<a href="#">IBIHM1031-22</a>	<a href="#">BOLD:AAJ2215</a>	<a href="#">OR796330</a>
Andrenidae	<i>Andrena hypopolia</i> Schmiedeknecht, 1884	INV12648	<a href="#">IBIHM1049-22</a>	<a href="#">BOLD:AAJ2215</a>	<a href="#">OR796871</a>
Andrenidae	<i>Andrena hystrix</i> Schmiedeknecht, 1883	INV12631	<a href="#">IBIHM1032-22</a>	<a href="#">BOLD:AEO0162</a>	<a href="#">OR796029</a>
Andrenidae	<i>Andrena hystrix</i> Schmiedeknecht, 1883	INV12632	<a href="#">IBIHM1033-22</a>	<a href="#">BOLD:AEO0162</a>	<a href="#">OR796383</a>
Andrenidae	<i>Andrena impressa</i> Warncke, 1967	INV12646	<a href="#">IBIHM1047-22</a>	<a href="#">BOLD:AEO5002</a>	<a href="#">OR796456</a>
Andrenidae	<i>Andrena juliana</i> Wood, 2021	INV12525	<a href="#">IBIHM496-21</a>	<a href="#">BOLD:AEO3956</a>	<a href="#">OR796882</a>
Andrenidae	<i>Andrena labialis</i> (Kirby, 1802)	INV12526	<a href="#">IBIHM497-21</a>	<a href="#">BOLD:AAK0232</a>	<a href="#">OR796783</a>
Andrenidae	<i>Andrena labialis</i> (Kirby, 1802)	INV13189	<a href="#">IBIHM760-21</a>	<a href="#">BOLD:AAK0232</a>	<a href="#">OR796394</a>
Andrenidae	<i>Andrena labiata</i> Fabricius, 1781	INV02352	<a href="#">IBIHM019-19</a>	<a href="#">BOLD:ADS9137</a>	<a href="#">OR796910</a>
Andrenidae	<i>Andrena labiata</i> Fabricius, 1781	INV02353	<a href="#">IBIHM020-19</a>	<a href="#">BOLD:ADS9137</a>	<a href="#">OR796320</a>
Andrenidae	<i>Andrena labiata</i> Fabricius, 1781	INV12527	<a href="#">IBIHM498-21</a>	<a href="#">BOLD:ADS9137</a>	<a href="#">OR796000</a>
Andrenidae	<i>Andrena labiata</i> Fabricius, 1781	INV13419	<a href="#">IBIHM989-21</a>	<a href="#">BOLD:ADS9137</a>	<a href="#">OR796244</a>
Andrenidae	<i>Andrena lagopus</i> Latreille, 1809	INV12528	<a href="#">IBIHM499-21</a>	<a href="#">BOLD:AAK0222</a>	<a href="#">OR796638</a>
Andrenidae	<i>Andrena lagopus</i> Latreille, 1809	INV13389	<a href="#">IBIHM959-21</a>	<a href="#">BOLD:AAK0222</a>	<a href="#">OR796802</a>
Andrenidae	<i>Andrena lagopus</i> Latreille, 1809	INV13396	<a href="#">IBIHM966-21</a>	<a href="#">BOLD:AAK0222</a>	<a href="#">OR795990</a>
Andrenidae	<i>Andrena leptopyga</i> Pérez, 1895	INV13371	<a href="#">IBIHM941-21</a>	<a href="#">BOLD:AEO3338</a>	<a href="#">OR796421</a>
Andrenidae	<i>Andrena leucolippa</i> Pérez, 1895	INV12529	<a href="#">IBIHM500-21</a>	<a href="#">BOLD:AEO2473</a>	<a href="#">OR796565</a>
Andrenidae	<i>Andrena limata</i> Smith, 1853	INV12530	<a href="#">IBIHM501-21</a>	<a href="#">BOLD:AAE1815</a>	<a href="#">OR796200</a>
Andrenidae	<i>Andrena limata</i> Smith, 1853	INV13386	<a href="#">IBIHM956-21</a>	<a href="#">BOLD:AAE1815</a>	<a href="#">OR796862</a>
Andrenidae	<i>Andrena limata</i> Smith, 1853	INV13384	<a href="#">IBIHM954-21</a>	<a href="#">BOLD:AEX3903</a>	<a href="#">OR796675</a>
Andrenidae	<i>Andrena livens</i> Pérez, 1895	INV12531	<a href="#">IBIHM502-21</a>	<a href="#">BOLD:AEL4518</a>	<a href="#">OR796809</a>
Andrenidae	<i>Andrena livens</i> Pérez, 1895	INV12532	<a href="#">IBIHM503-21</a>	<a href="#">BOLD:AEL4518</a>	<a href="#">OR796116</a>
Andrenidae	<i>Andrena longibarbis</i> Pérez, 1895	INV12533	<a href="#">IBIHM504-21</a>	<a href="#">BOLD:AEO0110</a>	<a href="#">OR795913</a>
Andrenidae	<i>Andrena longibarbis</i> Pérez, 1895	INV12534	<a href="#">IBIHM505-21</a>	<a href="#">BOLD:AEO0110</a>	<a href="#">OR796779</a>
Andrenidae	<i>Andrena longibarbis</i> Pérez, 1895	INV13422	<a href="#">IBIHM992-21</a>	<a href="#">BOLD:AEO0110</a>	<a href="#">OR796557</a>
Andrenidae	<i>Andrena lusitania</i> Wood & Ortiz-Sánchez, 2022#	INV13428	<a href="#">IBIHM998-21</a>	<a href="#">BOLD:AET5292</a>	<a href="#">OR796355</a>
Andrenidae	<i>Andrena minutula</i> (Kirby, 1802)	INV12535	<a href="#">IBIHM506-21</a>	<a href="#">BOLD:AAJ2143</a>	<a href="#">OR796477</a>
Andrenidae	<i>Andrena minutula</i> (Kirby, 1802)	INV12536	<a href="#">IBIHM507-21</a>	<a href="#">BOLD:AAJ2143</a>	<a href="#">OR796060</a>



Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Andrenidae	<i>Andrena minutula</i> (Kirby, 1802)	INV12564	<a href="#">IBIHM535-21</a>	<a href="#">BOLD:AAJ2143</a>	<a href="#">OR796044</a>
Andrenidae	<i>Andrena minutula</i> (Kirby, 1802)	INV13191	<a href="#">IBIHM762-21</a>	<a href="#">BOLD:AAJ2143</a>	<a href="#">OR796198</a>
Andrenidae	<i>Andrena minutula</i> (Kirby, 1802)	INV13407	<a href="#">IBIHM977-21</a>	<a href="#">BOLD:AAJ2143</a>	<a href="#">OR796039</a>
Andrenidae	<i>Andrena minutuloides</i> Perkins, 1914	INV12537	<a href="#">IBIHM508-21</a>	<a href="#">BOLD:AAE4947</a>	<a href="#">OR796022</a>
Andrenidae	<i>Andrena morio</i> Brullé, 1832	INV12523	<a href="#">IBIHM494-21</a>	<a href="#">BOLD:AAJ2141</a>	<a href="#">OR795955</a>
Andrenidae	<i>Andrena morio</i> Brullé, 1832	INV13380	<a href="#">IBIHM950-21</a>	<a href="#">BOLD:AAJ2141</a>	<a href="#">OR796420</a>
Andrenidae	<i>Andrena morio</i> Brullé, 1832	INV13381	<a href="#">IBIHM951-21</a>	<a href="#">BOLD:AER2061</a>	<a href="#">OR796324</a>
Andrenidae	<i>Andrena nana</i> (Kirby, 1802)	INV12538	<a href="#">IBIHM509-21</a>	<a href="#">BOLD:AAR3413</a>	<a href="#">OR796476</a>
Andrenidae	<i>Andrena nana</i> (Kirby, 1802)	INV13404	<a href="#">IBIHM974-21</a>	<a href="#">BOLD:AAR3413</a>	<a href="#">OR796337</a>
Andrenidae	<i>Andrena nana</i> (Kirby, 1802)	INV13406	<a href="#">IBIHM976-21</a>	<a href="#">BOLD:AAR3413</a>	<a href="#">OR795968</a>
Andrenidae	<i>Andrena nigroaenea</i> (Kirby, 1802)	INV12539	<a href="#">IBIHM510-21</a>	<a href="#">BOLD:AAC8068</a>	<a href="#">OR796900</a>
Andrenidae	<i>Andrena nigroaenea</i> (Kirby, 1802)	INV13173	<a href="#">IBIHM744-21</a>	<a href="#">BOLD:AAC8068</a>	<a href="#">OR796237</a>
Andrenidae	<i>Andrena nigroaenea</i> (Kirby, 1802)	INV13186	<a href="#">IBIHM757-21</a>	<a href="#">BOLD:AAC8068</a>	<a href="#">OR796885</a>
Andrenidae	<i>Andrena nigroolivacea</i> Dours, 1873	INV12540	<a href="#">IBIHM511-21</a>	<a href="#">BOLD:ADZ3313</a>	<a href="#">OR796223</a>
Andrenidae	<i>Andrena nigroolivacea</i> Dours, 1873	INV13194	<a href="#">IBIHM765-21</a>	<a href="#">BOLD:ADZ3313</a>	<a href="#">OR796879</a>
Andrenidae	<i>Andrena nigroolivacea</i> Dours, 1873	INV13195	<a href="#">IBIHM766-21</a>	<a href="#">BOLD:ADZ3313</a>	<a href="#">OR795987</a>
Andrenidae	<i>Andrena nitidula</i> Pérez, 1903	INV12642	<a href="#">IBIHM1043-22</a>	<a href="#">BOLD:AAJ2142</a>	<a href="#">OR796203</a>
Andrenidae	<i>Andrena nitidula</i> Pérez, 1903	INV12814	<a href="#">IBIHM1215-22</a>	<a href="#">BOLD:AAJ2142</a>	<a href="#">OR795912</a>
Andrenidae	<i>Andrena orana</i> Warncke, 1975	INV12542	<a href="#">IBIHM513-21</a>	<a href="#">BOLD:AEI8573</a>	<a href="#">OR796921</a>
Andrenidae	<i>Andrena orbitalis</i> Morawitz, 1871#	INV12543	<a href="#">IBIHM514-21</a>	<a href="#">BOLD:AEO3428'</a>	<a href="#">OR796140</a>
Andrenidae	<i>Andrena orbitalis</i> Morawitz, 1871#	INV13373	<a href="#">IBIHM943-21</a>	<a href="#">BOLD:AEO3428'</a>	<a href="#">OR796432</a>
Andrenidae	<i>Andrena orbitalis</i> Morawitz, 1871#	INV13374	<a href="#">IBIHM944-21</a>	<a href="#">BOLD:AEO3428'</a>	<a href="#">OR796307</a>
Andrenidae	<i>Andrena orbitalis</i> Morawitz, 1871#	INV13425	<a href="#">IBIHM995-21</a>	<a href="#">BOLD:AEO3428'</a>	<a href="#">OR796096</a>
Andrenidae	<i>Andrena ovatula</i> (Kirby, 1802)	INV12644	<a href="#">IBIHM1045-22</a>	<a href="#">BOLD:AAK0399</a>	<a href="#">OR796018</a>
Andrenidae	<i>Andrena ovatula</i> (Kirby, 1802)	INV13414	<a href="#">IBIHM984-21</a>	<a href="#">BOLD:AAK0399</a>	<a href="#">OR796216</a>
Andrenidae	<i>Andrena ovatula</i> (Kirby, 1802)	INV13426	<a href="#">IBIHM996-21</a>	<a href="#">BOLD:AAK0399</a>	<a href="#">OR796108</a>
Andrenidae	<i>Andrena ovatula</i> (Kirby, 1802)	INV13429	<a href="#">IBIHM999-21</a>	<a href="#">BOLD:AAK0399</a>	<a href="#">OR796389</a>
Andrenidae	<i>Andrena oviventris</i> Pérez, 1895	INV12544	<a href="#">IBIHM515-21</a>	<a href="#">BOLD:AEO5504</a>	<a href="#">OR796772</a>
Andrenidae	<i>Andrena oviventris</i> Pérez, 1895	INV13378	<a href="#">IBIHM948-21</a>	<a href="#">BOLD:AEO5504</a>	<a href="#">OR796443</a>
Andrenidae	<i>Andrena pandellei</i> Pérez, 1895	INV12545	<a href="#">IBIHM516-21</a>	<a href="#">BOLD:AEO5453</a>	<a href="#">OR796629</a>

Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Andrenidae	<i>Andrena panurgina</i> De Stefani, 1889	INV12830	<a href="#">IBIHM1231-22</a>	<a href="#">BOLD:AEM7346</a>	<a href="#">OR796268</a>
Andrenidae	<i>Andrena panurgina</i> De Stefani, 1889	INV12843	<a href="#">IBIHM1244-22</a>	<a href="#">BOLD:AEM7346</a>	<a href="#">OR796086</a>
Andrenidae	<i>Andrena pilipes</i> Fabricius, 1781	INV12549	<a href="#">IBIHM520-21</a>	<a href="#">BOLD:AAF1031</a>	<a href="#">OR796038</a>
Andrenidae	<i>Andrena pilipes</i> Fabricius, 1781	INV12550	<a href="#">IBIHM521-21</a>	<a href="#">BOLD:AAF1031</a>	<a href="#">OR796288</a>
Andrenidae	<i>Andrena praecox</i> (Scopoli, 1763)	INV13395	<a href="#">IBIHM965-21</a>	<a href="#">BOLD:AER0527'</a>	<a href="#">OR796097</a>
Andrenidae	<i>Andrena propinqua</i> Schenck, 1853	INV12643	<a href="#">IBIHM1044-22</a>	<a href="#">BOLD:AAJ2115</a>	<a href="#">OR795957</a>
Andrenidae	<i>Andrena propinqua</i> Schenck, 1853	INV13167	<a href="#">IBIHM738-21</a>	<a href="#">BOLD:AAJ2115</a>	<a href="#">OR796428</a>
Andrenidae	<i>Andrena propinqua</i> Schenck, 1853	INV13417	<a href="#">IBIHM987-21</a>	<a href="#">BOLD:AAJ2115</a>	<a href="#">OR796648</a>
Andrenidae	<i>Andrena propinqua</i> Schenck, 1853	INV13185	<a href="#">IBIHM756-21</a>	<a href="#">BOLD:AEN9473</a>	<a href="#">OR796102</a>
Andrenidae	<i>Andrena propinqua</i> Schenck, 1853	INV13228	<a href="#">IBIHM799-21</a>	<a href="#">BOLD:AEN9473</a>	<a href="#">OR795997</a>
Andrenidae	<i>Andrena propinqua</i> Schenck, 1853	INV13410	<a href="#">IBIHM980-21</a>	<a href="#">BOLD:AEN9473</a>	<a href="#">OR796158</a>
Andrenidae	<i>Andrena propinqua</i> Schenck, 1853	INV13423	<a href="#">IBIHM993-21</a>	<a href="#">BOLD:AEN9473</a>	<a href="#">OR796953</a>
Andrenidae	<i>Andrena propinqua</i> Schenck, 1853	INV13427	<a href="#">IBIHM997-21</a>	<a href="#">BOLD:AEN9473</a>	<a href="#">OR796473</a>
Andrenidae	<i>Andrena ramosa</i> Wood 2022#	INV12553	<a href="#">IBIHM524-21</a>	<a href="#">BOLD:AEO3339'</a>	<a href="#">OR796144</a>
Andrenidae	<i>Andrena rhenana</i> E.Stöckhert, 1930	INV02286	<a href="#">IBIHM011-19</a>	<a href="#">BOLD:AAN4168</a>	<a href="#">OR796726</a>
Andrenidae	<i>Andrena rhenana</i> E.Stöckhert, 1930	INV12551	<a href="#">IBIHM522-21</a>	<a href="#">BOLD:AAN4168</a>	<a href="#">OR796914</a>
Andrenidae	<i>Andrena rhenana</i> E.Stöckhert, 1930	INV13177	<a href="#">IBIHM748-21</a>	<a href="#">BOLD:AAN4168</a>	<a href="#">OR796721</a>
Andrenidae	<i>Andrena rhenana</i> E.Stöckhert, 1930	INV13178	<a href="#">IBIHM749-21</a>	<a href="#">BOLD:AAN4168</a>	<a href="#">OR796860</a>
Andrenidae	<i>Andrena rhenana</i> E.Stöckhert, 1930	INV13179	<a href="#">IBIHM750-21</a>	<a href="#">BOLD:AAN4168</a>	<a href="#">OR796263</a>
Andrenidae	<i>Andrena rhenana</i> E.Stöckhert, 1930	INV13413	<a href="#">IBIHM983-21</a>	<a href="#">BOLD:AAN4168</a>	<a href="#">OR796640</a>
Andrenidae	<i>Andrena rhyssonota</i> Pérez, 1895	INV12552	<a href="#">IBIHM523-21</a>	<a href="#">BOLD:AEO1135</a>	<a href="#">OR796265</a>
Andrenidae	<i>Andrena rhyssonota</i> Pérez, 1895	INV13372	<a href="#">IBIHM942-21</a>	<a href="#">BOLD:AEO1135</a>	<a href="#">OR796615</a>
Andrenidae	<i>Andrena russula</i> Lepeletier, 1841	INV12558	<a href="#">IBIHM529-21</a>	<a href="#">BOLD:AAZ1205</a>	<a href="#">OR795971</a>
Andrenidae	<i>Andrena russula</i> Lepeletier, 1841	INV13375	<a href="#">IBIHM945-21</a>	<a href="#">BOLD:AAZ1205</a>	<a href="#">OR796594</a>
Andrenidae	<i>Andrena russula</i> Lepeletier, 1841	INV13408	<a href="#">IBIHM978-21</a>	<a href="#">BOLD:AAZ1205</a>	<a href="#">OR795949</a>
Andrenidae	<i>Andrena russula</i> Lepeletier, 1841	INV12555	<a href="#">IBIHM526-21</a>	<a href="#">BOLD:AEN8931</a>	<a href="#">OR796728</a>
Andrenidae	<i>Andrena russula</i> Lepeletier, 1841	INV12556	<a href="#">IBIHM527-21</a>	<a href="#">BOLD:AEN8931</a>	<a href="#">OR796861</a>
Andrenidae	<i>Andrena russula</i> Lepeletier, 1841	INV12557	<a href="#">IBIHM528-21</a>	<a href="#">BOLD:AEN8931</a>	<a href="#">OR796074</a>
Andrenidae	<i>Andrena saxonica</i> E.Stöckhert, 1935	INV12636	<a href="#">IBIHM1037-22</a>	<a href="#">BOLD:AEO3917</a>	<a href="#">OR796266</a>
Andrenidae	<i>Andrena schencki</i> Morawitz, 1866	INV13225	<a href="#">IBIHM796-21</a>	<a href="#">BOLD:AEO3916</a>	<a href="#">OR796322</a>

Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Andrenidae	<i>Andrena senecionis</i> Pérez, 1895	INV12554	<a href="#">IBIHM525-21</a>	<a href="#">BOLD:AEN9475</a>	<a href="#">OR796568</a>
Andrenidae	<i>Andrena senecionis</i> Pérez, 1895	INV13187	<a href="#">IBIHM758-21</a>	<a href="#">BOLD:AEN9475</a>	<a href="#">OR796757</a>
Andrenidae	<i>Andrena spreta</i> Pérez, 1895	INV12560	<a href="#">IBIHM531-21</a>	<a href="#">BOLD:ABA7470</a>	<a href="#">OR796803</a>
Andrenidae	<i>Andrena spreta</i> Pérez, 1895	INV12561	<a href="#">IBIHM532-21</a>	<a href="#">BOLD:ABA7470</a>	<a href="#">OR796844</a>
Andrenidae	<i>Andrena spreta</i> Pérez, 1895	INV12562	<a href="#">IBIHM533-21</a>	<a href="#">BOLD:ABA7470</a>	<a href="#">OR796436</a>
Andrenidae	<i>Andrena spreta</i> Pérez, 1895	INV12565	<a href="#">IBIHM536-21</a>	<a href="#">BOLD:ABA7470</a>	<a href="#">OR796356</a>
Andrenidae	<i>Andrena spreta</i> Pérez, 1895	INV13190	<a href="#">IBIHM761-21</a>	<a href="#">BOLD:ABA7470</a>	<a href="#">OR796876</a>
Andrenidae	<i>Andrena spreta</i> Pérez, 1895	INV13415	<a href="#">IBIHM985-21</a>	<a href="#">BOLD:ABA7470</a>	<a href="#">OR796057</a>
Andrenidae	<i>Andrena spreta</i> Pérez, 1895	INV13416	<a href="#">IBIHM986-21</a>	<a href="#">BOLD:ABA7470</a>	<a href="#">OR796676</a>
Andrenidae	<i>Andrena suerinensis</i> Friese, 1884	INV12566	<a href="#">IBIHM537-21</a>	<a href="#">BOLD:AEO0042</a>	<a href="#">OR796364</a>
Andrenidae	<i>Andrena suerinensis</i> Friese, 1884	INV12567	<a href="#">IBIHM538-21</a>	<a href="#">BOLD:AEO0042</a>	<a href="#">OR796618</a>
Andrenidae	<i>Andrena synadelpha</i> Perkins, 1914	INV12568	<a href="#">IBIHM539-21</a>	<a href="#">BOLD:ACQ8363</a>	<a href="#">OR796754</a>
Andrenidae	<i>Andrena synadelpha</i> Perkins, 1914	INV12569	<a href="#">IBIHM540-21</a>	<a href="#">BOLD:ACQ8363</a>	<a href="#">OR796617</a>
Andrenidae	<i>Andrena tenuistriata</i> Pérez, 1895	INV12570	<a href="#">IBIHM541-21</a>	<a href="#">BOLD:AEO5588'</a>	<a href="#">OR796070</a>
Andrenidae	<i>Andrena tenuistriata</i> Pérez, 1895	INV13197	<a href="#">IBIHM768-21</a>	<a href="#">BOLD:AEO5588'</a>	<a href="#">OR796461</a>
Andrenidae	<i>Andrena thoracica</i> (Fabricius, 1775)	INV12571	<a href="#">IBIHM542-21</a>	<a href="#">BOLD:AAE1815</a>	<a href="#">OR795911</a>
Andrenidae	<i>Andrena thoracica</i> (Fabricius, 1775)	INV13159	<a href="#">IBIHM730-21</a>	<a href="#">BOLD:AAE1815</a>	<a href="#">OR796489</a>
Andrenidae	<i>Andrena thoracica</i> (Fabricius, 1775)	INV13160	<a href="#">IBIHM731-21</a>	<a href="#">BOLD:AAE1815</a>	<a href="#">OR796023</a>
Andrenidae	<i>Andrena thoracica</i> (Fabricius, 1775)	INV13391	<a href="#">IBIHM961-21</a>	<a href="#">BOLD:AAE1815</a>	<a href="#">OR796668</a>
Andrenidae	<i>Andrena trimmerana</i> (Kirby, 1802)	INV12640	<a href="#">IBIHM1041-22</a>	<a href="#">BOLD:AAD2472</a>	<a href="#">OR796778</a>
Andrenidae	<i>Andrena trimmerana</i> (Kirby, 1802)	INV13170	<a href="#">IBIHM741-21</a>	<a href="#">BOLD:AAD2472</a>	<a href="#">OR796441</a>
Andrenidae	<i>Andrena truncatilabris</i> Morawitz, 1877	INV12641	<a href="#">IBIHM1042-22</a>	<a href="#">BOLD:AEO1242</a>	<a href="#">OR795998</a>
Andrenidae	<i>Andrena variabilis</i> Smith, 1853	INV12572	<a href="#">IBIHM543-21</a>	<a href="#">BOLD:AEK5331</a>	<a href="#">OR796637</a>
Andrenidae	<i>Andrena ventricosa</i> Dours, 1873	INV12573	<a href="#">IBIHM544-21</a>	<a href="#">BOLD:AEK6031</a>	<a href="#">OR796830</a>
Andrenidae	<i>Andrena verticalis</i> Pérez, 1895	INV12650	<a href="#">IBIHM1051-22</a>	<a href="#">BOLD:AEN0289</a>	<a href="#">OR796479</a>
Andrenidae	<i>Andrena vetula</i> Lepeletier, 1841	INV12831	<a href="#">IBIHM1232-22</a>	<a href="#">BOLD:AEO0268</a>	<a href="#">OR796124</a>
Andrenidae	<i>Andrena villipes</i> Pérez, 1895	INV12574	<a href="#">IBIHM545-21</a>	<a href="#">BOLD:AEO1830</a>	<a href="#">OR795991</a>
Andrenidae	<i>Andrena villipes</i> Pérez, 1895	INV12819	<a href="#">IBIHM1220-22</a>	<a href="#">BOLD:AEO1830</a>	<a href="#">OR796796</a>
Andrenidae	<i>Andrena villipes</i> Pérez, 1895	INV12820	<a href="#">IBIHM1221-22</a>	<a href="#">BOLD:AEO1830</a>	<a href="#">OR796205</a>
Andrenidae	<i>Andrena vulcana</i> Dours, 1873	INV12815	<a href="#">IBIHM1216-22</a>	<a href="#">BOLD:AES1212'</a>	<a href="#">OR796672</a>

Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Andrenidae	<i>Andrena vulcana</i> Dours, 1873	INV12816	<a href="#">IBIHM1217-22</a>	<a href="#">BOLD:AES1212'</a>	<a href="#">OR796049</a>
Andrenidae	<i>Andrena wilkella</i> (Kirby, 1802)	INV12576	<a href="#">IBIHM547-21</a>	<a href="#">BOLD:AAA8959</a>	<a href="#">OR796493</a>
Andrenidae	<i>Flavipanurgus granadensis</i> (Warncke, 1987)	INV12377	<a href="#">IBIHM448-21</a>	<a href="#">BOLD:AEO4846</a>	<a href="#">OR796833</a>
Andrenidae	<i>Flavipanurgus granadensis</i> (Warncke, 1987)	INV12376	<a href="#">IBIHM447-21</a>	<a href="#">BOLD:AEO4847'</a>	<a href="#">OR796866</a>
Andrenidae	<i>Flavipanurgus kastiliensis</i> (Warncke, 1985)#	INV13322	<a href="#">IBIHM892-21</a>	<a href="#">BOLD:AEO4911</a>	<a href="#">OR796378</a>
Andrenidae	<i>Halopanurgus baldocki</i> (Wood & Cross, 2017)#	INV12378	<a href="#">IBIHM449-21</a>	<a href="#">BOLD:AEO5533'</a>	<a href="#">OR796744</a>
Andrenidae	<i>Melitturga caudata</i> Pérez, 1879#	INV12364	<a href="#">IBIHM435-21</a>	<a href="#">BOLD:AEO3399'</a>	<a href="#">OR796657</a>
Andrenidae	<i>Panurginus albopilosus</i> (Lucas, 1849)#	INV12372	<a href="#">IBIHM443-21</a>	<a href="#">BOLD:AEN9481'</a>	<a href="#">OR796143</a>
Andrenidae	<i>Panurginus albopilosus</i> (Lucas, 1849)#	INV12373	<a href="#">IBIHM444-21</a>	<a href="#">BOLD:AEN9481'</a>	<a href="#">OR796546</a>
Andrenidae	<i>Panurginus albopilosus</i> (Lucas, 1849)#	INV12374	<a href="#">IBIHM445-21</a>	<a href="#">BOLD:AEN9481'</a>	<a href="#">OR796113</a>
Andrenidae	<i>Panurgus banksianus</i> (Kirby, 1802)	INV12379	<a href="#">IBIHM450-21</a>	<a href="#">BOLD:AAO8748</a>	<a href="#">OR796587</a>
Andrenidae	<i>Panurgus banksianus</i> (Kirby, 1802)	INV13324	<a href="#">IBIHM894-21</a>	<a href="#">BOLD:AAO8748</a>	<a href="#">OR796543</a>
Andrenidae	<i>Panurgus calcaratus</i> (Scopoli, 1763)	INV01510	<a href="#">IBIHM025-19</a>	<a href="#">BOLD:ADD7208</a>	<a href="#">OR796789</a>
Andrenidae	<i>Panurgus calcaratus</i> (Scopoli, 1763)	INV01526	<a href="#">IBIHM027-19</a>	<a href="#">BOLD:ADD7208</a>	<a href="#">OR796501</a>
Andrenidae	<i>Panurgus calcaratus</i> (Scopoli, 1763)	INV01530	<a href="#">IBIHM028-19</a>	<a href="#">BOLD:ADD7208</a>	<a href="#">OR796361</a>
Andrenidae	<i>Panurgus calcaratus</i> (Scopoli, 1763)	INV01540	<a href="#">IBIHM029-19</a>	<a href="#">BOLD:ADD7208</a>	<a href="#">OR796025</a>
Andrenidae	<i>Panurgus calcaratus</i> (Scopoli, 1763)	INV01550	<a href="#">IBIHM031-19</a>	<a href="#">BOLD:ADD7208</a>	<a href="#">OR796209</a>
Andrenidae	<i>Panurgus calcaratus</i> (Scopoli, 1763)	INV01557	<a href="#">IBIHM033-19</a>	<a href="#">BOLD:ADD7208</a>	<a href="#">OR796252</a>
Andrenidae	<i>Panurgus calcaratus</i> (Scopoli, 1763)	INV01567	<a href="#">IBIHM035-19</a>	<a href="#">BOLD:ADD7208</a>	<a href="#">OR796169</a>
Andrenidae	<i>Panurgus calcaratus</i> (Scopoli, 1763)	INV12380	<a href="#">IBIHM451-21</a>	<a href="#">BOLD:ADD7208</a>	<a href="#">OR796931</a>
Andrenidae	<i>Panurgus calcaratus</i> (Scopoli, 1763)	INV13323	<a href="#">IBIHM893-21</a>	<a href="#">BOLD:ADD7208</a>	<a href="#">OR796698</a>
Andrenidae	<i>Panurgus canescens</i> Latreille, 1811#	INV12798	<a href="#">IBIHM1199-22</a>	<a href="#">BOLD:AES8898'</a>	<a href="#">OR795952</a>
Andrenidae	<i>Panurgus canescens</i> Latreille, 1811#	INV12799	<a href="#">IBIHM1200-22</a>	<a href="#">BOLD:AES8898'</a>	<a href="#">OR795986</a>
Andrenidae	<i>Panurgus cephalotes</i> Latreille, 1811#	INV12375	<a href="#">IBIHM446-21</a>	<a href="#">BOLD:AEO4429'</a>	<a href="#">OR795946</a>
Andrenidae	<i>Panurgus cephalotes</i> Latreille, 1811#	INV13200	<a href="#">IBIHM771-21</a>	<a href="#">BOLD:AEO4429'</a>	<a href="#">OR796316</a>
Andrenidae	<i>Panurgus cephalotes</i> Latreille, 1811#	INV13201	<a href="#">IBIHM772-21</a>	<a href="#">BOLD:AEO4429'</a>	<a href="#">OR796106</a>
Andrenidae	<i>Panurgus cephalotes</i> Latreille, 1811#	INV13202	<a href="#">IBIHM773-21</a>	<a href="#">BOLD:AEO4429'</a>	<a href="#">OR796537</a>
Andrenidae	<i>Panurgus cephalotes</i> Latreille, 1811#	INV13328	<a href="#">IBIHM898-21</a>	<a href="#">BOLD:AEO4429'</a>	<a href="#">OR796155</a>
Andrenidae	<i>Panurgus dargius</i> Warncke, 1972#	INV12369	<a href="#">IBIHM440-21</a>	<a href="#">BOLD:AEO3268'</a>	<a href="#">OR796741</a>

Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Andrenidae	<i>Panurgus perezii</i> Saunders, 1882#	INV12382	<a href="#">IBIHM453-21</a>	<a href="#">BOLD:AEO3269'</a>	<a href="#">OR796449</a>
Andrenidae	<i>Panurgus perezii</i> Saunders, 1882#	INV13203	<a href="#">IBIHM774-21</a>	<a href="#">BOLD:AEO3269'</a>	<a href="#">OR796573</a>
Andrenidae	<i>Panurgus perezii</i> Saunders, 1882#	INV13204	<a href="#">IBIHM775-21</a>	<a href="#">BOLD:AEO3269'</a>	<a href="#">OR795992</a>
Andrenidae	<i>Panurgus perezii</i> Saunders, 1882#	INV13205	<a href="#">IBIHM776-21</a>	<a href="#">BOLD:AEO3269'</a>	<a href="#">OR796150</a>
Apidae	<i>Amegilla albigena</i> (Lepeletier, 1841)	INV12150	<a href="#">IBIHM221-21</a>	<a href="#">BOLD:AEL4482</a>	<a href="#">OR795951</a>
Apidae	<i>Amegilla albigena</i> (Lepeletier, 1841)	INV12149	<a href="#">IBIHM220-21</a>	<a href="#">BOLD:AEO2968</a>	<a href="#">OR796701</a>
Apidae	<i>Amegilla albigena</i> (Lepeletier, 1841)	INV13344	<a href="#">IBIHM914-21</a>	<a href="#">BOLD:AEO2968</a>	<a href="#">OR796696</a>
Apidae	<i>Amegilla fasciata</i> (Fabricius, 1775)	INV12151	<a href="#">IBIHM222-21</a>	<a href="#">BOLD:AEN9315</a>	<a href="#">OR795963</a>
Apidae	<i>Amegilla quadrifasciata</i> (de Villers, 1789)	INV12152	<a href="#">IBIHM223-21</a>	<a href="#">BOLD:ABX1552</a>	<a href="#">OR796854</a>
Apidae	<i>Amegilla savignyi</i> (Lepeletier, 1841)	INV12468	<a href="#">IBIHM1321-22</a>	<a href="#">BOLD:AEU2956</a>	<a href="#">OR796202</a>
Apidae	<i>Ammobates muticus</i> Spinola, 1843	INV12013	<a href="#">IBIHM084-21</a>	<a href="#">BOLD:AEO2733</a>	<a href="#">OR796197</a>
Apidae	<i>Ammobates muticus</i> Spinola, 1843	INV12014	<a href="#">IBIHM085-21</a>	<a href="#">BOLD:AEO2733</a>	<a href="#">OR796670</a>
Apidae	<i>Ammobates muticus</i> Spinola, 1843	INV12015	<a href="#">IBIHM086-21</a>	<a href="#">BOLD:AEO2733</a>	<a href="#">OR796112</a>
Apidae	<i>Ammobates punctatus</i> (Fabricius, 1804)	INV12030	<a href="#">IBIHM101-21</a>	<a href="#">BOLD:AAC7051</a>	<a href="#">OR796870</a>
Apidae	<i>Ammobatoides scriptus</i> (Gerstäcker, 1869)	INV12028	<a href="#">IBIHM099-21</a>	<a href="#">BOLD:AEO4234</a>	<a href="#">OR796004</a>
Apidae	<i>Anthophora aestivalis</i> (Panzer, 1801)	INV12129	<a href="#">IBIHM200-21</a>	<a href="#">BOLD:AAK2880</a>	<a href="#">OR796008</a>
Apidae	<i>Anthophora agama</i> Radoszkowski, 1869	INV12130	<a href="#">IBIHM201-21</a>	<a href="#">BOLD:AEO0218</a>	<a href="#">OR796697</a>
Apidae	<i>Anthophora atriceps</i> Pérez, 1879	INV12131	<a href="#">IBIHM202-21</a>	<a href="#">BOLD:AEO3578</a>	<a href="#">OR796507</a>
Apidae	<i>Anthophora atroalba</i> Lepeletier, 1841	INV12132	<a href="#">IBIHM203-21</a>	<a href="#">BOLD:AER1825</a>	<a href="#">OR796230</a>
Apidae	<i>Anthophora balneorum</i> Lepeletier, 1841	INV12133	<a href="#">IBIHM204-21</a>	<a href="#">BOLD:AEN8225'</a>	<a href="#">OR796118</a>
Apidae	<i>Anthophora bimaculata</i> (Panzer, 1798)	INV12134	<a href="#">IBIHM205-21</a>	<a href="#">BOLD:AAJ2426</a>	<a href="#">OR796067</a>
Apidae	<i>Anthophora bimaculata</i> (Panzer, 1798)	INV13332	<a href="#">IBIHM902-21</a>	<a href="#">BOLD:AAJ2426</a>	<a href="#">OR796528</a>
Apidae	<i>Anthophora bimaculata</i> (Panzer, 1798)	INV15650	<a href="#">IBIHY001-22</a>	<a href="#">BOLD:AAJ2426</a>	<a href="#">OR796881</a>
Apidae	<i>Anthophora bimaculata</i> (Panzer, 1798)	INV15661	<a href="#">IBIHY005-22</a>	<a href="#">BOLD:AAJ2426</a>	<a href="#">OR796319</a>
Apidae	<i>Anthophora bimaculata</i> (Panzer, 1798)	INV15665	<a href="#">IBIHY009-22</a>	<a href="#">BOLD:AAJ2426</a>	<a href="#">OR795923</a>
Apidae	<i>Anthophora bimaculata</i> (Panzer, 1798)	INV15667	<a href="#">IBIHY010-22</a>	<a href="#">BOLD:AAJ2426</a>	<a href="#">OR796624</a>
Apidae	<i>Anthophora bimaculata</i> (Panzer, 1798)	INV15681	<a href="#">IBIHY023-22</a>	<a href="#">BOLD:AAJ2426</a>	<a href="#">OR796782</a>
Apidae	<i>Anthophora crassipes</i> Lepeletier, 1841	INV12135	<a href="#">IBIHM206-21</a>	<a href="#">BOLD:AEN9016</a>	<a href="#">OR796093</a>
Apidae	<i>Anthophora crinipes</i> Smith, 1854	INV12136	<a href="#">IBIHM207-21</a>	<a href="#">BOLD:ADK6129</a>	<a href="#">OR796500</a>
Apidae	<i>Anthophora crinipes</i> Smith, 1854	INV13331	<a href="#">IBIHM901-21</a>	<a href="#">BOLD:ADK6129</a>	<a href="#">OR796452</a>

Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Apidae	<i>Anthophora dispar</i> Lepeletier, 1841	INV12137	<a href="#">IBIHM208-21</a>	<a href="#">BOLD:AEO5509</a>	<a href="#">OR796028</a>
Apidae	<i>Anthophora dispar</i> Lepeletier, 1841	INV13330	<a href="#">IBIHM900-21</a>	<a href="#">BOLD:AEO5509</a>	<a href="#">OR795975</a>
Apidae	<i>Anthophora femorata</i> (Olivier, 1789)	INV12142	<a href="#">IBIHM213-21</a>	<a href="#">BOLD:ADD5374</a>	<a href="#">OR796890</a>
Apidae	<i>Anthophora fulvitaris</i> Brullé, 1832	INV12138	<a href="#">IBIHM209-21</a>	<a href="#">BOLD:AEO0884</a>	<a href="#">OR796359</a>
Apidae	<i>Anthophora fulvodimidiata</i> Dours, 1869	INV12139	<a href="#">IBIHM210-21</a>	<a href="#">BOLD:AEO1252</a>	<a href="#">OR796163</a>
Apidae	<i>Anthophora furcata</i> (Panzer, 1798)	INV12141	<a href="#">IBIHM212-21</a>	<a href="#">BOLD:AAC5304</a>	<a href="#">OR796405</a>
Apidae	<i>Anthophora gallica</i> (Dalla Torre & Friese, 1895)	INV12140	<a href="#">IBIHM211-21</a>	<a href="#">BOLD:AEO4497</a>	<a href="#">OR796718</a>
Apidae	<i>Anthophora gallica</i> (Dalla Torre & Friese, 1895)	INV12143	<a href="#">IBIHM214-21</a>	<a href="#">BOLD:AEO4497</a>	<a href="#">OR796370</a>
Apidae	<i>Anthophora hispanica</i> (Fabricius, 1787)	INV12153	<a href="#">IBIHM224-21</a>	<a href="#">BOLD:AEO5858'</a>	<a href="#">OR796469</a>
Apidae	<i>Anthophora hispanica</i> (Fabricius, 1787)	INV13329	<a href="#">IBIHM899-21</a>	<a href="#">BOLD:AEO5858'</a>	<a href="#">OR796257</a>
Apidae	<i>Anthophora leucophaea</i> Pérez, 1879	INV12469	<a href="#">IBIHM1322-22</a>	<a href="#">BOLD:AEN6387</a>	<a href="#">OR796621</a>
Apidae	<i>Anthophora mucida</i> Gribodo, 1873	INV12144	<a href="#">IBIHM215-21</a>	<a href="#">BOLD:AEO0770</a>	<a href="#">OR796368</a>
Apidae	<i>Anthophora plumipes</i> (Pallas, 1772)	INV12146	<a href="#">IBIHM217-21</a>	<a href="#">BOLD:AEN8725</a>	<a href="#">OR796306</a>
Apidae	<i>Anthophora plumipes</i> (Pallas, 1772)	INV13015	<a href="#">IBIHM586-21</a>	<a href="#">BOLD:AEN8725</a>	<a href="#">OR796367</a>
Apidae	<i>Anthophora plumipes</i> (Pallas, 1772)	INV13013	<a href="#">IBIHM584-21</a>	<a href="#">BOLD:AEO1358</a>	<a href="#">OR796547</a>
Apidae	<i>Anthophora podagra</i> Lepeletier, 1841	INV12145	<a href="#">IBIHM216-21</a>	<a href="#">BOLD:AEO2867</a>	<a href="#">OR796574</a>
Apidae	<i>Anthophora retusa</i> (Linnaeus, 1758)	INV12147	<a href="#">IBIHM218-21</a>	<a href="#">BOLD:ACD9731</a>	<a href="#">OR796280</a>
Apidae	<i>Anthophora retusa</i> (Linnaeus, 1758)	INV13014	<a href="#">IBIHM585-21</a>	<a href="#">BOLD:ACD9731</a>	<a href="#">OR796327</a>
Apidae	<i>Anthophora retusa</i> (Linnaeus, 1758)	INV13016	<a href="#">IBIHM587-21</a>	<a href="#">BOLD:ACD9731</a>	<a href="#">OR796227</a>
Apidae	<i>Anthophora robusta</i> (Klug, 1845)	INV12148	<a href="#">IBIHM219-21</a>	<a href="#">BOLD:AEO3449'</a>	<a href="#">OR796191</a>
Apidae	<i>Apis mellifera</i> Linnaeus, 1758	INV01913	<a href="#">IBIHM040-19</a>	<a href="#">BOLD:AAA2326</a>	<a href="#">OR796894</a>
Apidae	<i>Apis mellifera</i> Linnaeus, 1758	INV04881	<a href="#">IBIHM061-19</a>	<a href="#">BOLD:AAA2326</a>	<a href="#">OR796077</a>
Apidae	<i>Apis mellifera</i> Linnaeus, 1758	INV13041	<a href="#">IBIHM612-21</a>	<a href="#">BOLD:AAA2326</a>	<a href="#">OR796534</a>
Apidae	<i>Apis mellifera</i> Linnaeus, 1758	INV13042	<a href="#">IBIHM613-21</a>	<a href="#">BOLD:AAA2326</a>	<a href="#">OR796172</a>
Apidae	<i>Bombus barbutellus</i> (Kirby, 1802)	INV12154	<a href="#">IBIHM225-21</a>	<a href="#">BOLD:AAF7051</a>	<a href="#">OR795945</a>
Apidae	<i>Bombus campestris</i> (Panzer, 1801)	INV12155	<a href="#">IBIHM226-21</a>	<a href="#">BOLD:AAD8221</a>	<a href="#">OR796002</a>
Apidae	<i>Bombus hortorum</i> (Linnaeus, 1761)	INV08813	<a href="#">IBIHM065-20</a>	<a href="#">BOLD:AAD2566</a>	<a href="#">OR796294</a>
Apidae	<i>Bombus hortorum</i> (Linnaeus, 1761)	INV13005	<a href="#">IBIHM576-21</a>	<a href="#">BOLD:AAD2566</a>	<a href="#">OR795929</a>
Apidae	<i>Bombus hortorum</i> (Linnaeus, 1761)	INV13006	<a href="#">IBIHM577-21</a>	<a href="#">BOLD:AAD2566</a>	<a href="#">OR796835</a>
Apidae	<i>Bombus hortorum</i> (Linnaeus, 1761)	INV15676	<a href="#">IBIHY019-22</a>	<a href="#">BOLD:AAD2566</a>	<a href="#">OR796174</a>

Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Apidae	<i>Bombus humilis</i> Illiger, 1806	INV12470	<a href="#">IBIHM1323-22</a>	<a href="#">BOLD:ABY7210</a>	<a href="#">OR796485</a>
Apidae	<i>Bombus lapidarius</i> (Linnaeus, 1758)	INV12175	<a href="#">IBIHM246-21</a>	<a href="#">BOLD:AEF7156</a>	<a href="#">OR796287</a>
Apidae	<i>Bombus muscorum</i> (Linnaeus, 1758)	INV12472	<a href="#">IBIHM1325-22</a>	<a href="#">BOLD:AAD8159</a>	<a href="#">OR796064</a>
Apidae	<i>Bombus muscorum</i> (Linnaeus, 1758)	INV12473	<a href="#">IBIHM1326-22</a>	<a href="#">BOLD:AAD8159</a>	<a href="#">OR796795</a>
Apidae	<i>Bombus pascuorum</i> (Scopoli, 1763)	INV12156	<a href="#">IBIHM227-21</a>	<a href="#">BOLD:AAC4378</a>	<a href="#">OR796627</a>
Apidae	<i>Bombus pascuorum</i> (Scopoli, 1763)	INV12159	<a href="#">IBIHM230-21</a>	<a href="#">BOLD:AAC4378</a>	<a href="#">OR795916</a>
Apidae	<i>Bombus pascuorum</i> (Scopoli, 1763)	INV13007	<a href="#">IBIHM578-21</a>	<a href="#">BOLD:AAC4378</a>	<a href="#">OR796775</a>
Apidae	<i>Bombus pascuorum</i> (Scopoli, 1763)	INV13008	<a href="#">IBIHM579-21</a>	<a href="#">BOLD:AAC4378</a>	<a href="#">OR796317</a>
Apidae	<i>Bombus pascuorum</i> (Scopoli, 1763)	INV13009	<a href="#">IBIHM580-21</a>	<a href="#">BOLD:AAC4378</a>	<a href="#">OR796199</a>
Apidae	<i>Bombus pascuorum</i> (Scopoli, 1763)	INV13010	<a href="#">IBIHM581-21</a>	<a href="#">BOLD:AAC4378</a>	<a href="#">OR796654</a>
Apidae	<i>Bombus pascuorum</i> (Scopoli, 1763)	INV13038	<a href="#">IBIHM609-21</a>	<a href="#">BOLD:AAC4378</a>	<a href="#">OR796132</a>
Apidae	<i>Bombus pascuorum</i> (Scopoli, 1763)	INV13039	<a href="#">IBIHM610-21</a>	<a href="#">BOLD:AAC4378</a>	<a href="#">OR796646</a>
Apidae	<i>Bombus pratorum</i> (Linnaeus, 1761)	INV12157	<a href="#">IBIHM228-21</a>	<a href="#">BOLD:AAD4735</a>	<a href="#">OR796816</a>
Apidae	<i>Bombus pratorum</i> (Linnaeus, 1761)	INV13001	<a href="#">IBIHM572-21</a>	<a href="#">BOLD:AAD4735</a>	<a href="#">OR796607</a>
Apidae	<i>Bombus ruderatus</i> (Fabricius, 1775)	INV02336	<a href="#">IBIHM018-19</a>	<a href="#">BOLD:AAJ7737</a>	<a href="#">OR795958</a>
Apidae	<i>Bombus ruderatus</i> (Fabricius, 1775)	INV12158	<a href="#">IBIHM229-21</a>	<a href="#">BOLD:AAJ7737</a>	<a href="#">OR796611</a>
Apidae	<i>Bombus sylvarum</i> (Linnaeus, 1761)	INV12177	<a href="#">IBIHM248-21</a>	<a href="#">BOLD:AAD2551</a>	<a href="#">OR796379</a>
Apidae	<i>Bombus terrestris</i> (Linnaeus, 1758)	INV12471	<a href="#">IBIHM1324-22</a>	<a href="#">BOLD:AAB1062</a>	<a href="#">OR796774</a>
Apidae	<i>Bombus terrestris</i> (Linnaeus, 1758)	INV13000	<a href="#">IBIHM571-21</a>	<a href="#">BOLD:AAB1062</a>	<a href="#">OR796798</a>
Apidae	<i>Bombus terrestris</i> (Linnaeus, 1758)	INV13002	<a href="#">IBIHM573-21</a>	<a href="#">BOLD:AAB1062</a>	<a href="#">OR796260</a>
Apidae	<i>Bombus terrestris</i> (Linnaeus, 1758)	INV13003	<a href="#">IBIHM574-21</a>	<a href="#">BOLD:AAB1062</a>	<a href="#">OR796592</a>
Apidae	<i>Bombus terrestris</i> (Linnaeus, 1758)	INV13004	<a href="#">IBIHM575-21</a>	<a href="#">BOLD:AAB1062</a>	<a href="#">OR796269</a>
Apidae	<i>Bombus terrestris</i> (Linnaeus, 1758)	INV13011	<a href="#">IBIHM582-21</a>	<a href="#">BOLD:AAB1062</a>	<a href="#">OR796107</a>
Apidae	<i>Bombus terrestris</i> (Linnaeus, 1758)	INV13234	<a href="#">IBIHM804-21</a>	<a href="#">BOLD:AAB1062</a>	<a href="#">OR796239</a>
Apidae	<i>Bombus vestalis</i> (Geoffroy, 1785)	INV09330	<a href="#">IBIHM070-20</a>	<a href="#">BOLD:AAI8745</a>	<a href="#">OR796818</a>
Apidae	<i>Bombus vestalis</i> (Geoffroy, 1785)	INV12160	<a href="#">IBIHM231-21</a>	<a href="#">BOLD:AAI8745</a>	<a href="#">OR796909</a>
Apidae	<i>Bombus vestalis</i> (Geoffroy, 1785)	INV13233	<a href="#">IBIHM803-21</a>	<a href="#">BOLD:AAI8745</a>	<a href="#">OR796815</a>
Apidae	<i>Ceratina callosa</i> (Fabricius, 1794)#	INV12162	<a href="#">IBIHM233-21</a>	<a href="#">BOLD:AEN0370</a>	<a href="#">OR796945</a>
Apidae	<i>Ceratina chalcites</i> Germar, 1839	INV12165	<a href="#">IBIHM236-21</a>	<a href="#">BOLD:ACM3088</a>	<a href="#">OR796839</a>
Apidae	<i>Ceratina chalcites</i> Germar, 1839	INV13258	<a href="#">IBIHM828-21</a>	<a href="#">BOLD:ACM3088</a>	<a href="#">OR796036</a>



Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Apidae	<i>Ceratina chalybea</i> Chevrier, 1872	INV12164	<a href="#">IBIHM235-21</a>	<a href="#">BOLD:AAW6323</a>	<a href="#">OR795927</a>
Apidae	<i>Ceratina cucurbitina</i> (Rossi, 1792)	INV12163	<a href="#">IBIHM234-21</a>	<a href="#">BOLD:AAO0285</a>	<a href="#">OR796251</a>
Apidae	<i>Ceratina cucurbitina</i> (Rossi, 1792)	INV13037	<a href="#">IBIHM608-21</a>	<a href="#">BOLD:AAO0285</a>	<a href="#">OR796824</a>
Apidae	<i>Ceratina cucurbitina</i> (Rossi, 1792)	INV13214	<a href="#">IBIHM785-21</a>	<a href="#">BOLD:AAO0285</a>	<a href="#">OR796954</a>
Apidae	<i>Ceratina cucurbitina</i> (Rossi, 1792)	INV15669	<a href="#">IBIHY012-22</a>	<a href="#">BOLD:AAO0285</a>	<a href="#">OR796797</a>
Apidae	<i>Ceratina cyanea</i> (Kirby, 1802)	INV02339	<a href="#">IBIHM046-19</a>	<a href="#">BOLD:AAE9812</a>	<a href="#">OR796425</a>
Apidae	<i>Ceratina cyanea</i> (Kirby, 1802)	INV12170	<a href="#">IBIHM241-21</a>	<a href="#">BOLD:AAE9812</a>	<a href="#">OR796723</a>
Apidae	<i>Ceratina cyanea</i> (Kirby, 1802)	INV13034	<a href="#">IBIHM605-21</a>	<a href="#">BOLD:AAE9812</a>	<a href="#">OR796828</a>
Apidae	<i>Ceratina cyanea</i> (Kirby, 1802)	INV13215	<a href="#">IBIHM786-21</a>	<a href="#">BOLD:AAE9812</a>	<a href="#">OR796552</a>
Apidae	<i>Ceratina cyanea</i> (Kirby, 1802)	INV13216	<a href="#">IBIHM787-21</a>	<a href="#">BOLD:AAE9812</a>	<a href="#">OR796259</a>
Apidae	<i>Ceratina cyanea</i> (Kirby, 1802)	INV13252	<a href="#">IBIHM822-21</a>	<a href="#">BOLD:AAE9812</a>	<a href="#">OR796823</a>
Apidae	<i>Ceratina cyanea</i> (Kirby, 1802)	INV13254	<a href="#">IBIHM824-21</a>	<a href="#">BOLD:AAE9812</a>	<a href="#">OR795924</a>
Apidae	<i>Ceratina dallatorreana</i> Friese, 1896	INV12169	<a href="#">IBIHM240-21</a>	<a href="#">BOLD:ADF8180</a>	<a href="#">OR796186</a>
Apidae	<i>Ceratina dallatorreana</i> Friese, 1896	INV13035	<a href="#">IBIHM606-21</a>	<a href="#">BOLD:ADF8180</a>	<a href="#">OR796583</a>
Apidae	<i>Ceratina dallatorreana</i> Friese, 1896	INV13255	<a href="#">IBIHM825-21</a>	<a href="#">BOLD:ADF8180</a>	<a href="#">OR796684</a>
Apidae	<i>Ceratina gravidula</i> Gerstäcker, 1869	INV12161	<a href="#">IBIHM232-21</a>	<a href="#">BOLD:AEA2549</a>	<a href="#">OR796616</a>
Apidae	<i>Ceratina mocsaryi</i> Friese, 1896	INV12167	<a href="#">IBIHM238-21</a>	<a href="#">BOLD:AEO3844</a>	<a href="#">OR796766</a>
Apidae	<i>Ceratina mocsaryi</i> Friese, 1896	INV13253	<a href="#">IBIHM823-21</a>	<a href="#">BOLD:AEO3844</a>	<a href="#">OR796608</a>
Apidae	<i>Ceratina mocsaryi</i> Friese, 1896	INV13257	<a href="#">IBIHM827-21</a>	<a href="#">BOLD:AEO3844</a>	<a href="#">OR796376</a>
Apidae	<i>Ceratina nigrolabiata</i> Friese, 1896	INV12474	<a href="#">IBIHM1327-22</a>	<a href="#">BOLD:ACG0777</a>	<a href="#">OR796448</a>
Apidae	<i>Ceratina nigrolabiata</i> Friese, 1896	INV12475	<a href="#">IBIHM1328-22</a>	<a href="#">BOLD:ACG0777</a>	<a href="#">OR796678</a>
Apidae	<i>Ceratina nigrolabiata</i> Friese, 1896	INV13256	<a href="#">IBIHM826-21</a>	<a href="#">BOLD:ACG0777</a>	<a href="#">OR796868</a>
Apidae	<i>Ceratina parvula</i> Smith, 1854	INV12166	<a href="#">IBIHM237-21</a>	<a href="#">BOLD:AEO2595'</a>	<a href="#">OR796596</a>
Apidae	<i>Ceratina saundersi</i> Daly, 1983#	INV12176	<a href="#">IBIHM247-21</a>	<a href="#">BOLD:AEO3675'</a>	<a href="#">OR796877</a>
Apidae	<i>Epeolus cruciger marginatus</i> Bischoff, 1930	INV12012	<a href="#">IBIHM083-21</a>	<a href="#">BOLD:AAN3663</a>	<a href="#">OR796946</a>
Apidae	<i>Epeolus cruciger</i> (Panzer, 1799)	INV12462	<a href="#">IBIHM1315-22</a>	<a href="#">BOLD:AAN3663</a>	<a href="#">OR796164</a>
Apidae	<i>Epeolus intermedius</i> Pérez, 1884	INV12464	<a href="#">IBIHM1317-22</a>	<a href="#">BOLD:AAJ0611</a>	<a href="#">OR796091</a>
Apidae	<i>Epeolus intermedius</i> Pérez, 1884	INV12467	<a href="#">IBIHM1320-22</a>	<a href="#">BOLD:AAJ0611</a>	<a href="#">OR795988</a>
Apidae	<i>Epeolus julliani</i> Pérez, 1884	INV12463	<a href="#">IBIHM1316-22</a>	<a href="#">BOLD:ACD1277</a>	<a href="#">OR796659</a>
Apidae	<i>Epeolus variegatus</i> (Linnaeus, 1758)	INV12466	<a href="#">IBIHM1319-22</a>	<a href="#">BOLD:AAJ0611</a>	<a href="#">OR796525</a>

Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Apidae	<i>Eucera barbiventris</i> Pérez, 1902#	INV12100	<a href="#">IBIHM171-21</a>	<a href="#">BOLD:AEN2742</a>	<a href="#">OR796562</a>
Apidae	<i>Eucera barbiventris</i> Pérez, 1902#	INV13239	<a href="#">IBIHM809-21</a>	<a href="#">BOLD:AEN2742</a>	<a href="#">OR796912</a>
Apidae	<i>Eucera chrysopyga</i> Pérez, 1879	INV12114	<a href="#">IBIHM185-21</a>	<a href="#">BOLD:ABV4745</a>	<a href="#">OR796487</a>
Apidae	<i>Eucera chrysopyga</i> Pérez, 1879	INV13017	<a href="#">IBIHM588-21</a>	<a href="#">BOLD:ABV4745</a>	<a href="#">OR796235</a>
Apidae	<i>Eucera chrysopyga</i> Pérez, 1879	INV13021	<a href="#">IBIHM592-21</a>	<a href="#">BOLD:ABV4745</a>	<a href="#">OR796079</a>
Apidae	<i>Eucera collaris</i> Dours, 1873	INV12104	<a href="#">IBIHM175-21</a>	<a href="#">BOLD:AEO1485'</a>	<a href="#">OR796413</a>
Apidae	<i>Eucera collaris</i> Dours, 1873	INV13237	<a href="#">IBIHM807-21</a>	<a href="#">BOLD:AEO1485'</a>	<a href="#">OR796855</a>
Apidae	<i>Eucera dalmatica</i> Lepeletier, 1841	INV13235	<a href="#">IBIHM805-21</a>	<a href="#">BOLD:ADE3334</a>	<a href="#">OR795980</a>
Apidae	<i>Eucera dalmatica</i> Lepeletier, 1841	INV13236	<a href="#">IBIHM806-21</a>	<a href="#">BOLD:ADE3334</a>	<a href="#">OR796856</a>
Apidae	<i>Eucera elongatula</i> Vachal, 1907	INV12108	<a href="#">IBIHM179-21</a>	<a href="#">BOLD:ABU9563</a>	<a href="#">OR796076</a>
Apidae	<i>Eucera elongatula</i> Vachal, 1907	INV12109	<a href="#">IBIHM180-21</a>	<a href="#">BOLD:ABU9563</a>	<a href="#">OR796825</a>
Apidae	<i>Eucera elongatula</i> Vachal, 1907	INV13241	<a href="#">IBIHM811-21</a>	<a href="#">BOLD:ABU9563</a>	<a href="#">OR796516</a>
Apidae	<i>Eucera elongatula</i> Vachal, 1907	INV13242	<a href="#">IBIHM812-21</a>	<a href="#">BOLD:ABU9563</a>	<a href="#">OR796786</a>
Apidae	<i>Eucera eucnemidea</i> Dours, 1873	INV12110	<a href="#">IBIHM181-21</a>	<a href="#">BOLD:AEO0071'</a>	<a href="#">OR796893</a>
Apidae	<i>Eucera eucnemidea</i> Dours, 1873	INV12111	<a href="#">IBIHM182-21</a>	<a href="#">BOLD:AEO0071'</a>	<a href="#">OR796875</a>
Apidae	<i>Eucera hispana</i> Lepeletier, 1841#	INV12116	<a href="#">IBIHM187-21</a>	<a href="#">BOLD:AEO1591'</a>	<a href="#">OR796391</a>
Apidae	<i>Eucera hungarica</i> Friese, 1895	INV12099	<a href="#">IBIHM170-21</a>	<a href="#">BOLD:AAL4610</a>	<a href="#">OR796898</a>
Apidae	<i>Eucera iberica</i> (Dusmet y Alonso 1926)	INV13251	<a href="#">IBIHM821-21</a>	<a href="#">BOLD:AER1385'</a>	<a href="#">OR795982</a>
Apidae	<i>Eucera interrupta</i> Bär, 1850	INV12118	<a href="#">IBIHM189-21</a>	<a href="#">BOLD:ABZ4791</a>	<a href="#">OR796865</a>
Apidae	<i>Eucera longicornis</i> (Linnaeus, 1758)	INV12115	<a href="#">IBIHM186-21</a>	<a href="#">BOLD:ABZ4790</a>	<a href="#">OR796805</a>
Apidae	<i>Eucera longicornis</i> (Linnaeus, 1758)	INV12482	<a href="#">IBIHM1335-22</a>	<a href="#">BOLD:ABZ4790</a>	<a href="#">OR796183</a>
Apidae	<i>Eucera longicornis</i> (Linnaeus, 1758)	INV12483	<a href="#">IBIHM1336-22</a>	<a href="#">BOLD:ABZ4790</a>	<a href="#">OR796957</a>
Apidae	<i>Eucera longicornis</i> (Linnaeus, 1758)	INV13238	<a href="#">IBIHM808-21</a>	<a href="#">BOLD:ABZ4790</a>	<a href="#">OR796431</a>
Apidae	<i>Eucera nigrescens</i> Pérez, 1879	INV12105	<a href="#">IBIHM176-21</a>	<a href="#">BOLD:ABZ2397</a>	<a href="#">OR796395</a>
Apidae	<i>Eucera nigrescens</i> Pérez, 1879	INV13240	<a href="#">IBIHM810-21</a>	<a href="#">BOLD:ABZ2397</a>	<a href="#">OR796255</a>
Apidae	<i>Eucera nigrescens</i> Pérez, 1879	INV13246	<a href="#">IBIHM816-21</a>	<a href="#">BOLD:ABZ2397</a>	<a href="#">OR795989</a>
Apidae	<i>Eucera nigrescens</i> Pérez, 1879	INV13248	<a href="#">IBIHM818-21</a>	<a href="#">BOLD:ABZ2397</a>	<a href="#">OR796872</a>
Apidae	<i>Eucera nigrescens</i> Pérez, 1879	INV13250	<a href="#">IBIHM820-21</a>	<a href="#">BOLD:ABZ2397</a>	<a href="#">OR796333</a>
Apidae	<i>Eucera nigrifacies</i> Lepeletier, 1841	INV12120	<a href="#">IBIHM191-21</a>	<a href="#">BOLD:AER1612'</a>	<a href="#">OR795899</a>
Apidae	<i>Eucera nigrilabris</i> Lepeletier, 1841	INV12121	<a href="#">IBIHM192-21</a>	<a href="#">BOLD:AEM9739</a>	<a href="#">OR796302</a>

Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Apidae	<i>Eucera nigrilabris</i> Lepeletier, 1841	INV13019	<a href="#">IBIHM590-21</a>	<a href="#">BOLD:AEM9739</a>	<a href="#">OR796072</a>
Apidae	<i>Eucera nigrilabris</i> Lepeletier, 1841	INV13020	<a href="#">IBIHM591-21</a>	<a href="#">BOLD:AEM9739</a>	<a href="#">OR795907</a>
Apidae	<i>Eucera notata</i> Lepeletier, 1841#	INV12122	<a href="#">IBIHM193-21</a>	<a href="#">BOLD:AEN4764</a>	<a href="#">OR796709</a>
Apidae	<i>Eucera notata</i> Lepeletier, 1841#	INV13244	<a href="#">IBIHM814-21</a>	<a href="#">BOLD:AEN4764</a>	<a href="#">OR796384</a>
Apidae	<i>Eucera notata</i> Lepeletier, 1841#	INV13245	<a href="#">IBIHM815-21</a>	<a href="#">BOLD:AEN4764</a>	<a href="#">OR796357</a>
Apidae	<i>Eucera numida</i> Lepeletier, 1841	INV12123	<a href="#">IBIHM194-21</a>	<a href="#">BOLD:AEA1287</a>	<a href="#">OR796729</a>
Apidae	<i>Eucera proxima</i> Morawitz, 1875	INV12832	<a href="#">IBIHM1233-22</a>	<a href="#">BOLD:AAI4916</a>	<a href="#">OR796770</a>
Apidae	<i>Eucera proxima</i> Morawitz, 1875	INV12833	<a href="#">IBIHM1234-22</a>	<a href="#">BOLD:AAI4916</a>	<a href="#">OR796908</a>
Apidae	<i>Eucera punctatissima</i> Pérez, 1895#	INV12834	<a href="#">IBIHM1235-22</a>	<a href="#">BOLD:AET2033'</a>	<a href="#">OR796940</a>
Apidae	<i>Eucera punctatissima</i> Pérez, 1895#	INV12835	<a href="#">IBIHM1236-22</a>	<a href="#">BOLD:AET2033'</a>	<a href="#">OR795939</a>
Apidae	<i>Eucera rufa</i> (Lepeletier, 1841)	INV12124	<a href="#">IBIHM195-21</a>	<a href="#">BOLD:ADZ9496</a>	<a href="#">OR796720</a>
Apidae	<i>Eucera ruficollis</i> (Brullé, 1832)	INV12098	<a href="#">IBIHM169-21</a>	<a href="#">BOLD:AEM7547</a>	<a href="#">OR796148</a>
Apidae	<i>Eucera taurica</i> Morawitz, 1870	INV12126	<a href="#">IBIHM197-21</a>	<a href="#">BOLD:AEK9612</a>	<a href="#">OR796182</a>
Apidae	<i>Eucera tricincta</i> Erichson, 1835#	INV12127	<a href="#">IBIHM198-21</a>	<a href="#">BOLD:AEO1994'</a>	<a href="#">OR796080</a>
Apidae	<i>Melecta albifrons</i> (Forster, 1771)	INV12002	<a href="#">IBIHM073-21</a>	<a href="#">BOLD:ACR2895</a>	<a href="#">OR796340</a>
Apidae	<i>Melecta albifrons</i> (Forster, 1771)	INV12003	<a href="#">IBIHM074-21</a>	<a href="#">BOLD:ACR2895</a>	<a href="#">OR796141</a>
Apidae	<i>Melecta festiva</i> Lieftinck, 1980#	INV13336	<a href="#">IBIHM906-21</a>		<a href="#">OR796751</a>
Apidae	<i>Melecta</i> sp.	INV12001	<a href="#">IBIHM072-21</a>	<a href="#">BOLD:AEO2855</a>	<a href="#">OR796791</a>
Apidae	<i>Nomada agrestis</i> Fabricius, 1787	INV12035	<a href="#">IBIHM106-21</a>	<a href="#">BOLD:AEN9589</a>	<a href="#">OR796773</a>
Apidae	<i>Nomada agrestis</i> Fabricius, 1787	INV13265	<a href="#">IBIHM835-21</a>	<a href="#">BOLD:AEN9589</a>	<a href="#">OR796836</a>
Apidae	<i>Nomada basalis</i> Herrich-Schäffer, 1839	INV13270	<a href="#">IBIHM840-21</a>	<a href="#">BOLD:AEK6178</a>	<a href="#">OR796576</a>
Apidae	<i>Nomada basalis</i> Herrich-Schäffer, 1839	INV12036	<a href="#">IBIHM107-21</a>	<a href="#">BOLD:AEN3462</a>	<a href="#">OR796691</a>
Apidae	<i>Nomada basalis</i> Herrich-Schäffer, 1839	INV12037	<a href="#">IBIHM108-21</a>	<a href="#">BOLD:AEO4155'</a>	<a href="#">OR796398</a>
Apidae	<i>Nomada basalis</i> Herrich-Schäffer, 1839	INV12038	<a href="#">IBIHM109-21</a>	<a href="#">BOLD:AEO4155'</a>	<a href="#">OR796767</a>
Apidae	<i>Nomada basalis</i> Herrich-Schäffer, 1839	INV12039	<a href="#">IBIHM110-21</a>	<a href="#">BOLD:AEO4155'</a>	<a href="#">OR795917</a>
Apidae	<i>Nomada beaumonti</i> Schwarz, 1967	INV12041	<a href="#">IBIHM112-21</a>	<a href="#">BOLD:AEO4341</a>	<a href="#">OR796899</a>
Apidae	<i>Nomada bifasciata</i> Olivier, 1811	INV12040	<a href="#">IBIHM111-21</a>	<a href="#">BOLD:AAE5755</a>	<a href="#">OR795993</a>
Apidae	<i>Nomada bifasciata</i> Olivier, 1811	INV12054	<a href="#">IBIHM125-21</a>	<a href="#">BOLD:AAE5755</a>	<a href="#">OR796048</a>
Apidae	<i>Nomada bifasciata</i> Olivier, 1811	INV12055	<a href="#">IBIHM126-21</a>	<a href="#">BOLD:AAE5755</a>	<a href="#">OR796033</a>
Apidae	<i>Nomada bifasciata</i> Olivier, 1811	INV13025	<a href="#">IBIHM596-21</a>	<a href="#">BOLD:AAE5755</a>	<a href="#">OR796641</a>

Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Apidae	<i>Nomada bluethgeni</i> Stoeckert, 1943	INV12608	<a href="#">IBIHM1009-22</a>	<a href="#">BOLD:AES2302</a>	<a href="#">OR796419</a>
Apidae	<i>Nomada bluethgeni</i> Stoeckert, 1943	INV12609	<a href="#">IBIHM1010-22</a>	<a href="#">BOLD:AES2302</a>	<a href="#">OR796527</a>
Apidae	<i>Nomada carnifex</i> Mocsáry, 1883	INV12042	<a href="#">IBIHM113-21</a>	<a href="#">BOLD:AEO0078</a>	<a href="#">OR796582</a>
Apidae	<i>Nomada carnifex</i> Mocsáry, 1883	INV12043	<a href="#">IBIHM114-21</a>	<a href="#">BOLD:AEO0078</a>	<a href="#">OR796575</a>
Apidae	<i>Nomada conjungens</i> Herrich-Schäffer, 1839	INV12606	<a href="#">IBIHM1007-22</a>	<a href="#">BOLD:AER6266'</a>	<a href="#">OR796630</a>
Apidae	<i>Nomada conjungens</i> Herrich-Schäffer, 1839	INV13024	<a href="#">IBIHM595-21</a>	<a href="#">BOLD:AER6266'</a>	<a href="#">OR796943</a>
Apidae	<i>Nomada corcyraea</i> Schmiedeknecht, 1882#	INV12845	<a href="#">IBIHM1246-22</a>	<a href="#">BOLD:AEO6156</a>	<a href="#">OR796137</a>
Apidae	<i>Nomada cristata</i> Pérez, 1896#	INV12044	<a href="#">IBIHM115-21</a>	<a href="#">BOLD:AEO1919'</a>	<a href="#">OR795922</a>
Apidae	<i>Nomada dira</i> Schmiedeknecht, 1882#	INV12045	<a href="#">IBIHM116-21</a>	<a href="#">BOLD:AEN3179</a>	<a href="#">OR795964</a>
Apidae	<i>Nomada discrepans</i> Schmiedeknecht, 1882	INV12048	<a href="#">IBIHM119-21</a>	<a href="#">BOLD:AEN8935'</a>	<a href="#">OR796695</a>
Apidae	<i>Nomada discrepans</i> Schmiedeknecht, 1882	INV13259	<a href="#">IBIHM829-21</a>	<a href="#">BOLD:AEN8935'</a>	<a href="#">OR796009</a>
Apidae	<i>Nomada discrepans</i> Schmiedeknecht, 1882	INV13260	<a href="#">IBIHM830-21</a>	<a href="#">BOLD:AEN8935'</a>	<a href="#">OR796323</a>
Apidae	<i>Nomada distinguenda</i> Morawitz, 1874	INV13023	<a href="#">IBIHM594-21</a>	<a href="#">BOLD:ACY0250</a>	<a href="#">OR796567</a>
Apidae	<i>Nomada distinguenda</i> Morawitz, 1874	INV13027	<a href="#">IBIHM598-21</a>	<a href="#">BOLD:ACY0250</a>	<a href="#">OR796090</a>
Apidae	<i>Nomada distinguenda</i> Morawitz, 1874	INV12602	<a href="#">IBIHM1003-22</a>	<a href="#">BOLD:AET5764'</a>	<a href="#">OR796083</a>
Apidae	<i>Nomada duplex</i> Smith, 1854#	INV12049	<a href="#">IBIHM120-21</a>	<a href="#">BOLD:AEO0073'</a>	<a href="#">OR796114</a>
Apidae	<i>Nomada duplex</i> Smith, 1854#	INV13264	<a href="#">IBIHM834-21</a>	<a href="#">BOLD:AEO0073'</a>	<a href="#">OR796760</a>
Apidae	<i>Nomada fallax</i> Pérez, 1913	INV12611	<a href="#">IBIHM1012-22</a>	<a href="#">BOLD:AEW3802'</a>	<a href="#">OR796010</a>
Apidae	<i>Nomada fallax</i> Pérez, 1913	INV12612	<a href="#">IBIHM1013-22</a>	<a href="#">BOLD:AEW3802'</a>	<a href="#">OR796435</a>
Apidae	<i>Nomada fallax</i> Pérez, 1913	INV12844	<a href="#">IBIHM1245-22</a>	<a href="#">BOLD:AEW3802'</a>	<a href="#">OR796400</a>
Apidae	<i>Nomada fallax</i> Pérez, 1913	INV13268	<a href="#">IBIHM838-21</a>	<a href="#">BOLD:AEW3802'</a>	<a href="#">OR796892</a>
Apidae	<i>Nomada femoralis</i> Morawitz, 1869	INV12052	<a href="#">IBIHM123-21</a>	<a href="#">BOLD:AAI2830</a>	<a href="#">OR796271</a>
Apidae	<i>Nomada femoralis</i> Morawitz, 1869	INV12053	<a href="#">IBIHM124-21</a>	<a href="#">BOLD:AEO6156</a>	<a href="#">OR796559</a>
Apidae	<i>Nomada femoralis</i> Morawitz, 1869	INV13028	<a href="#">IBIHM599-21</a>	<a href="#">BOLD:AEO6156</a>	<a href="#">OR796372</a>
Apidae	<i>Nomada fenestrata</i> Lepeletier, 1841#	INV12837	<a href="#">IBIHM1238-22</a>	<a href="#">BOLD:AER8574'</a>	<a href="#">OR796254</a>
Apidae	<i>Nomada fenestrata</i> Lepeletier, 1841#	INV12838	<a href="#">IBIHM1239-22</a>	<a href="#">BOLD:AER8574'</a>	<a href="#">OR796509</a>
Apidae	<i>Nomada flavoguttata</i> (Kirby, 1802)	INV12046	<a href="#">IBIHM117-21</a>	<a href="#">BOLD:AAD4959</a>	<a href="#">OR796305</a>
Apidae	<i>Nomada flavoguttata</i> (Kirby, 1802)	INV12047	<a href="#">IBIHM118-21</a>	<a href="#">BOLD:AAD4959</a>	<a href="#">OR796404</a>

Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Apidae	<i>Nomada flavoguttata</i> (Kirby, 1802)	INV13033	<a href="#">IBIHM604-21</a>	<a href="#">BOLD:AAD4959</a>	<a href="#">OR796386</a>
Apidae	<i>Nomada flavoguttata</i> (Kirby, 1802)	INV13209	<a href="#">IBIHM780-21</a>	<a href="#">BOLD:AAD4959</a>	<a href="#">OR796192</a>
Apidae	<i>Nomada fulvicornis</i> Fabricius, 1793	INV12056	<a href="#">IBIHM127-21</a>	<a href="#">BOLD:ACE0147</a>	<a href="#">OR796635</a>
Apidae	<i>Nomada fulvicornis</i> Fabricius, 1793	INV12057	<a href="#">IBIHM128-21</a>	<a href="#">BOLD:ACE0147</a>	<a href="#">OR796850</a>
Apidae	<i>Nomada fulvicornis</i> Fabricius, 1793	INV13207	<a href="#">IBIHM778-21</a>	<a href="#">BOLD:ACE0147</a>	<a href="#">OR795935</a>
Apidae	<i>Nomada fuscicornis</i> Nylander, 1848	INV12601	<a href="#">IBIHM1002-22</a>	<a href="#">BOLD:AAF3571</a>	<a href="#">OR795956</a>
Apidae	<i>Nomada glaucopsis</i> Pérez, 1890	INV13263	<a href="#">IBIHM833-21</a>	<a href="#">BOLD:AEJ1237</a>	<a href="#">OR795970</a>
Apidae	<i>Nomada glaucopsis</i> Pérez, 1890	INV12058	<a href="#">IBIHM129-21</a>	<a href="#">BOLD:AEO3423</a>	<a href="#">OR796246</a>
Apidae	<i>Nomada glaucopsis</i> Pérez, 1890	INV12059	<a href="#">IBIHM130-21</a>	<a href="#">BOLD:AEO3423</a>	<a href="#">OR796282</a>
Apidae	<i>Nomada glaucopsis</i> Pérez, 1890	INV12078	<a href="#">IBIHM149-21</a>	<a href="#">BOLD:AEO3423</a>	<a href="#">OR795948</a>
Apidae	<i>Nomada glaucopsis</i> Pérez, 1890	INV12603	<a href="#">IBIHM1004-22</a>	<a href="#">BOLD:AEO3423</a>	<a href="#">OR796184</a>
Apidae	<i>Nomada goodeniana</i> (Kirby, 1802)	INV13026	<a href="#">IBIHM597-21</a>	<a href="#">BOLD:AEB4149</a>	<a href="#">OR796347</a>
Apidae	<i>Nomada hispanica</i> Dusmet y Alonso, 1913#	INV12060	<a href="#">IBIHM131-21</a>	<a href="#">BOLD:AAE5753</a>	<a href="#">OR796030</a>
Apidae	<i>Nomada hispanica</i> Dusmet y Alonso, 1913#	INV13030	<a href="#">IBIHM601-21</a>	<a href="#">BOLD:AAE5753</a>	<a href="#">OR795915</a>
Apidae	<i>Nomada illustris</i> Schmiedeknecht, 1882	INV12061	<a href="#">IBIHM132-21</a>	<a href="#">BOLD:AEN8381</a>	<a href="#">OR796081</a>
Apidae	<i>Nomada illustris</i> Schmiedeknecht, 1882	INV12062	<a href="#">IBIHM133-21</a>	<a href="#">BOLD:AEN8381</a>	<a href="#">OR796134</a>
Apidae	<i>Nomada illustris</i> Schmiedeknecht, 1882	INV12600	<a href="#">IBIHM1001-22</a>	<a href="#">BOLD:AEN8381</a>	<a href="#">OR796058</a>
Apidae	<i>Nomada insignipes</i> Schmiedeknecht, 1882#	INV12063	<a href="#">IBIHM134-21</a>	<a href="#">BOLD:AEL5320</a>	<a href="#">OR796742</a>
Apidae	<i>Nomada insignipes</i> Schmiedeknecht, 1882#	INV12064	<a href="#">IBIHM135-21</a>	<a href="#">BOLD:AEL5320</a>	<a href="#">OR796730</a>
Apidae	<i>Nomada integra</i> Brullé, 1832	INV12065	<a href="#">IBIHM136-21</a>	<a href="#">BOLD:ABZ1320</a>	<a href="#">OR796129</a>
Apidae	<i>Nomada integra</i> Brullé, 1832	INV12095	<a href="#">IBIHM166-21</a>	<a href="#">BOLD:AEN8926</a>	<a href="#">OR796937</a>
Apidae	<i>Nomada integra</i> Brullé, 1832	INV12096	<a href="#">IBIHM167-21</a>	<a href="#">BOLD:AEN8926</a>	<a href="#">OR796270</a>
Apidae	<i>Nomada integra</i> Brullé, 1832	INV12097	<a href="#">IBIHM168-21</a>	<a href="#">BOLD:AEN8926</a>	<a href="#">OR796201</a>
Apidae	<i>Nomada integra</i> Brullé, 1832	INV13266	<a href="#">IBIHM836-21</a>	<a href="#">BOLD:AEN8926</a>	<a href="#">OR796275</a>
Apidae	<i>Nomada integra</i> Brullé, 1832	INV12066	<a href="#">IBIHM137-21</a>	<a href="#">BOLD:AEO3904'</a>	<a href="#">OR796826</a>
Apidae	<i>Nomada kohli</i> Schmiedeknecht, 1882	INV12067	<a href="#">IBIHM138-21</a>	<a href="#">BOLD:AAX4976</a>	<a href="#">OR796380</a>
Apidae	<i>Nomada kohli</i> Schmiedeknecht, 1882	INV12090	<a href="#">IBIHM161-21</a>	<a href="#">BOLD:AAX4976</a>	<a href="#">OR796272</a>
Apidae	<i>Nomada linsenmaieri</i> Schwarz, 1974	INV12068	<a href="#">IBIHM139-21</a>	<a href="#">BOLD:AAF3571</a>	<a href="#">OR796021</a>
Apidae	<i>Nomada linsenmaieri</i> Schwarz, 1974	INV12069	<a href="#">IBIHM140-21</a>	<a href="#">BOLD:AAF3571</a>	<a href="#">OR796221</a>

Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Apidae	<i>Nomada linsenmaieri</i> Schwarz, 1974	INV13211	<a href="#">IBIHM782-21</a>	<a href="#">BOLD:AAF3571</a>	<a href="#">OR796156</a>
Apidae	<i>Nomada linsenmaieri</i> Schwarz, 1974	INV13267	<a href="#">IBIHM837-21</a>	<a href="#">BOLD:AAF3571</a>	<a href="#">OR796673</a>
Apidae	<i>Nomada maculicornis</i> Pérez, 1884	INV12070	<a href="#">IBIHM141-21</a>	<a href="#">BOLD:AEO4739</a>	<a href="#">OR796126</a>
Apidae	<i>Nomada marshamella</i> (Kirby, 1802)	INV09254	<a href="#">IBIHM067-20</a>	<a href="#">BOLD:AAC4884</a>	<a href="#">OR796390</a>
Apidae	<i>Nomada melathoracica</i> Imhoff, 1834	INV12071	<a href="#">IBIHM142-21</a>	<a href="#">BOLD:AAX4983</a>	<a href="#">OR796895</a>
Apidae	<i>Nomada melathoracica</i> Imhoff, 1834	INV12072	<a href="#">IBIHM143-21</a>	<a href="#">BOLD:AAX4983</a>	<a href="#">OR796185</a>
Apidae	<i>Nomada merceti</i> Alfken, 1909#	INV12073	<a href="#">IBIHM144-21</a>	<a href="#">BOLD:AEO1963'</a>	<a href="#">OR796423</a>
Apidae	<i>Nomada merceti</i> Alfken, 1909#	INV12074	<a href="#">IBIHM145-21</a>	<a href="#">BOLD:AEO1963'</a>	<a href="#">OR796917</a>
Apidae	<i>Nomada merceti</i> Alfken, 1909#	INV12084	<a href="#">IBIHM155-21</a>	<a href="#">BOLD:AEO1963'</a>	<a href="#">OR796138</a>
Apidae	<i>Nomada merceti</i> Alfken, 1909#	INV13210	<a href="#">IBIHM781-21</a>	<a href="#">BOLD:AEO1963'</a>	<a href="#">OR796735</a>
Apidae	<i>Nomada merceti</i> Alfken, 1909#	INV13212	<a href="#">IBIHM783-21</a>	<a href="#">BOLD:AEO1963'</a>	<a href="#">OR796586</a>
Apidae	<i>Nomada merceti</i> Alfken, 1909#	INV13213	<a href="#">IBIHM784-21</a>	<a href="#">BOLD:AEO1963'</a>	<a href="#">OR795932</a>
Apidae	<i>Nomada minuscula</i> Noskiewicz, 1930	INV12075	<a href="#">IBIHM146-21</a>	<a href="#">BOLD:AAP1578</a>	<a href="#">OR796161</a>
Apidae	<i>Nomada mutabilis</i> Morawitz, 1870	INV12076	<a href="#">IBIHM147-21</a>	<a href="#">BOLD:AAX4985</a>	<a href="#">OR796609</a>
Apidae	<i>Nomada nobilis</i> Herrich-Schäffer, 1839	INV12077	<a href="#">IBIHM148-21</a>	<a href="#">BOLD:AAU8975</a>	<a href="#">OR796447</a>
Apidae	<i>Nomada nobilis</i> Herrich-Schäffer, 1839	INV13262	<a href="#">IBIHM832-21</a>	<a href="#">BOLD:AAU8975</a>	<a href="#">OR796171</a>
Apidae	<i>Nomada pectoralis</i> Morawitz, 1877	INV12079	<a href="#">IBIHM150-21</a>	<a href="#">BOLD:AEO0458</a>	<a href="#">OR796426</a>
Apidae	<i>Nomada piccioliana</i> Magretti, 1883#	INV12080	<a href="#">IBIHM151-21</a>	<a href="#">BOLD:AAF3496</a>	<a href="#">OR796703</a>
Apidae	<i>Nomada piccioliana</i> Magretti, 1883#	INV12081	<a href="#">IBIHM152-21</a>	<a href="#">BOLD:AAF3496</a>	<a href="#">OR795947</a>
Apidae	<i>Nomada rubricoxa</i> Schwarz, 1977#	INV12082	<a href="#">IBIHM153-21</a>	<a href="#">BOLD:AEO1962'</a>	<a href="#">OR796120</a>
Apidae	<i>Nomada rubricoxa</i> Schwarz, 1977#	INV12083	<a href="#">IBIHM154-21</a>	<a href="#">BOLD:AEO1962'</a>	<a href="#">OR796308</a>
Apidae	<i>Nomada rubricoxa</i> Schwarz, 1977#	INV12085	<a href="#">IBIHM156-21</a>	<a href="#">BOLD:AEO1962'</a>	<a href="#">OR796117</a>
Apidae	<i>Nomada sanguinea</i> Smith, 1854	INV12086	<a href="#">IBIHM157-21</a>	<a href="#">BOLD:AEN8255</a>	<a href="#">OR796588</a>
Apidae	<i>Nomada sanguinea</i> Smith, 1854	INV12087	<a href="#">IBIHM158-21</a>	<a href="#">BOLD:AEN8255</a>	<a href="#">OR796950</a>
Apidae	<i>Nomada sanguinea</i> Smith, 1854	INV13271	<a href="#">IBIHM841-21</a>	<a href="#">BOLD:AEN8255</a>	<a href="#">OR796187</a>
Apidae	<i>Nomada sexfasciata</i> Panzer, 1799	INV12088	<a href="#">IBIHM159-21</a>	<a href="#">BOLD:AAI2916</a>	<a href="#">OR796031</a>
Apidae	<i>Nomada sexfasciata</i> Panzer, 1799	INV13269	<a href="#">IBIHM839-21</a>	<a href="#">BOLD:AAI2916</a>	<a href="#">OR795973</a>
Apidae	<i>Nomada sheppardana</i> (Kirby, 1802)	INV12089	<a href="#">IBIHM160-21</a>	<a href="#">BOLD:AAP1578</a>	<a href="#">OR796595</a>
Apidae	<i>Nomada similis</i> Morawitz, 1872	INV12091	<a href="#">IBIHM162-21</a>	<a href="#">BOLD:AEX4551'</a>	<a href="#">OR796147</a>
Apidae	<i>Nomada stigma</i> Fabricius, 1804	INV12092	<a href="#">IBIHM163-21</a>	<a href="#">BOLD:ABA8671</a>	<a href="#">OR796450</a>

Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Apidae	<i>Nomada striata</i> Fabricius, 1793	INV12093	<a href="#">IBIHM164-21</a>	<a href="#">BOLD:ABY7961</a>	<a href="#">OR796506</a>
Apidae	<i>Nomada striata</i> Fabricius, 1793	INV12605	<a href="#">IBIHM1006-22</a>	<a href="#">BOLD:ABY7961</a>	<a href="#">OR796348</a>
Apidae	<i>Nomada striata</i> Fabricius, 1793	INV13206	<a href="#">IBIHM777-21</a>	<a href="#">BOLD:ABY7961</a>	<a href="#">OR795994</a>
Apidae	<i>Nomada striata</i> Fabricius, 1793	INV13208	<a href="#">IBIHM779-21</a>	<a href="#">BOLD:ABY7961</a>	<a href="#">OR796502</a>
Apidae	<i>Nomada succincta</i> Panzer, 1798	INV12094	<a href="#">IBIHM165-21</a>	<a href="#">BOLD:ABX5010</a>	<a href="#">OR796256</a>
Apidae	<i>Nomada succincta</i> Panzer, 1798	INV13261	<a href="#">IBIHM831-21</a>	<a href="#">BOLD:ABX5010</a>	<a href="#">OR796153</a>
Apidae	<i>Pasites maculatus</i> Jurine, 1807	INV12027	<a href="#">IBIHM098-21</a>	<a href="#">BOLD:AAL3976</a>	<a href="#">OR796569</a>
Apidae	<i>Tetralonia cinctella</i> (Saunders, 1908)	INV12102	<a href="#">IBIHM173-21</a>	<a href="#">BOLD:AEN9450'</a>	<a href="#">OR796857</a>
Apidae	<i>Tetralonia dentata</i> (Germar, 1839)	INV12107	<a href="#">IBIHM178-21</a>	<a href="#">BOLD:AEO2705'</a>	<a href="#">OR796915</a>
Apidae	<i>Tetralonia fulvescens</i> Giraud, 1863	INV12113	<a href="#">IBIHM184-21</a>	<a href="#">BOLD:ADJ0585</a>	<a href="#">OR796497</a>
Apidae	<i>Tetralonia fulvescens</i> Giraud, 1863	INV12112	<a href="#">IBIHM183-21</a>		<a href="#">OR796536</a>
Apidae	<i>Tetralonia iberica</i> Dusmet y Alonso 1926	INV12117	<a href="#">IBIHM188-21</a>	<a href="#">BOLD:AER1385</a>	<a href="#">OR796061</a>
Apidae	<i>Tetralonia nana</i> Morawitz, 1874	INV12119	<a href="#">IBIHM190-21</a>	<a href="#">BOLD:ABW6400</a>	<a href="#">OR796841</a>
Apidae	<i>Tetralonia strigata</i> (Lepeletier, 1841)	INV12125	<a href="#">IBIHM196-21</a>	<a href="#">BOLD:AEN8168</a>	<a href="#">OR796240</a>
Apidae	<i>Thyreus hirtus</i> (de Beaumont, 1940)	INV12004	<a href="#">IBIHM075-21</a>	<a href="#">BOLD:AEO3985</a>	<a href="#">OR796533</a>
Apidae	<i>Thyreus hirtus</i> (de Beaumont, 1940)	INV12005	<a href="#">IBIHM076-21</a>	<a href="#">BOLD:AEO3985</a>	<a href="#">OR796549</a>
Apidae	<i>Thyreus hirtus</i> (de Beaumont, 1940)	INV12007	<a href="#">IBIHM078-21</a>	<a href="#">BOLD:AEO3985</a>	<a href="#">OR796598</a>
Apidae	<i>Thyreus histrionicus</i> (Illiger, 1806)	INV12457	<a href="#">IBIHM1310-22</a>	<a href="#">BOLD:AAO3396</a>	<a href="#">OR796245</a>
Apidae	<i>Thyreus histrionicus</i> (Illiger, 1806)	INV12458	<a href="#">IBIHM1311-22</a>	<a href="#">BOLD:AAO3396</a>	<a href="#">OR796238</a>
Apidae	<i>Thyreus histrionicus</i> (Illiger, 1806)	INV12460	<a href="#">IBIHM1313-22</a>	<a href="#">BOLD:AAO3396</a>	<a href="#">OR796771</a>
Apidae	<i>Thyreus orbatus</i> (Lepeletier, 1841)	INV12006	<a href="#">IBIHM077-21</a>	<a href="#">BOLD:AAI0456</a>	<a href="#">OR796313</a>
Apidae	<i>Thyreus orbatus</i> (Lepeletier, 1841)	INV12010	<a href="#">IBIHM081-21</a>	<a href="#">BOLD:AAI0456</a>	<a href="#">OR796110</a>
Apidae	<i>Thyreus orbatus</i> (Lepeletier, 1841)	INV12011	<a href="#">IBIHM082-21</a>	<a href="#">BOLD:AAI0456</a>	<a href="#">OR796498</a>
Apidae	<i>Thyreus picaron</i> Lieftinck, 1968	INV12461	<a href="#">IBIHM1314-22</a>	<a href="#">BOLD:AED2570</a>	<a href="#">OR796358</a>
Apidae	<i>Thyreus ramosus</i> (Lepeletier, 1841)	INV12008	<a href="#">IBIHM079-21</a>	<a href="#">BOLD:AAK1852</a>	<a href="#">OR796224</a>
Apidae	<i>Thyreus ramosus</i> (Lepeletier, 1841)	INV12009	<a href="#">IBIHM080-21</a>	<a href="#">BOLD:AAK1852</a>	<a href="#">OR796037</a>
Apidae	<i>Thyreus truncatus</i> (Pérez, 1883)	INV12459	<a href="#">IBIHM1312-22</a>	<a href="#">BOLD:AES2873</a>	<a href="#">OR795902</a>
Apidae	<i>Xylocopa cantabrita</i> Lepeletier, 1841#	INV12173	<a href="#">IBIHM244-21</a>	<a href="#">BOLD:AEO2264</a>	<a href="#">OR796867</a>
Apidae	<i>Xylocopa cantabrita</i> Lepeletier, 1841#	INV13040	<a href="#">IBIHM611-21</a>	<a href="#">BOLD:AEO2264</a>	<a href="#">OR796858</a>
Apidae	<i>Xylocopa iris</i> (Christ, 1791)	INV12172	<a href="#">IBIHM243-21</a>	<a href="#">BOLD:AEO4657'</a>	<a href="#">OR796217</a>



Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Apidae	<i>Xylocopa iris</i> (Christ, 1791)	INV13231	<a href="#">IBIHM801-21</a>	<a href="#">BOLD:AEO4657'</a>	<a href="#">OR796736</a>
Apidae	<i>Xylocopa valga</i> Gerstäcker, 1872	INV12171	<a href="#">IBIHM242-21</a>	<a href="#">BOLD:AEN0425</a>	<a href="#">OR796293</a>
Apidae	<i>Xylocopa violacea</i> (Linnaeus, 1758)	INV12174	<a href="#">IBIHM245-21</a>	<a href="#">BOLD:AAJ9209</a>	<a href="#">OR796614</a>
Apidae	<i>Xylocopa violacea</i> (Linnaeus, 1758)	INV13232	<a href="#">IBIHM802-21</a>	<a href="#">BOLD:AAJ9209</a>	<a href="#">OR796465</a>
Colletidae	<i>Colletes abeillei</i> Pérez, 1903	INV12347	<a href="#">IBIHM418-21</a>	<a href="#">BOLD:ACP8014</a>	<a href="#">OR796715</a>
Colletidae	<i>Colletes abeillei</i> Pérez, 1903	INV13153	<a href="#">IBIHM724-21</a>		<a href="#">OR796563</a>
Colletidae	<i>Colletes acutus</i> Pérez, 1903	INV12348	<a href="#">IBIHM419-21</a>	<a href="#">BOLD:AAI9265</a>	<a href="#">OR796731</a>
Colletidae	<i>Colletes albomaculatus</i> (Lucas, 1849)	INV12349	<a href="#">IBIHM420-21</a>	<a href="#">BOLD:ABU9046</a>	<a href="#">OR796089</a>
Colletidae	<i>Colletes albomaculatus</i> (Lucas, 1849)	INV13308	<a href="#">IBIHM878-21</a>	<a href="#">BOLD:ABU9046</a>	<a href="#">OR795920</a>
Colletidae	<i>Colletes dinizi</i> Kuhlmann, Ortiz & Orrosa, 2001#	INV12490	<a href="#">IBIHM1343-22</a>	<a href="#">BOLD:AEU9447'</a>	<a href="#">OR796281</a>
Colletidae	<i>Colletes eous</i> Morice, 1904	INV12353	<a href="#">IBIHM424-21</a>	<a href="#">BOLD:ADW0513</a>	<a href="#">OR796015</a>
Colletidae	<i>Colletes fodiens</i> (Fourcroy, 1785)	INV12354	<a href="#">IBIHM425-21</a>	<a href="#">BOLD:ABZ6809</a>	<a href="#">OR795931</a>
Colletidae	<i>Colletes foveolaris</i> Pérez, 1903	INV12484	<a href="#">IBIHM1337-22</a>	<a href="#">BOLD:AEU9446</a>	<a href="#">OR796674</a>
Colletidae	<i>Colletes hylaeiformis</i> Eversmann, 1852	INV13309	<a href="#">IBIHM879-21</a>	<a href="#">BOLD:AEU8542'</a>	<a href="#">OR796326</a>
Colletidae	<i>Colletes hylaeiformis</i> Eversmann, 1852	INV12355	<a href="#">IBIHM426-21</a>	<a href="#">BOLD:AEW0951'</a>	<a href="#">OR796829</a>
Colletidae	<i>Colletes marginatus</i> Smith, 1846	INV12358	<a href="#">IBIHM429-21</a>	<a href="#">BOLD:AAN3911</a>	<a href="#">OR796699</a>
Colletidae	<i>Colletes mlokoszewiczi</i> Radoszkowski, 1891	INV12487	<a href="#">IBIHM1340-22</a>	<a href="#">BOLD:ABA8594</a>	<a href="#">OR796561</a>
Colletidae	<i>Colletes nigricans</i> Gistel, 1857	INV12357	<a href="#">IBIHM428-21</a>	<a href="#">BOLD:AEZ9412</a>	<a href="#">OR796581</a>
Colletidae	<i>Colletes nigricans</i> Gistel, 1857	INV12485	<a href="#">IBIHM1338-22</a>	<a href="#">BOLD:AEZ9412</a>	<a href="#">OR796377</a>
Colletidae	<i>Colletes nigricans</i> Gistel, 1857	INV13310	<a href="#">IBIHM880-21</a>	<a href="#">BOLD:AEZ9412</a>	<a href="#">OR796103</a>
Colletidae	<i>Colletes pulchellus</i> Pérez, 1903	INV12488	<a href="#">IBIHM1341-22</a>	<a href="#">BOLD:AAN3911</a>	<a href="#">OR796951</a>
Colletidae	<i>Colletes pulchellus</i> Pérez, 1903	INV12489	<a href="#">IBIHM1342-22</a>	<a href="#">BOLD:AAN3911</a>	<a href="#">OR796173</a>
Colletidae	<i>Hylaeus angustatus</i> (Schenck, 1861)	INV12178	<a href="#">IBIHM249-21</a>	<a href="#">BOLD:AAK3477</a>	<a href="#">OR796750</a>
Colletidae	<i>Hylaeus angustatus</i> (Schenck, 1861)	INV12194	<a href="#">IBIHM265-21</a>	<a href="#">BOLD:AAK3477</a>	<a href="#">OR796433</a>
Colletidae	<i>Hylaeus angustatus</i> (Schenck, 1861)	INV13224	<a href="#">IBIHM795-21</a>	<a href="#">BOLD:AEN9677'</a>	<a href="#">OR796842</a>
Colletidae	<i>Hylaeus angustatus</i> (Schenck, 1861)	INV13316	<a href="#">IBIHM886-21</a>	<a href="#">BOLD:AEN9677'</a>	<a href="#">OR796848</a>
Colletidae	<i>Hylaeus annularis</i> (Kirby, 1802)	INV12179	<a href="#">IBIHM250-21</a>	<a href="#">BOLD:AEK2943</a>	<a href="#">OR796470</a>
Colletidae	<i>Hylaeus annularis</i> (Kirby, 1802)	INV12180	<a href="#">IBIHM251-21</a>	<a href="#">BOLD:AEK2943</a>	<a href="#">OR796346</a>
Colletidae	<i>Hylaeus annularis</i> (Kirby, 1802)	INV13320	<a href="#">IBIHM890-21</a>	<a href="#">BOLD:AEK2943</a>	<a href="#">OR796738</a>
Colletidae	<i>Hylaeus clypearis</i> (Schenck, 1853)	INV12183	<a href="#">IBIHM254-21</a>	<a href="#">BOLD:AAK3480</a>	<a href="#">OR796853</a>

Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Colletidae	<i>Hylaeus communis</i> Nylander, 1852	INV13222	<a href="#">IBIHM793-21</a>	<a href="#">BOLD:AAE5080</a>	<a href="#">OR796880</a>
Colletidae	<i>Hylaeus confusus</i> Nylander, 1852	INV12184	<a href="#">IBIHM255-21</a>	<a href="#">BOLD:AAD9315</a>	<a href="#">OR796100</a>
Colletidae	<i>Hylaeus coriaceus</i> (Pérez, 1895)	INV12195	<a href="#">IBIHM266-21</a>	<a href="#">BOLD:AEO4115'</a>	<a href="#">OR796508</a>
Colletidae	<i>Hylaeus coriaceus</i> (Pérez, 1895)	INV12196	<a href="#">IBIHM267-21</a>	<a href="#">BOLD:AEO4115'</a>	<a href="#">OR796623</a>
Colletidae	<i>Hylaeus cornutus</i> Curtis, 1831	INV12185	<a href="#">IBIHM256-21</a>	<a href="#">BOLD:AAF4031</a>	<a href="#">OR796243</a>
Colletidae	<i>Hylaeus cornutus</i> Curtis, 1831	INV13315	<a href="#">IBIHM885-21</a>	<a href="#">BOLD:AAF4031</a>	<a href="#">OR796231</a>
Colletidae	<i>Hylaeus crassanus</i> (Warncke, 1972)	INV12187	<a href="#">IBIHM258-21</a>	<a href="#">BOLD:AEN8873'</a>	<a href="#">OR796190</a>
Colletidae	<i>Hylaeus difformis</i> (Eversmann, 1852)	INV12186	<a href="#">IBIHM257-21</a>	<a href="#">BOLD:AAK3468</a>	<a href="#">OR796480</a>
Colletidae	<i>Hylaeus dilatatus</i> (Kirby, 1802)	INV12498	<a href="#">IBIHM1351-22</a>	<a href="#">BOLD:AEU1509'</a>	<a href="#">OR796942</a>
Colletidae	<i>Hylaeus dilatatus</i> (Kirby, 1802)	INV12188	<a href="#">IBIHM259-21</a>		<a href="#">OR796510</a>
Colletidae	<i>Hylaeus gredleri</i> Förster, 1871	INV12190	<a href="#">IBIHM261-21</a>	<a href="#">BOLD:AEO3886'</a>	<a href="#">OR796225</a>
Colletidae	<i>Hylaeus hyalinatus</i> Smith, 1842	INV12191	<a href="#">IBIHM262-21</a>	<a href="#">BOLD:AAE1166</a>	<a href="#">OR796593</a>
Colletidae	<i>Hylaeus hyalinatus</i> Smith, 1842	INV13156	<a href="#">IBIHM727-21</a>	<a href="#">BOLD:AAE1166</a>	<a href="#">OR796740</a>
Colletidae	<i>Hylaeus imparilis</i> Förster, 1871	INV12192	<a href="#">IBIHM263-21</a>	<a href="#">BOLD:AAE5079</a>	<a href="#">OR796253</a>
Colletidae	<i>Hylaeus incongruus</i> Förster, 1871	INV01584	<a href="#">IBIHM038-19</a>	<a href="#">BOLD:ABU9205</a>	<a href="#">OR796047</a>
Colletidae	<i>Hylaeus incongruus</i> Förster, 1871	INV12189	<a href="#">IBIHM260-21</a>	<a href="#">BOLD:ABU9205</a>	<a href="#">OR795925</a>
Colletidae	<i>Hylaeus incongruus</i> Förster, 1871	INV12200	<a href="#">IBIHM271-21</a>	<a href="#">BOLD:ABU9205</a>	<a href="#">OR796457</a>
Colletidae	<i>Hylaeus incongruus</i> Förster, 1871	INV12201	<a href="#">IBIHM272-21</a>	<a href="#">BOLD:ABU9205</a>	<a href="#">OR796935</a>
Colletidae	<i>Hylaeus incongruus</i> Förster, 1871	INV13154	<a href="#">IBIHM725-21</a>	<a href="#">BOLD:ABU9205</a>	<a href="#">OR796429</a>
Colletidae	<i>Hylaeus incongruus</i> Förster, 1871	INV13155	<a href="#">IBIHM726-21</a>	<a href="#">BOLD:ABU9205</a>	<a href="#">OR796655</a>
Colletidae	<i>Hylaeus incongruus</i> Förster, 1871	INV13157	<a href="#">IBIHM728-21</a>	<a href="#">BOLD:ABU9205</a>	<a href="#">OR795953</a>
Colletidae	<i>Hylaeus incongruus</i> Förster, 1871	INV13223	<a href="#">IBIHM794-21</a>	<a href="#">BOLD:ABU9205</a>	<a href="#">OR796339</a>
Colletidae	<i>Hylaeus kahri</i> Förster, 1871	INV12193	<a href="#">IBIHM264-21</a>	<a href="#">BOLD:AAN3379</a>	<a href="#">OR796084</a>
Colletidae	<i>Hylaeus lineolatus</i> (Schenck, 1861)	INV12496	<a href="#">IBIHM1349-22</a>	<a href="#">BOLD:AAI8781</a>	<a href="#">OR796924</a>
Colletidae	<i>Hylaeus lineolatus</i> (Schenck, 1861)	INV12497	<a href="#">IBIHM1350-22</a>	<a href="#">BOLD:AAI8781</a>	<a href="#">OR796005</a>
Colletidae	<i>Hylaeus penalaris</i> Dathe, 1979#	INV12197	<a href="#">IBIHM268-21</a>	<a href="#">BOLD:AEO2266'</a>	<a href="#">OR796414</a>
Colletidae	<i>Hylaeus pictipes</i> Nylander, 1852	INV12198	<a href="#">IBIHM269-21</a>	<a href="#">BOLD:AAK3488</a>	<a href="#">OR796642</a>
Colletidae	<i>Hylaeus pictipes</i> Nylander, 1852	INV13314	<a href="#">IBIHM884-21</a>	<a href="#">BOLD:AAK3488</a>	<a href="#">OR796490</a>
Colletidae	<i>Hylaeus pictipes</i> Nylander, 1852	INV13319	<a href="#">IBIHM889-21</a>	<a href="#">BOLD:AAK3488</a>	<a href="#">OR796261</a>
Colletidae	<i>Hylaeus pictus</i> (Smith, 1853)	INV12202	<a href="#">IBIHM273-21</a>	<a href="#">BOLD:AEO2267</a>	<a href="#">OR796295</a>

Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Colletidae	<i>Hylaeus pilosulus</i> (Pérez, 1903)	INV12203	<a href="#">IBIHM274-21</a>	<a href="#">BOLD:AAZ2603</a>	<a href="#">OR796362</a>
Colletidae	<i>Hylaeus pilosulus</i> (Pérez, 1903)	INV12204	<a href="#">IBIHM275-21</a>	<a href="#">BOLD:AAZ2603</a>	<a href="#">OR796658</a>
Colletidae	<i>Hylaeus punctatus</i> (Brullé, 1832)	INV12205	<a href="#">IBIHM276-21</a>	<a href="#">BOLD:AAE5060</a>	<a href="#">OR796056</a>
Colletidae	<i>Hylaeus punctulatissimus</i> Smith, 1842	INV12206	<a href="#">IBIHM277-21</a>	<a href="#">BOLD:AAK3323</a>	<a href="#">OR796210</a>
Colletidae	<i>Hylaeus signatus</i> (Panzer, 1798)	INV12207	<a href="#">IBIHM278-21</a>	<a href="#">BOLD:AAI8577</a>	<a href="#">OR796312</a>
Colletidae	<i>Hylaeus soror</i> (Pérez, 1903)	INV12499	<a href="#">IBIHM1352-22</a>	<a href="#">BOLD:AET8250'</a>	<a href="#">OR796434</a>
Colletidae	<i>Hylaeus sulphuripes</i> (Gribodo, 1894)	INV12208	<a href="#">IBIHM279-21</a>	<a href="#">BOLD:AEJ3211</a>	<a href="#">OR796043</a>
Colletidae	<i>Hylaeus taeniolatus</i> Förster, 1871	INV12199	<a href="#">IBIHM270-21</a>	<a href="#">BOLD:AE05452'</a>	<a href="#">OR796300</a>
Colletidae	<i>Hylaeus variegatus</i> (Fabricius, 1798)	INV12209	<a href="#">IBIHM280-21</a>	<a href="#">BOLD:AAK3338</a>	<a href="#">OR796896</a>
Colletidae	<i>Hylaeus variegatus</i> (Fabricius, 1798)	INV12210	<a href="#">IBIHM281-21</a>	<a href="#">BOLD:AAK3338</a>	<a href="#">OR796050</a>
Colletidae	<i>Hylaeus variegatus</i> (Fabricius, 1798)	INV13317	<a href="#">IBIHM887-21</a>	<a href="#">BOLD:AAK3338</a>	<a href="#">OR795903</a>
Halictidae	<i>Ceylalictus variegatus</i> (Olivier, 1789)	INV12279	<a href="#">IBIHM350-21</a>	<a href="#">BOLD:AAV7281</a>	<a href="#">OR796006</a>
Halictidae	<i>Ceylalictus variegatus</i> (Olivier, 1789)	INV12281	<a href="#">IBIHM352-21</a>	<a href="#">BOLD:AAV7281</a>	<a href="#">OR796925</a>
Halictidae	<i>Dufourea gaullei</i> Vachal, 1897#	INV12275	<a href="#">IBIHM346-21</a>	<a href="#">BOLD:AEN9216'</a>	<a href="#">OR796099</a>
Halictidae	<i>Dufourea gaullei</i> Vachal, 1897#	INV12276	<a href="#">IBIHM347-21</a>	<a href="#">BOLD:AEN9216'</a>	<a href="#">OR796808</a>
Halictidae	<i>Dufourea gaullei</i> Vachal, 1897#	INV13293	<a href="#">IBIHM863-21</a>	<a href="#">BOLD:AEN9216'</a>	<a href="#">OR795909</a>
Halictidae	<i>Dufourea halictula</i> (Nylander, 1852)	INV13217	<a href="#">IBIHM788-21</a>	<a href="#">BOLD:AAI9074</a>	<a href="#">OR796349</a>
Halictidae	<i>Dufourea trautmanni</i> Dusmet y Alonso, 1935#	INV12273	<a href="#">IBIHM344-21</a>	<a href="#">BOLD:AEN3645</a>	<a href="#">OR796622</a>
Halictidae	<i>Dufourea trautmanni</i> Dusmet y Alonso, 1935#	INV12274	<a href="#">IBIHM345-21</a>	<a href="#">BOLD:AEN3645</a>	<a href="#">OR796922</a>
Halictidae	<i>Halictus brunnescens</i> (Eversmann, 1852)	INV12259	<a href="#">IBIHM330-21</a>	<a href="#">BOLD:AAE3033</a>	<a href="#">OR796366</a>
Halictidae	<i>Halictus brunnescens</i> (Eversmann, 1852)	INV12263	<a href="#">IBIHM334-21</a>	<a href="#">BOLD:AAE3033</a>	<a href="#">OR796704</a>
Halictidae	<i>Halictus brunnescens</i> (Eversmann, 1852)	INV13054	<a href="#">IBIHM625-21</a>	<a href="#">BOLD:AAE3033</a>	<a href="#">OR796014</a>
Halictidae	<i>Halictus confusus</i> Smith, 1853	INV12257	<a href="#">IBIHM328-21</a>	<a href="#">BOLD:AEN9591'</a>	<a href="#">OR795965</a>
Halictidae	<i>Halictus crenicornis</i> Blüthgen, 1923	INV12258	<a href="#">IBIHM329-21</a>	<a href="#">BOLD:AAD5869</a>	<a href="#">OR796521</a>
Halictidae	<i>Halictus crenicornis</i> Blüthgen, 1923	INV13055	<a href="#">IBIHM626-21</a>	<a href="#">BOLD:AAD5869</a>	<a href="#">OR796393</a>
Halictidae	<i>Halictus fulvipes</i> (Klug, 1817)	INV02289	<a href="#">IBIHM013-19</a>	<a href="#">BOLD:ADS5152</a>	<a href="#">OR796212</a>
Halictidae	<i>Halictus gemmeus</i> Dours, 1872	INV01552	<a href="#">IBIHM032-19</a>	<a href="#">BOLD:ABV4897</a>	<a href="#">OR796916</a>
Halictidae	<i>Halictus gemmeus</i> Dours, 1872	INV01553	<a href="#">IBIHM005-19</a>	<a href="#">BOLD:ABV4897</a>	<a href="#">OR796430</a>

Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Halictidae	<i>Halictus gemmeus</i> Dours, 1872	INV12260	<a href="#">IBIHM331-21</a>	<a href="#">BOLD:ABV4897</a>	<a href="#">OR796392</a>
Halictidae	<i>Halictus gemmeus</i> Dours, 1872	INV13058	<a href="#">IBIHM629-21</a>	<a href="#">BOLD:ABV4897</a>	<a href="#">OR796602</a>
Halictidae	<i>Halictus maculatus</i> Smith, 1848	INV13053	<a href="#">IBIHM624-21</a>	<a href="#">BOLD:ACH4344</a>	<a href="#">OR796541</a>
Halictidae	<i>Halictus maculatus</i> Smith, 1848	INV12261	<a href="#">IBIHM332-21</a>	<a href="#">BOLD:AE00160'</a>	<a href="#">OR796283</a>
Halictidae	<i>Halictus pollinosus</i> Sichel, 1860	INV12262	<a href="#">IBIHM333-21</a>	<a href="#">BOLD:ADZ7031</a>	<a href="#">OR796345</a>
Halictidae	<i>Halictus pollinosus</i> Sichel, 1860	INV13218	<a href="#">IBIHM789-21</a>	<a href="#">BOLD:ADZ7031</a>	<a href="#">OR796620</a>
Halictidae	<i>Halictus pollinosus</i> Sichel, 1860	INV13276	<a href="#">IBIHM846-21</a>	<a href="#">BOLD:ADZ7031</a>	<a href="#">OR796705</a>
Halictidae	<i>Halictus quadripartitus</i> Blüthgen, 1923	INV13274	<a href="#">IBIHM844-21</a>	<a href="#">BOLD:AEW0985</a>	<a href="#">OR796296</a>
Halictidae	<i>Halictus rubicundus</i> (Christ, 1791)	INV12265	<a href="#">IBIHM336-21</a>	<a href="#">BOLD:AAA3534</a>	<a href="#">OR796486</a>
Halictidae	<i>Halictus scabiosae</i> (Rossi, 1790)	INV13047	<a href="#">IBIHM618-21</a>	<a href="#">BOLD:AAN4492</a>	<a href="#">OR796578</a>
Halictidae	<i>Halictus scabiosae</i> (Rossi, 1790)	INV13048	<a href="#">IBIHM619-21</a>	<a href="#">BOLD:AAN4492</a>	<a href="#">OR796127</a>
Halictidae	<i>Halictus seladonius</i> (Fabricius, 1794)#	INV12267	<a href="#">IBIHM338-21</a>	<a href="#">BOLD:AEL5026</a>	<a href="#">OR796301</a>
Halictidae	<i>Halictus seladonius</i> (Fabricius, 1794)#	INV13062	<a href="#">IBIHM633-21</a>	<a href="#">BOLD:AEL5026</a>	<a href="#">OR795962</a>
Halictidae	<i>Halictus seladonius</i> (Fabricius, 1794)#	INV15673	<a href="#">IBIHY016-22</a>	<a href="#">BOLD:AEL5026</a>	<a href="#">OR796677</a>
Halictidae	<i>Halictus sexcinctus</i> (Fabricius, 1775)	INV12264	<a href="#">IBIHM335-21</a>	<a href="#">BOLD:AAI6486</a>	<a href="#">OR795933</a>
Halictidae	<i>Halictus smaragdulus</i> Vachal, 1895	INV01583	<a href="#">IBIHM006-19</a>	<a href="#">BOLD:ABV8170</a>	<a href="#">OR796761</a>
Halictidae	<i>Halictus smaragdulus</i> Vachal, 1895	INV02260	<a href="#">IBIHM041-19</a>	<a href="#">BOLD:ABV8170</a>	<a href="#">OR796804</a>
Halictidae	<i>Halictus smaragdulus</i> Vachal, 1895	INV02317	<a href="#">IBIHM044-19</a>	<a href="#">BOLD:ABV8170</a>	<a href="#">OR796213</a>
Halictidae	<i>Halictus smaragdulus</i> Vachal, 1895	INV12270	<a href="#">IBIHM341-21</a>	<a href="#">BOLD:ABV8170</a>	<a href="#">OR796407</a>
Halictidae	<i>Halictus subauratus</i> (Rossi, 1792)	INV01563	<a href="#">IBIHM034-19</a>	<a href="#">BOLD:AAI6480</a>	<a href="#">OR796314</a>
Halictidae	<i>Halictus subauratus</i> (Rossi, 1792)	INV01579	<a href="#">IBIHM036-19</a>	<a href="#">BOLD:AAI6480</a>	<a href="#">OR796948</a>
Halictidae	<i>Halictus subauratus</i> (Rossi, 1792)	INV02297	<a href="#">IBIHM014-19</a>	<a href="#">BOLD:AAI6480</a>	<a href="#">OR796785</a>
Halictidae	<i>Halictus subauratus</i> (Rossi, 1792)	INV02318	<a href="#">IBIHM045-19</a>	<a href="#">BOLD:AAI6480</a>	<a href="#">OR796388</a>
Halictidae	<i>Halictus subauratus</i> (Rossi, 1792)	INV12268	<a href="#">IBIHM339-21</a>	<a href="#">BOLD:AAI6480</a>	<a href="#">OR796189</a>
Halictidae	<i>Halictus subauratus</i> (Rossi, 1792)	INV13059	<a href="#">IBIHM630-21</a>	<a href="#">BOLD:AAI6480</a>	<a href="#">OR796619</a>
Halictidae	<i>Halictus subauratus</i> (Rossi, 1792)	INV13060	<a href="#">IBIHM631-21</a>	<a href="#">BOLD:AAI6480</a>	<a href="#">OR796511</a>
Halictidae	<i>Halictus subauratus</i> (Rossi, 1792)	INV13061	<a href="#">IBIHM632-21</a>	<a href="#">BOLD:AAI6480</a>	<a href="#">OR796052</a>
Halictidae	<i>Halictus subauratus</i> (Rossi, 1792)	INV13277	<a href="#">IBIHM847-21</a>	<a href="#">BOLD:AAI6480</a>	<a href="#">OR796020</a>
Halictidae	<i>Halictus submediterraneus</i> (Pauly, 2015)	INV12269	<a href="#">IBIHM340-21</a>	<a href="#">BOLD:AAK4967</a>	<a href="#">OR796807</a>
Halictidae	<i>Halictus submediterraneus</i> (Pauly, 2015)	INV13050	<a href="#">IBIHM621-21</a>	<a href="#">BOLD:AAK4967</a>	<a href="#">OR796277</a>

Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Halictidae	<i>Halictus vestitus</i> Lepeletier, 1841	INV12271	<a href="#">IBIHM342-21</a>	<a href="#">BOLD:ACU5548</a>	<a href="#">OR796104</a>
Halictidae	<i>Lasioglossum aeratum</i> (Kirby, 1802)	INV12310	<a href="#">IBIHM381-21</a>	<a href="#">BOLD:AAJ3200</a>	<a href="#">OR796901</a>
Halictidae	<i>Lasioglossum albocinctum</i> (Lucas, 1849)	INV12299	<a href="#">IBIHM370-21</a>	<a href="#">BOLD:AAE5835</a>	<a href="#">OR795996</a>
Halictidae	<i>Lasioglossum albocinctum</i> (Lucas, 1849)	INV13072	<a href="#">IBIHM643-21</a>	<a href="#">BOLD:AAE5835</a>	<a href="#">OR795978</a>
Halictidae	<i>Lasioglossum albocinctum</i> (Lucas, 1849)	INV13074	<a href="#">IBIHM645-21</a>	<a href="#">BOLD:AAE5835</a>	<a href="#">OR796790</a>
Halictidae	<i>Lasioglossum algericolellum</i> (Strand, 1909)	INV12492	<a href="#">IBIHM1345-22</a>	<a href="#">BOLD:AEN2990</a>	<a href="#">OR796290</a>
Halictidae	<i>Lasioglossum algericolellum</i> (Strand, 1909)	INV12493	<a href="#">IBIHM1346-22</a>	<a href="#">BOLD:AEN2990</a>	<a href="#">OR795985</a>
Halictidae	<i>Lasioglossum algericolellum</i> (Strand, 1909)	INV13102	<a href="#">IBIHM673-21</a>	<a href="#">BOLD:AEN2990</a>	<a href="#">OR796756</a>
Halictidae	<i>Lasioglossum angusticeps</i> (Perkins, 1895)	INV12494	<a href="#">IBIHM1347-22</a>	<a href="#">BOLD:AAK8433</a>	<a href="#">OR796241</a>
Halictidae	<i>Lasioglossum angusticeps</i> (Perkins, 1895)	INV13114	<a href="#">IBIHM685-21</a>	<a href="#">BOLD:AAK8433</a>	<a href="#">OR796610</a>
Halictidae	<i>Lasioglossum aureolum</i> (Pérez, 1903)	INV12613	<a href="#">IBIHM1014-22</a>	<a href="#">BOLD:ADZ5328</a>	<a href="#">OR796354</a>
Halictidae	<i>Lasioglossum aureolum</i> (Pérez, 1903)	INV13107	<a href="#">IBIHM678-21</a>	<a href="#">BOLD:ADZ5328</a>	<a href="#">OR796462</a>
Halictidae	<i>Lasioglossum aureolum</i> (Pérez, 1903)	INV13108	<a href="#">IBIHM679-21</a>	<a href="#">BOLD:ADZ5328</a>	<a href="#">OR796111</a>
Halictidae	<i>Lasioglossum aureolum</i> (Pérez, 1903)	INV13109	<a href="#">IBIHM680-21</a>	<a href="#">BOLD:ADZ5328</a>	<a href="#">OR796332</a>
Halictidae	<i>Lasioglossum bimaculatum</i> (Dours, 1872)	INV12301	<a href="#">IBIHM372-21</a>	<a href="#">BOLD:AAW9939</a>	<a href="#">OR796222</a>
Halictidae	<i>Lasioglossum bimaculatum</i> (Dours, 1872)	INV13286	<a href="#">IBIHM856-21</a>	<a href="#">BOLD:AAW9939</a>	<a href="#">OR796873</a>
Halictidae	<i>Lasioglossum bimaculatum</i> (Dours, 1872)	INV13287	<a href="#">IBIHM857-21</a>	<a href="#">BOLD:AAW9939</a>	<a href="#">OR796402</a>
Halictidae	<i>Lasioglossum brevicorne</i> (Schenck, 1870)	INV12302	<a href="#">IBIHM373-21</a>	<a href="#">BOLD:AAK8357</a>	<a href="#">OR796406</a>
Halictidae	<i>Lasioglossum brevicorne</i> (Schenck, 1870)	INV13104	<a href="#">IBIHM675-21</a>	<a href="#">BOLD:AAK8357</a>	<a href="#">OR796403</a>
Halictidae	<i>Lasioglossum brevicorne</i> (Schenck, 1870)	INV13105	<a href="#">IBIHM676-21</a>	<a href="#">BOLD:AAK8357</a>	<a href="#">OR796165</a>
Halictidae	<i>Lasioglossum breviventre</i> (Schenck, 1853)	INV12303	<a href="#">IBIHM374-21</a>	<a href="#">BOLD:AAZ8321</a>	<a href="#">OR796298</a>
Halictidae	<i>Lasioglossum buccale</i> (Pérez, 1903)	INV12304	<a href="#">IBIHM375-21</a>	<a href="#">BOLD:ADZ4420</a>	<a href="#">OR796734</a>
Halictidae	<i>Lasioglossum buccale</i> (Pérez, 1903)	INV13281	<a href="#">IBIHM851-21</a>	<a href="#">BOLD:ADZ4420</a>	<a href="#">OR796229</a>
Halictidae	<i>Lasioglossum calceatum</i> (Scopoli, 1763)	INV12318	<a href="#">IBIHM389-21</a>	<a href="#">BOLD:AAB0353</a>	<a href="#">OR796321</a>
Halictidae	<i>Lasioglossum calceatum</i> (Scopoli, 1763)	INV13086	<a href="#">IBIHM657-21</a>	<a href="#">BOLD:AAB0353</a>	<a href="#">OR796631</a>

Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Halictidae	<i>Lasioglossum calceatum</i> (Scopoli, 1763)	INV13089	<a href="#">IBIHM660-21</a>	<a href="#">BOLD:AAB0353</a>	<a href="#">OR796926</a>
Halictidae	<i>Lasioglossum calceatum</i> (Scopoli, 1763)	INV12305	<a href="#">IBIHM376-21</a>	<a href="#">BOLD:AEO1453'</a>	<a href="#">OR796851</a>
Halictidae	<i>Lasioglossum callizonium</i> (Pérez, 1896)	INV12306	<a href="#">IBIHM377-21</a>	<a href="#">BOLD:ABA0006</a>	<a href="#">OR796460</a>
Halictidae	<i>Lasioglossum callizonium</i> (Pérez, 1896)	INV13066	<a href="#">IBIHM637-21</a>	<a href="#">BOLD:ABA0006</a>	<a href="#">OR796952</a>
Halictidae	<i>Lasioglossum corvinum</i> (Morawitz, 1876)	INV12312	<a href="#">IBIHM383-21</a>	<a href="#">BOLD:ACR3210</a>	<a href="#">OR796045</a>
Halictidae	<i>Lasioglossum costulatum</i> (Kriechbaumer, 1873)	INV12313	<a href="#">IBIHM384-21</a>	<a href="#">BOLD:AAJ3116</a>	<a href="#">OR796353</a>
Halictidae	<i>Lasioglossum costulatum</i> (Kriechbaumer, 1873)	INV13075	<a href="#">IBIHM646-21</a>	<a href="#">BOLD:AAJ3116</a>	<a href="#">OR796176</a>
Halictidae	<i>Lasioglossum discus</i> (Smith, 1853)#	INV02261	<a href="#">IBIHM007-19</a>	<a href="#">BOLD:ABA0007</a>	<a href="#">OR796702</a>
Halictidae	<i>Lasioglossum discus</i> (Smith, 1853)#	INV02333	<a href="#">IBIHM017-19</a>	<a href="#">BOLD:ABA0007</a>	<a href="#">OR796055</a>
Halictidae	<i>Lasioglossum discus</i> (Smith, 1853)#	INV12314	<a href="#">IBIHM385-21</a>	<a href="#">BOLD:ABA0007</a>	<a href="#">OR796303</a>
Halictidae	<i>Lasioglossum discus</i> (Smith, 1853)#	INV13291	<a href="#">IBIHM861-21</a>	<a href="#">BOLD:ABA0007</a>	<a href="#">OR796335</a>
Halictidae	<i>Lasioglossum dusmeti</i> (Blüthgen, 1924)#	INV12315	<a href="#">IBIHM386-21</a>	<a href="#">BOLD:AEN9127'</a>	<a href="#">OR796098</a>
Halictidae	<i>Lasioglossum dusmeti</i> (Blüthgen, 1924)#	INV13288	<a href="#">IBIHM858-21</a>	<a href="#">BOLD:AEN9127'</a>	<a href="#">OR796653</a>
Halictidae	<i>Lasioglossum glabriusculum</i> (Morawitz, 1872)	INV12316	<a href="#">IBIHM387-21</a>	<a href="#">BOLD:AAZ1489</a>	<a href="#">OR796016</a>
Halictidae	<i>Lasioglossum griseolum</i> (Morawitz, 1872)	INV12495	<a href="#">IBIHM1348-22</a>	<a href="#">BOLD:AET1905'</a>	<a href="#">OR796488</a>
Halictidae	<i>Lasioglossum ibericum</i> Ebmer, 1975#	INV12317	<a href="#">IBIHM388-21</a>	<a href="#">BOLD:AAJ1741</a>	<a href="#">OR796707</a>
Halictidae	<i>Lasioglossum immunitum</i> (Vachal, 1895)#	INV13083	<a href="#">IBIHM654-21</a>	<a href="#">BOLD:AEW5079'</a>	<a href="#">OR796193</a>
Halictidae	<i>Lasioglossum interruptum</i> (Panzer, 1798)	INV13093	<a href="#">IBIHM664-21</a>	<a href="#">BOLD:ABU8540</a>	<a href="#">OR795984</a>
Halictidae	<i>Lasioglossum interruptum</i> (Panzer, 1798)	INV13290	<a href="#">IBIHM860-21</a>	<a href="#">BOLD:ABU8540</a>	<a href="#">OR795938</a>
Halictidae	<i>Lasioglossum interruptum</i> (Panzer, 1798)	INV12319	<a href="#">IBIHM390-21</a>	<a href="#">BOLD:AFK8181</a>	<a href="#">OR796652</a>
Halictidae	<i>Lasioglossum laevigatum</i> (Kirby, 1802)	INV12320	<a href="#">IBIHM391-21</a>	<a href="#">BOLD:AAK8392</a>	<a href="#">OR796656</a>
Halictidae	<i>Lasioglossum lativentre</i> (Schenck, 1853)	INV12321	<a href="#">IBIHM392-21</a>	<a href="#">BOLD:AAE1129</a>	<a href="#">OR796681</a>
Halictidae	<i>Lasioglossum leucopus</i> (Kirby, 1802)	INV12614	<a href="#">IBIHM1015-22</a>	<a href="#">BOLD:AAF3848</a>	<a href="#">OR795974</a>
Halictidae	<i>Lasioglossum leucozonium</i> (Schrank, '78')	INV13113	<a href="#">IBIHM684-21</a>	<a href="#">BOLD:AEN9620</a>	<a href="#">OR796178</a>
Halictidae	<i>Lasioglossum leucozonium</i> (Schrank, 1781)	INV13112	<a href="#">IBIHM683-21</a>	<a href="#">BOLD:AAA2322</a>	<a href="#">OR796526</a>

Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Halictidae	<i>Lasioglossum leucozonium</i> (Schrank, 1781)	INV12322	<a href="#">IBIHM393-21</a>	<a href="#">BOLD:AEN9620</a>	<a href="#">OR795969</a>
Halictidae	<i>Lasioglossum leucozonium</i> (Schrank, 1781)	INV13064	<a href="#">IBIHM635-21</a>	<a href="#">BOLD:AEN9620</a>	<a href="#">OR796566</a>
Halictidae	<i>Lasioglossum leucozonium</i> (Schrank, 1781)	INV13110	<a href="#">IBIHM681-21</a>	<a href="#">BOLD:AEN9620</a>	<a href="#">OR796764</a>
Halictidae	<i>Lasioglossum leucozonium</i> (Schrank, 1781)	INV13111	<a href="#">IBIHM682-21</a>	<a href="#">BOLD:AEN9620</a>	<a href="#">OR796471</a>
Halictidae	<i>Lasioglossum limbellum</i> (Morawitz, 1876)	INV12323	<a href="#">IBIHM394-21</a>	<a href="#">BOLD:ADZ7745</a>	<a href="#">OR796454</a>
Halictidae	<i>Lasioglossum littorale</i> (Blüthgen, 1924)	INV12615	<a href="#">IBIHM1016-22</a>	<a href="#">BOLD:ADZ2937</a>	<a href="#">OR795906</a>
Halictidae	<i>Lasioglossum littorale</i> (Blüthgen, 1924)	INV12616	<a href="#">IBIHM1017-22</a>	<a href="#">BOLD:ADZ2937</a>	<a href="#">OR796708</a>
Halictidae	<i>Lasioglossum lucidulum</i> (Schenck, 1861)	INV12338	<a href="#">IBIHM409-21</a>	<a href="#">BOLD:AAE5918</a>	<a href="#">OR796530</a>
Halictidae	<i>Lasioglossum lucidulum</i> (Schenck, 1861)	INV12617	<a href="#">IBIHM1018-22</a>	<a href="#">BOLD:AAE5918</a>	<a href="#">OR796667</a>
Halictidae	<i>Lasioglossum malachurum</i> (Kirby, 1802)	INV12324	<a href="#">IBIHM395-21</a>	<a href="#">BOLD:AAE5496</a>	<a href="#">OR795908</a>
Halictidae	<i>Lasioglossum malachurum</i> (Kirby, 1802)	INV13092	<a href="#">IBIHM663-21</a>	<a href="#">BOLD:AEO8786</a>	<a href="#">OR796130</a>
Halictidae	<i>Lasioglossum mandibulare</i> (Morawitz, 1866)	INV12326	<a href="#">IBIHM397-21</a>	<a href="#">BOLD:AEO4941</a>	<a href="#">OR796211</a>
Halictidae	<i>Lasioglossum marginatum</i> (Brullé, 1832)	INV12325	<a href="#">IBIHM396-21</a>	<a href="#">BOLD:AFA0740</a>	<a href="#">OR796273</a>
Halictidae	<i>Lasioglossum maurusium</i> (Blüthgen, 1935)	INV12797	<a href="#">IBIHM1198-22</a>	<a href="#">BOLD:ADZ2523</a>	<a href="#">OR795966</a>
Halictidae	<i>Lasioglossum mediterraneum</i> (Blüthgen, 1926)#	INV12327	<a href="#">IBIHM398-21</a>	<a href="#">BOLD:AEO8781</a>	<a href="#">OR796365</a>
Halictidae	<i>Lasioglossum mediterraneum</i> (Blüthgen, 1926)#	INV13292	<a href="#">IBIHM862-21</a>	<a href="#">BOLD:AEO8781</a>	<a href="#">OR796599</a>
Halictidae	<i>Lasioglossum minutissimum</i> (Kirby, 1802)	INV12328	<a href="#">IBIHM399-21</a>	<a href="#">BOLD:ACQ8646</a>	<a href="#">OR796936</a>
Halictidae	<i>Lasioglossum minutissimum</i> (Kirby, 1802)	INV13094	<a href="#">IBIHM665-21</a>	<a href="#">BOLD:ACQ8646</a>	<a href="#">OR796887</a>
Halictidae	<i>Lasioglossum minutissimum</i> (Kirby, 1802)	INV13095	<a href="#">IBIHM666-21</a>	<a href="#">BOLD:ACQ8646</a>	<a href="#">OR796063</a>
Halictidae	<i>Lasioglossum morio</i> (Fabricius, 1793)	INV12618	<a href="#">IBIHM1019-22</a>	<a href="#">BOLD:AAD9335</a>	<a href="#">OR796267</a>
Halictidae	<i>Lasioglossum morio</i> (Fabricius, 1793)	INV12619	<a href="#">IBIHM1020-22</a>	<a href="#">BOLD:AAD9335</a>	<a href="#">OR796671</a>
Halictidae	<i>Lasioglossum morio</i> (Fabricius, 1793)	INV13229	<a href="#">IBIHM800-21</a>	<a href="#">BOLD:AAD9335</a>	<a href="#">OR796651</a>
Halictidae	<i>Lasioglossum morio</i> (Fabricius, 1793)	INV15678	<a href="#">IBIHY021-22</a>	<a href="#">BOLD:AAD9335</a>	<a href="#">OR796442</a>
Halictidae	<i>Lasioglossum nitidiusculum</i> (Kirby, 1802)	INV12329	<a href="#">IBIHM400-21</a>	<a href="#">BOLD:AAZ9229</a>	<a href="#">OR796415</a>



Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Halictidae	<i>Lasioglossum orihuelicum</i> (Blüthgen, 1924)#	INV12330	<a href="#">IBIHM401-21</a>	<a href="#">BOLD:AEO0527'</a>	<a href="#">OR796381</a>
Halictidae	<i>Lasioglossum pallens</i> (Brullé, 1832)	INV12331	<a href="#">IBIHM402-21</a>	<a href="#">BOLD:ADM1219</a>	<a href="#">OR796492</a>
Halictidae	<i>Lasioglossum parvulum</i> (Schenck, 1853)	INV12346	<a href="#">IBIHM417-21</a>	<a href="#">BOLD:ADT1404</a>	<a href="#">OR796636</a>
Halictidae	<i>Lasioglossum pauperatum</i> (Brullé, 1832)	INV01536	<a href="#">IBIHM004-19</a>	<a href="#">BOLD:AAK7827</a>	<a href="#">OR796092</a>
Halictidae	<i>Lasioglossum pauperatum</i> (Brullé, 1832)	INV02264	<a href="#">IBIHM008-19</a>	<a href="#">BOLD:AAK7827</a>	<a href="#">OR796162</a>
Halictidae	<i>Lasioglossum pauperatum</i> (Brullé, 1832)	INV02277	<a href="#">IBIHM009-19</a>	<a href="#">BOLD:AAK7827</a>	<a href="#">OR796363</a>
Halictidae	<i>Lasioglossum pauperatum</i> (Brullé, 1832)	INV12332	<a href="#">IBIHM403-21</a>	<a href="#">BOLD:AAK7827</a>	<a href="#">OR796713</a>
Halictidae	<i>Lasioglossum pauperatum</i> (Brullé, 1832)	INV13067	<a href="#">IBIHM638-21</a>	<a href="#">BOLD:AAK7827</a>	<a href="#">OR796665</a>
Halictidae	<i>Lasioglossum pauperatum</i> (Brullé, 1832)	INV13097	<a href="#">IBIHM668-21</a>	<a href="#">BOLD:AAK7827</a>	<a href="#">OR795905</a>
Halictidae	<i>Lasioglossum pauperatum</i> (Brullé, 1832)	INV13098	<a href="#">IBIHM669-21</a>	<a href="#">BOLD:AAK7827</a>	<a href="#">OR796933</a>
Halictidae	<i>Lasioglossum pauperatum</i> (Brullé, 1832)	INV13103	<a href="#">IBIHM674-21</a>	<a href="#">BOLD:AAK7827</a>	<a href="#">OR796579</a>
Halictidae	<i>Lasioglossum pauperatum</i> (Brullé, 1832)	INV13284	<a href="#">IBIHM854-21</a>	<a href="#">BOLD:AAK7827</a>	<a href="#">OR795904</a>
Halictidae	<i>Lasioglossum pauxillum</i> (Schenck, 1853)	INV12334	<a href="#">IBIHM405-21</a>		<a href="#">OR796938</a>
Halictidae	<i>Lasioglossum perclavipes</i> (Blüthgen, 1934)#	INV12333	<a href="#">IBIHM404-21</a>	<a href="#">BOLD:AEO0577'</a>	<a href="#">OR796046</a>
Halictidae	<i>Lasioglossum prasinum</i> (Smith, 1848)#	INV12335	<a href="#">IBIHM406-21</a>	<a href="#">BOLD:AEO4817'</a>	<a href="#">OR796466</a>
Halictidae	<i>Lasioglossum punctatissimum</i> (Schenck, 1853)	INV01547	<a href="#">IBIHM030-19</a>	<a href="#">BOLD:AAF4021</a>	<a href="#">OR796625</a>
Halictidae	<i>Lasioglossum punctatissimum</i> (Schenck, 1853)	INV12336	<a href="#">IBIHM407-21</a>	<a href="#">BOLD:AAF4021</a>	<a href="#">OR796928</a>
Halictidae	<i>Lasioglossum punctatissimum</i> (Schenck, 1853)	INV13106	<a href="#">IBIHM677-21</a>	<a href="#">BOLD:AAF4021</a>	<a href="#">OR796663</a>
Halictidae	<i>Lasioglossum punctatissimum</i> (Schenck, 1853)	INV13279	<a href="#">IBIHM849-21</a>	<a href="#">BOLD:AAF4021</a>	<a href="#">OR796643</a>
Halictidae	<i>Lasioglossum puncticolle</i> (Morawitz, 1872)	INV12337	<a href="#">IBIHM408-21</a>	<a href="#">BOLD:AEO0839'</a>	<a href="#">OR796458</a>
Halictidae	<i>Lasioglossum sexnotatum</i> (Kirby, 1802)	INV12339	<a href="#">IBIHM410-21</a>	<a href="#">BOLD:AAW9816</a>	<a href="#">OR796662</a>
Halictidae	<i>Lasioglossum sexnotatum</i> (Kirby, 1802)	INV13070	<a href="#">IBIHM641-21</a>	<a href="#">BOLD:AAW9816</a>	<a href="#">OR796422</a>
Halictidae	<i>Lasioglossum sexnotatum</i> (Kirby, 1802)	INV13078	<a href="#">IBIHM649-21</a>	<a href="#">BOLD:AAW9816</a>	<a href="#">OR796555</a>
Halictidae	<i>Lasioglossum sphecodimorphum</i> (Vachal, 1892)	INV12341	<a href="#">IBIHM412-21</a>	<a href="#">BOLD:AEO3826</a>	<a href="#">OR796739</a>
Halictidae	<i>Lasioglossum sphecodimorphum</i> (Vachal, 1892)#	INV13285	<a href="#">IBIHM855-21</a>	<a href="#">BOLD:AEO3826</a>	<a href="#">OR795942</a>
Halictidae	<i>Lasioglossum strictifrons</i> (Vachal, 1895)	INV12622	<a href="#">IBIHM1023-22</a>	<a href="#">BOLD:AEN9032</a>	<a href="#">OR796669</a>

Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Halictidae	<i>Lasioglossum strictifrons</i> (Vachal, 1895)	INV13068	<a href="#">IBIHM639-21</a>	<a href="#">BOLD:AEN9032</a>	<a href="#">OR796523</a>
Halictidae	<i>Lasioglossum strictifrons</i> (Vachal, 1895)	INV13079	<a href="#">IBIHM650-21</a>	<a href="#">BOLD:AEN9032</a>	<a href="#">OR796628</a>
Halictidae	<i>Lasioglossum strictifrons</i> (Vachal, 1895)	INV13099	<a href="#">IBIHM670-21</a>	<a href="#">BOLD:AEN9032</a>	<a href="#">OR796597</a>
Halictidae	<i>Lasioglossum strictifrons</i> (Vachal, 1895)	INV13100	<a href="#">IBIHM671-21</a>	<a href="#">BOLD:AEN9032</a>	<a href="#">OR796515</a>
Halictidae	<i>Lasioglossum strictifrons</i> (Vachal, 1895)	INV13101	<a href="#">IBIHM672-21</a>	<a href="#">BOLD:AEN9032</a>	<a href="#">OR796716</a>
Halictidae	<i>Lasioglossum subhirtum</i> (Lepeletier, 1841)	INV12340	<a href="#">IBIHM411-21</a>	<a href="#">BOLD:ADM2541</a>	<a href="#">OR796753</a>
Halictidae	<i>Lasioglossum subhirtum</i> (Lepeletier, 1841)	INV13090	<a href="#">IBIHM661-21</a>	<a href="#">BOLD:ADM2541</a>	<a href="#">OR796338</a>
Halictidae	<i>Lasioglossum transitorium</i> (Schenck, 1868)	INV13084	<a href="#">IBIHM655-21</a>	<a href="#">BOLD:AEM8844</a>	<a href="#">OR796539</a>
Halictidae	<i>Lasioglossum transitorium planulum</i> (Pérez, 1903)	INV12623	<a href="#">IBIHM1024-22</a>	<a href="#">BOLD:AEM8844</a>	<a href="#">OR796531</a>
Halictidae	<i>Lasioglossum transitorium planulum</i> (Pérez, 1903)	INV12625	<a href="#">IBIHM1026-22</a>	<a href="#">BOLD:AEM8844</a>	<a href="#">OR796478</a>
Halictidae	<i>Lasioglossum transitorium planulum</i> (Pérez, 1903)	INV12624	<a href="#">IBIHM1025-22</a>	<a href="#">BOLD:AER6557</a>	<a href="#">OR796352</a>
Halictidae	<i>Lasioglossum villosulum</i> (Kirby, 1802)	INV12342	<a href="#">IBIHM413-21</a>	<a href="#">BOLD:AEW2300</a>	<a href="#">OR796793</a>
Halictidae	<i>Lasioglossum villosulum</i> (Kirby, 1802)	INV13069	<a href="#">IBIHM640-21</a>	<a href="#">BOLD:AEW2300</a>	<a href="#">OR796878</a>
Halictidae	<i>Lasioglossum villosulum</i> (Kirby, 1802)	INV13088	<a href="#">IBIHM659-21</a>	<a href="#">BOLD:AEW2300</a>	<a href="#">OR796416</a>
Halictidae	<i>Lasioglossum villosulum</i> (Kirby, 1802)	INV13280	<a href="#">IBIHM850-21</a>	<a href="#">BOLD:AEW2300</a>	<a href="#">OR796228</a>
Halictidae	<i>Lasioglossum villosulum</i> (Kirby, 1802)	INV13283	<a href="#">IBIHM853-21</a>	<a href="#">BOLD:AEW2300</a>	<a href="#">OR796884</a>
Halictidae	<i>Lasioglossum villosulum</i> (Kirby, 1802)	INV15687	<a href="#">IBIHY028-22</a>	<a href="#">BOLD:AEW2300</a>	<a href="#">OR796233</a>
Halictidae	<i>Lasioglossum virens</i> (Erichson, 1835)#	INV12839	<a href="#">IBIHM1240-22</a>	<a href="#">BOLD:AAZ9232</a>	<a href="#">OR796242</a>
Halictidae	<i>Lasioglossum virens</i> (Erichson, 1835)#	INV12840	<a href="#">IBIHM1241-22</a>	<a href="#">BOLD:AAZ9232</a>	<a href="#">OR796152</a>
Halictidae	<i>Lasioglossum xanthopus</i> (Kirby, 1802)	INV12344	<a href="#">IBIHM415-21</a>	<a href="#">BOLD:AAE1789</a>	<a href="#">OR796032</a>
Halictidae	<i>Lasioglossum xanthopus</i> (Kirby, 1802)	INV13278	<a href="#">IBIHM848-21</a>	<a href="#">BOLD:AEW1421</a>	<a href="#">OR795914</a>
Halictidae	<i>Lasioglossum zonulum</i> (Smith, 1848)	INV12345	<a href="#">IBIHM416-21</a>	<a href="#">BOLD:AAB3147</a>	<a href="#">OR796817</a>
Halictidae	<i>Lasioglossum zonulum</i> (Smith, 1848)	INV13077	<a href="#">IBIHM648-21</a>	<a href="#">BOLD:AAB3147</a>	<a href="#">OR796309</a>
Halictidae	<i>Lasioglossum zonulum</i> (Smith, 1848)	INV13080	<a href="#">IBIHM651-21</a>	<a href="#">BOLD:AAB3147</a>	<a href="#">OR796763</a>
Halictidae	<i>Lasioglossum zonulum</i> (Smith, 1848)	INV13081	<a href="#">IBIHM652-21</a>	<a href="#">BOLD:AAB3147</a>	<a href="#">OR796514</a>
Halictidae	<i>Lasioglossum zonulum</i> (Smith, 1848)	INV13082	<a href="#">IBIHM653-21</a>	<a href="#">BOLD:AAB3147</a>	<a href="#">OR796513</a>
Halictidae	<i>Nomiapis diversipes</i> (Latreille, 1806)	INV02319	<a href="#">IBIHM016-19</a>	<a href="#">BOLD:AAF6016</a>	<a href="#">OR796483</a>
Halictidae	<i>Nomiapis diversipes</i> (Latreille, 1806)	INV12278	<a href="#">IBIHM349-21</a>	<a href="#">BOLD:AAF6016</a>	<a href="#">OR796846</a>

Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Halictidae	<i>Nomiapis diversipes</i> (Latreille, 1806)	INV13219	<a href="#">IBIHM790-21</a>	<a href="#">BOLD:AAF6016</a>	<a href="#">OR796329</a>
Halictidae	<i>Nomiapis diversipes</i> (Latreille, 1806)	INV13273	<a href="#">IBIHM843-21</a>	<a href="#">BOLD:AAF6016</a>	<a href="#">OR796328</a>
Halictidae	<i>Nomiapis paulyi</i> Wood & Le Divelec, 2022	INV13272	<a href="#">IBIHM842-21</a>	<a href="#">BOLD:ADD4589</a>	<a href="#">OR796401</a>
Halictidae	<i>Nomioides facilis</i> (Smith, 1853)	INV12280	<a href="#">IBIHM351-21</a>	<a href="#">BOLD:AEJ1330</a>	<a href="#">OR796135</a>
Halictidae	<i>Nomioides minutissimus</i> (Rossi, 1790)	INV12282	<a href="#">IBIHM353-21</a>	<a href="#">BOLD:AEO2657'</a>	<a href="#">OR796520</a>
Halictidae	<i>Sphecodes albilabris</i> (Fabricius, 1793)	INV12283	<a href="#">IBIHM354-21</a>	<a href="#">BOLD:AAI0130</a>	<a href="#">OR796694</a>
Halictidae	<i>Sphecodes alternatus</i> Smith, 1853	INV12284	<a href="#">IBIHM355-21</a>	<a href="#">BOLD:ACD7802</a>	<a href="#">OR795918</a>
Halictidae	<i>Sphecodes alternatus</i> Smith, 1853	INV13303	<a href="#">IBIHM873-21</a>	<a href="#">BOLD:AEO6580</a>	<a href="#">OR795940</a>
Halictidae	<i>Sphecodes crassanus</i> Warncke, 1992	INV12285	<a href="#">IBIHM356-21</a>	<a href="#">BOLD:ACD7802</a>	<a href="#">OR796474</a>
Halictidae	<i>Sphecodes crassanus</i> Warncke, 1992	INV13294	<a href="#">IBIHM864-21</a>	<a href="#">BOLD:ACD7802</a>	<a href="#">OR796115</a>
Halictidae	<i>Sphecodes croaticus</i> Meyer, 1922	INV12286	<a href="#">IBIHM357-21</a>	<a href="#">BOLD:ACP5320</a>	<a href="#">OR796439</a>
Halictidae	<i>Sphecodes ephippius</i> (Linnaeus, 1767)	INV12287	<a href="#">IBIHM358-21</a>	<a href="#">BOLD:AAD0332</a>	<a href="#">OR795936</a>
Halictidae	<i>Sphecodes ephippius</i> (Linnaeus, 1767)	INV13298	<a href="#">IBIHM868-21</a>	<a href="#">BOLD:AAD0332</a>	<a href="#">OR796660</a>
Halictidae	<i>Sphecodes gibbus</i> (Linnaeus, 1758)	INV12289	<a href="#">IBIHM360-21</a>	<a href="#">BOLD:AAD5232</a>	<a href="#">OR796455</a>
Halictidae	<i>Sphecodes hirtellus</i> Blüthgen, 1923#	INV13117	<a href="#">IBIHM688-21</a>	<a href="#">BOLD:AEO0791'</a>	<a href="#">OR796859</a>
Halictidae	<i>Sphecodes longulus</i> Hagens, 1882	INV13116	<a href="#">IBIHM687-21</a>	<a href="#">BOLD:AFM8564</a>	<a href="#">OR796939</a>
Halictidae	<i>Sphecodes marginatus</i> Hagens, 1882	INV12308	<a href="#">IBIHM379-21</a>	<a href="#">BOLD:AA99961</a>	<a href="#">OR796732</a>
Halictidae	<i>Sphecodes marginatus</i> Hagens, 1882	INV13085	<a href="#">IBIHM656-21</a>	<a href="#">BOLD:AA99961</a>	<a href="#">OR796758</a>
Halictidae	<i>Sphecodes marginatus</i> Hagens, 1882	INV13295	<a href="#">IBIHM865-21</a>	<a href="#">BOLD:AA99961</a>	<a href="#">OR796911</a>
Halictidae	<i>Sphecodes monilicornis</i> (Kirby, 1802)	INV12290	<a href="#">IBIHM361-21</a>	<a href="#">BOLD:AAI0259</a>	<a href="#">OR796749</a>
Halictidae	<i>Sphecodes monilicornis</i> (Kirby, 1802)	INV13121	<a href="#">IBIHM692-21</a>	<a href="#">BOLD:AAI0259</a>	<a href="#">OR796438</a>
Halictidae	<i>Sphecodes monilicornis</i> (Kirby, 1802)	INV13297	<a href="#">IBIHM867-21</a>	<a href="#">BOLD:AAI0259</a>	<a href="#">OR796947</a>
Halictidae	<i>Sphecodes monilicornis</i> (Kirby, 1802)	INV13304	<a href="#">IBIHM874-21</a>	<a href="#">BOLD:AAI0259</a>	<a href="#">OR796125</a>
Halictidae	<i>Sphecodes monilicornis</i> (Kirby, 1802)	INV13305	<a href="#">IBIHM875-21</a>	<a href="#">BOLD:AAI0259</a>	<a href="#">OR796204</a>
Halictidae	<i>Sphecodes niger</i> Hagens, 1874	INV13115	<a href="#">IBIHM686-21</a>	<a href="#">BOLD:AAN0084</a>	<a href="#">OR796179</a>
Halictidae	<i>Sphecodes olivieri</i> Lepeletier, 1825	INV12291	<a href="#">IBIHM362-21</a>	<a href="#">BOLD:ACR8452</a>	<a href="#">OR796589</a>
Halictidae	<i>Sphecodes pellucidus</i> Smith, 1845	INV12848	<a href="#">IBIHM1249-22</a>	<a href="#">BOLD:AAI0260</a>	<a href="#">OR796409</a>
Halictidae	<i>Sphecodes pseudofasciatus</i> Blüthgen, 1925	INV13289	<a href="#">IBIHM859-21</a>	<a href="#">BOLD:AEO2633'</a>	<a href="#">OR796725</a>
Halictidae	<i>Sphecodes puncticeps</i> Thomson, 1870	INV12288	<a href="#">IBIHM359-21</a>	<a href="#">BOLD:AA99709</a>	<a href="#">OR796664</a>
Halictidae	<i>Sphecodes puncticeps</i> Thomson, 1870	INV12293	<a href="#">IBIHM364-21</a>	<a href="#">BOLD:AA99709</a>	<a href="#">OR796418</a>

Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Halictidae	<i>Sphecodes puncticeps</i> Thomson, 1870	INV13299	<a href="#">IBIHM869-21</a>	<a href="#">BOLD:AA9709</a>	<a href="#">OR796341</a>
Halictidae	<i>Sphecodes puncticeps</i> Thomson, 1870	INV13300	<a href="#">IBIHM870-21</a>	<a href="#">BOLD:AA9709</a>	<a href="#">OR796556</a>
Halictidae	<i>Sphecodes puncticeps</i> Thomson, 1870	INV13306	<a href="#">IBIHM876-21</a>	<a href="#">BOLD:AA9709</a>	<a href="#">OR796011</a>
Halictidae	<i>Sphecodes reticulatus</i> Thomson, 1870	INV12309	<a href="#">IBIHM380-21</a>	<a href="#">BOLD:ABV3743</a>	<a href="#">OR796220</a>
Halictidae	<i>Sphecodes reticulatus</i> Thomson, 1870	INV13296	<a href="#">IBIHM866-21</a>	<a href="#">BOLD:ABV3743</a>	<a href="#">OR796903</a>
Halictidae	<i>Sphecodes rubicundus</i> Hagens, 1875	INV13119	<a href="#">IBIHM690-21</a>	<a href="#">BOLD:AAJ3388</a>	<a href="#">OR796026</a>
Halictidae	<i>Sphecodes rubicundus</i> Hagens, 1875	INV13122	<a href="#">IBIHM693-21</a>	<a href="#">BOLD:AAJ3388</a>	<a href="#">OR796827</a>
Halictidae	<i>Sphecodes rubicundus</i> Hagens, 1875	INV13302	<a href="#">IBIHM872-21</a>	<a href="#">BOLD:AAJ3388</a>	<a href="#">OR796605</a>
Halictidae	<i>Sphecodes rubripes</i> Spinola, 1838#	INV12294	<a href="#">IBIHM365-21</a>	<a href="#">BOLD:AAM4113</a>	<a href="#">OR796687</a>
Halictidae	<i>Sphecodes ruficrus</i> (Erichson, 1835)	INV12296	<a href="#">IBIHM367-21</a>	<a href="#">BOLD:AAF2925</a>	<a href="#">OR795901</a>
Halictidae	<i>Sphecodes ruficrus</i> (Erichson, 1835)	INV13120	<a href="#">IBIHM691-21</a>	<a href="#">BOLD:AAF2925</a>	<a href="#">OR796013</a>
Halictidae	<i>Sphecodes ruficrus</i> (Erichson, 1835)	INV13123	<a href="#">IBIHM694-21</a>	<a href="#">BOLD:AAF2925</a>	<a href="#">OR796553</a>
Halictidae	<i>Sphecodes ruficrus</i> (Erichson, 1835)	INV13124	<a href="#">IBIHM695-21</a>	<a href="#">BOLD:AAF2925</a>	<a href="#">OR796373</a>
Halictidae	<i>Sphecodes ruficrus</i> (Erichson, 1835)	INV13301	<a href="#">IBIHM871-21</a>	<a href="#">BOLD:AAF2925</a>	<a href="#">OR796906</a>
Halictidae	<i>Sphecodes rufiventris</i> (Panzer, 1798)	INV12295	<a href="#">IBIHM366-21</a>	<a href="#">BOLD:ABA8649</a>	<a href="#">OR796177</a>
Halictidae	<i>Sphecodes spinulosus</i> Hagens, 1875	INV12297	<a href="#">IBIHM368-21</a>	<a href="#">BOLD:ACQ2281</a>	<a href="#">OR796564</a>
Halictidae	<i>Systropha grandimargo</i> Pérez, 1905	INV12272	<a href="#">IBIHM343-21</a>	<a href="#">BOLD:AEO6068'</a>	<a href="#">OR796633</a>
Megachilidae	<i>Afranthidium carduele malacopygum</i> (Gribodo, 1894)	INV12447	<a href="#">IBIHM1300-22</a>	<a href="#">BOLD:AEO1769</a>	<a href="#">OR796464</a>
Megachilidae	<i>Afranthidium carduele malacopygum</i> (Gribodo, 1894)	INV12448	<a href="#">IBIHM1301-22</a>	<a href="#">BOLD:AEO1769</a>	<a href="#">OR796832</a>
Megachilidae	<i>Afranthidium carduele malacopygum</i> (Gribodo, 1894)	INV13349	<a href="#">IBIHM919-21</a>	<a href="#">BOLD:AEO1769</a>	<a href="#">OR796188</a>
Megachilidae	<i>Afranthidium schulthessii</i> (Friese, 1897)	INV12211	<a href="#">IBIHM282-21</a>	<a href="#">BOLD:AEO4048</a>	<a href="#">OR796024</a>
Megachilidae	<i>Aglaoapis tridentata</i> (Nylander, 1848)	INV12022	<a href="#">IBIHM093-21</a>	<a href="#">BOLD:AAO2962</a>	<a href="#">OR796801</a>
Megachilidae	<i>Anthidiellum brevisculum</i> (Pérez, 1890)	INV12212	<a href="#">IBIHM283-21</a>	<a href="#">BOLD:AEN7284</a>	<a href="#">OR796051</a>
Megachilidae	<i>Anthidiellum strigatum</i> (Panzer, 1804)	INV02280	<a href="#">IBIHM010-19</a>	<a href="#">BOLD:AA98402</a>	<a href="#">OR796788</a>
Megachilidae	<i>Anthidiellum strigatum</i> (Panzer, 1804)	INV12213	<a href="#">IBIHM284-21</a>	<a href="#">BOLD:AA98402</a>	<a href="#">OR796748</a>
Megachilidae	<i>Anthidiellum strigatum</i> (Panzer, 1804)	INV13350	<a href="#">IBIHM920-21</a>	<a href="#">BOLD:AA98402</a>	<a href="#">OR796325</a>
Megachilidae	<i>Anthidium cingulatum</i> Latreille, 1809	INV12215	<a href="#">IBIHM286-21</a>	<a href="#">BOLD:AAN9423</a>	<a href="#">OR796467</a>
Megachilidae	<i>Anthidium diadema</i> Latreille, 1809	INV12445	<a href="#">IBIHM1298-22</a>	<a href="#">BOLD:AER0584</a>	<a href="#">OR796499</a>
Megachilidae	<i>Anthidium diadema</i> Latreille, 1809	INV12446	<a href="#">IBIHM1299-22</a>	<a href="#">BOLD:AET3713</a>	<a href="#">OR796149</a>

Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Megachilidae	<i>Anthidium florentinum</i> (Fabricius, 1775)	INV12214	<a href="#">IBIHM285-21</a>	<a href="#">BOLD:ABW0328</a>	<a href="#">OR796484</a>
Megachilidae	<i>Anthidium florentinum</i> (Fabricius, 1775)	INV15674	<a href="#">IBIHY017-22</a>	<a href="#">BOLD:ABW0328</a>	<a href="#">OR795941</a>
Megachilidae	<i>Anthidium loti</i> Perris, 1852	INV12216	<a href="#">IBIHM287-21</a>	<a href="#">BOLD:ACG1108</a>	<a href="#">OR796007</a>
Megachilidae	<i>Anthidium manicatum</i> (Linnaeus, 1758)	INV12217	<a href="#">IBIHM288-21</a>	<a href="#">BOLD:AAA9946</a>	<a href="#">OR796247</a>
Megachilidae	<i>Anthidium manicatum</i> (Linnaeus, 1758)	INV13142	<a href="#">IBIHM713-21</a>	<a href="#">BOLD:AAA9946</a>	<a href="#">OR796417</a>
Megachilidae	<i>Anthidium manicatum</i> (Linnaeus, 1758)	INV13143	<a href="#">IBIHM714-21</a>	<a href="#">BOLD:AAA9946</a>	<a href="#">OR796645</a>
Megachilidae	<i>Anthidium oblongatum</i> (Illiger, 1806)	INV12219	<a href="#">IBIHM290-21</a>	<a href="#">BOLD:AAC5344</a>	<a href="#">OR795959</a>
Megachilidae	<i>Anthidium punctatum</i> Latreille, 1809	INV12218	<a href="#">IBIHM289-21</a>	<a href="#">BOLD:AEN2704</a>	<a href="#">OR796680</a>
Megachilidae	<i>Anthidium taeniatum</i> Latreille, 1809	INV12220	<a href="#">IBIHM291-21</a>	<a href="#">BOLD:AEO3965</a>	<a href="#">OR796160</a>
Megachilidae	<i>Anthidium taeniatum</i> Latreille, 1809	INV13341	<a href="#">IBIHM911-21</a>	<a href="#">BOLD:AEO3965</a>	<a href="#">OR796399</a>
Megachilidae	<i>Chelostoma campanularum</i> (Kirby, 1802)	INV13220	<a href="#">IBIHM791-21</a>	<a href="#">BOLD:AAB1123</a>	<a href="#">OR796035</a>
Megachilidae	<i>Chelostoma campanularum</i> (Kirby, 1802)	INV13221	<a href="#">IBIHM792-21</a>	<a href="#">BOLD:AAB1123</a>	<a href="#">OR796600</a>
Megachilidae	<i>Chelostoma campanularum</i> (Kirby, 1802)	INV12443	<a href="#">IBIHM1296-22</a>	<a href="#">BOLD:AET7155'</a>	<a href="#">OR796495</a>
Megachilidae	<i>Chelostoma campanularum</i> (Kirby, 1802)	INV12444	<a href="#">IBIHM1297-22</a>	<a href="#">BOLD:AET7155'</a>	<a href="#">OR796053</a>
Megachilidae	<i>Chelostoma florissomme</i> (Linnaeus, 1758)	INV12442	<a href="#">IBIHM1295-22</a>	<a href="#">BOLD:AEU4316'</a>	<a href="#">OR796494</a>
Megachilidae	<i>Chelostoma rapunculi</i> (Lepeletier, 1841)	INV12400	<a href="#">IBIHM1253-22</a>	<a href="#">BOLD:AAA7122</a>	<a href="#">OR796768</a>
Megachilidae	<i>Chelostoma rapunculi</i> (Lepeletier, 1841)	INV12401	<a href="#">IBIHM1254-22</a>	<a href="#">BOLD:AAA7122</a>	<a href="#">OR796371</a>
Megachilidae	<i>Coelioxys acanthurus</i> (Illiger, 1806)	INV12449	<a href="#">IBIHM1302-22</a>	<a href="#">BOLD:AET0371</a>	<a href="#">OR796065</a>
Megachilidae	<i>Coelioxys afer</i> Lepeletier, 1841	INV12450	<a href="#">IBIHM1303-22</a>	<a href="#">BOLD:AAV8048</a>	<a href="#">OR796344</a>
Megachilidae	<i>Coelioxys afer</i> Lepeletier, 1841	INV13347	<a href="#">IBIHM917-21</a>	<a href="#">BOLD:AAV8048</a>	<a href="#">OR796385</a>
Megachilidae	<i>Coelioxys argenteus</i> Lepeletier, 1841	INV01263	<a href="#">IBIHM023-19</a>	<a href="#">BOLD:AAV9350</a>	<a href="#">OR796944</a>
Megachilidae	<i>Coelioxys argenteus</i> Lepeletier, 1841	INV12031	<a href="#">IBIHM102-21</a>	<a href="#">BOLD:AAV9350</a>	<a href="#">OR796524</a>
Megachilidae	<i>Coelioxys aurolimbatus</i> Förster, 1853	INV12452	<a href="#">IBIHM1305-22</a>	<a href="#">BOLD:AES4301'</a>	<a href="#">OR796710</a>
Megachilidae	<i>Coelioxys brevis</i> Eversmann, 1852	INV12032	<a href="#">IBIHM103-21</a>	<a href="#">BOLD:ADD7530</a>	<a href="#">OR796712</a>
Megachilidae	<i>Coelioxys echinatus</i> Förster, 1853	INV12034	<a href="#">IBIHM105-21</a>	<a href="#">BOLD:AET4410'</a>	<a href="#">OR796408</a>
Megachilidae	<i>Coelioxys echinatus</i> Förster, 1853	INV12451	<a href="#">IBIHM1304-22</a>	<a href="#">BOLD:AET4410'</a>	<a href="#">OR796886</a>
Megachilidae	<i>Coelioxys haemorrhoea</i> Förster, 1853	INV12033	<a href="#">IBIHM104-21</a>	<a href="#">BOLD:ADC9939</a>	<a href="#">OR796175</a>
Megachilidae	<i>Coelioxys haemorrhoea</i> Förster, 1853	INV12453	<a href="#">IBIHM1306-22</a>	<a href="#">BOLD:ADC9939</a>	<a href="#">OR796411</a>
Megachilidae	<i>Coelioxys haemorrhoea</i> Förster, 1853	INV12454	<a href="#">IBIHM1307-22</a>	<a href="#">BOLD:ADC9939</a>	<a href="#">OR796918</a>

Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Megachilidae	<i>Coelioxys obtusus</i> Pérez, 1884	INV12455	<a href="#">IBIHM1308-22</a>	<a href="#">BOLD:AEO4483'</a>	<a href="#">OR795979</a>
Megachilidae	<i>Coelioxys obtusus</i> Pérez, 1884	INV13345	<a href="#">IBIHM915-21</a>	<a href="#">BOLD:AEO4483'</a>	<a href="#">OR796752</a>
Megachilidae	<i>Coelioxys obtusus</i> Pérez, 1884	INV13346	<a href="#">IBIHM916-21</a>	<a href="#">BOLD:AEO4483'</a>	<a href="#">OR796683</a>
Megachilidae	<i>Dioxys cinctus</i> (Jurine, 1807)	INV12017	<a href="#">IBIHM088-21</a>	<a href="#">BOLD:AAy8179</a>	<a href="#">OR795977</a>
Megachilidae	<i>Dioxys cinctus</i> (Jurine, 1807)	INV12018	<a href="#">IBIHM089-21</a>	<a href="#">BOLD:AAy8179</a>	<a href="#">OR796094</a>
Megachilidae	<i>Dioxys pumilus</i> Gerstäcker, 1869	INV12019	<a href="#">IBIHM090-21</a>	<a href="#">BOLD:AEO4333'</a>	<a href="#">OR796459</a>
Megachilidae	<i>Dioxys pumilus</i> Gerstäcker, 1869	INV12020	<a href="#">IBIHM091-21</a>	<a href="#">BOLD:AEO4333'</a>	<a href="#">OR796017</a>
Megachilidae	<i>Dioxys pumilus</i> Gerstäcker, 1869	INV12021	<a href="#">IBIHM092-21</a>	<a href="#">BOLD:AEO4333'</a>	<a href="#">OR796503</a>
Megachilidae	<i>Ensliniana bidentata</i> (Friese, 1899)#	INV12016	<a href="#">IBIHM087-21</a>	<a href="#">BOLD:AEN9289'</a>	<a href="#">OR796930</a>
Megachilidae	<i>Heriades crenulata</i> Nylander, 1856	INV12579	<a href="#">IBIHM550-21</a>	<a href="#">BOLD:AAO0527</a>	<a href="#">OR796208</a>
Megachilidae	<i>Heriades crenulata</i> Nylander, 1856	INV13355	<a href="#">IBIHM925-21</a>	<a href="#">BOLD:AAO0527</a>	<a href="#">OR795921</a>
Megachilidae	<i>Heriades rubicola</i> Pérez, 1890	INV12578	<a href="#">IBIHM549-21</a>	<a href="#">BOLD:ABV4003</a>	<a href="#">OR796690</a>
Megachilidae	<i>Heriades rubicola</i> Pérez, 1890	INV13354	<a href="#">IBIHM924-21</a>	<a href="#">BOLD:ABV4003</a>	<a href="#">OR796343</a>
Megachilidae	<i>Heriades truncorum</i> (Linnaeus, 1758)	INV12596	<a href="#">IBIHM567-21</a>	<a href="#">BOLD:AAI8422</a>	<a href="#">OR796706</a>
Megachilidae	<i>Heriades truncorum</i> (Linnaeus, 1758)	INV13125	<a href="#">IBIHM696-21</a>	<a href="#">BOLD:AAI8422</a>	<a href="#">OR796003</a>
Megachilidae	<i>Heriades truncorum</i> (Linnaeus, 1758)	INV13356	<a href="#">IBIHM926-21</a>	<a href="#">BOLD:AAI8422</a>	<a href="#">OR796811</a>
Megachilidae	<i>Hoplitis acuticornis</i> (Dufour & Perris, 1840)	INV12386	<a href="#">IBIHM457-21</a>	<a href="#">BOLD:AAK6030</a>	<a href="#">OR796711</a>
Megachilidae	<i>Hoplitis adunca</i> (Panzer, 1798)	INV12421	<a href="#">IBIHM1274-22</a>	<a href="#">BOLD:AAI1794</a>	<a href="#">OR796834</a>
Megachilidae	<i>Hoplitis albiscopa</i> (Friese, 1899)#	INV12411	<a href="#">IBIHM1264-22</a>	<a href="#">BOLD:AEO0400'</a>	<a href="#">OR796864</a>
Megachilidae	<i>Hoplitis albiscopa</i> (Friese, 1899)#	INV12412	<a href="#">IBIHM1265-22</a>	<a href="#">BOLD:AEO0400'</a>	<a href="#">OR796350</a>
Megachilidae	<i>Hoplitis albiscopa</i> (Friese, 1899)#	INV13368	<a href="#">IBIHM938-21</a>	<a href="#">BOLD:AEO0400'</a>	<a href="#">OR796606</a>
Megachilidae	<i>Hoplitis annulata</i> (Latreille, 1811)	INV12383	<a href="#">IBIHM454-21</a>	<a href="#">BOLD:ADD6906</a>	<a href="#">OR796334</a>
Megachilidae	<i>Hoplitis annulata</i> (Latreille, 1811)	INV13366	<a href="#">IBIHM936-21</a>	<a href="#">BOLD:ADD6906</a>	<a href="#">OR796278</a>
Megachilidae	<i>Hoplitis anthocopoides</i> (Schenck, 1853)	INV12422	<a href="#">IBIHM1275-22</a>	<a href="#">BOLD:AAC3950</a>	<a href="#">OR796540</a>
Megachilidae	<i>Hoplitis antigae</i> (Pérez, 1895)	INV12416	<a href="#">IBIHM1269-22</a>	<a href="#">BOLD:AEN2131</a>	<a href="#">OR796920</a>
Megachilidae	<i>Hoplitis antigae</i> (Pérez, 1895)	INV12599	<a href="#">IBIHM570-21</a>	<a href="#">BOLD:AEN2131</a>	<a href="#">OR796927</a>
Megachilidae	<i>Hoplitis antigae</i> (Pérez, 1895)	INV13369	<a href="#">IBIHM939-21</a>	<a href="#">BOLD:AEN2131</a>	<a href="#">OR796276</a>
Megachilidae	<i>Hoplitis benoisti</i> (Alfken, 1935)	INV12423	<a href="#">IBIHM1276-22</a>	<a href="#">BOLD:AEV6823'</a>	<a href="#">OR796146</a>
Megachilidae	<i>Hoplitis bisulca</i> (Gerstäcker, 1869)	INV12588	<a href="#">IBIHM559-21</a>	<a href="#">BOLD:AEO0529</a>	<a href="#">OR796955</a>
Megachilidae	<i>Hoplitis brachypogon</i> (Pérez, 1879)#	INV12393	<a href="#">IBIHM464-21</a>	<a href="#">BOLD:AEP1421</a>	<a href="#">OR796219</a>



Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Megachilidae	<i>Hoplitis brachypogon</i> (Pérez, 1879)#	INV13367	<a href="#">IBIHM937-21</a>	<a href="#">BOLD:AEP1421</a>	<a href="#">OR795944</a>
Megachilidae	<i>Hoplitis cadiza</i> (Warncke, 1991)#	INV12419	<a href="#">IBIHM1272-22</a>	<a href="#">BOLD:AER8784'</a>	<a href="#">OR796351</a>
Megachilidae	<i>Hoplitis cadiza</i> (Warncke, 1991)#	INV12420	<a href="#">IBIHM1273-22</a>	<a href="#">BOLD:AER8784'</a>	<a href="#">OR796941</a>
Megachilidae	<i>Hoplitis campanularis</i> (Morawitz, 1879)#	INV12413	<a href="#">IBIHM1266-22</a>	<a href="#">BOLD:AES6061'</a>	<a href="#">OR796849</a>
Megachilidae	<i>Hoplitis campanularis</i> (Morawitz, 1879)#	INV12414	<a href="#">IBIHM1267-22</a>	<a href="#">BOLD:AES6061'</a>	<a href="#">OR796517</a>
Megachilidae	<i>Hoplitis claviventris</i> (Thomson, 1872)	INV12402	<a href="#">IBIHM1255-22</a>	<a href="#">BOLD:AAE5480</a>	<a href="#">OR796781</a>
Megachilidae	<i>Hoplitis cristatula</i> (van der Zanden, 1990)	INV12593	<a href="#">IBIHM564-21</a>	<a href="#">BOLD:AEL6177</a>	<a href="#">OR796087</a>
Megachilidae	<i>Hoplitis grumi</i> (Morawitz, 1894)#	INV12403	<a href="#">IBIHM1256-22</a>	<a href="#">BOLD:AET3653'</a>	<a href="#">OR796482</a>
Megachilidae	<i>Hoplitis leucomelana</i> (Kirby, 1802)	INV12398	<a href="#">IBIHM469-21</a>	<a href="#">BOLD:AEL2158</a>	<a href="#">OR796262</a>
Megachilidae	<i>Hoplitis marchali</i> (Pérez, 1902)	INV12404	<a href="#">IBIHM1257-22</a>	<a href="#">BOLD:AET3654'</a>	<a href="#">OR796375</a>
Megachilidae	<i>Hoplitis ochraceicornis</i> (Ferton, 1902)#	INV12424	<a href="#">IBIHM1277-22</a>	<a href="#">BOLD:AER7475'</a>	<a href="#">OR796745</a>
Megachilidae	<i>Hoplitis ochraceicornis</i> (Ferton, 1902)#	INV12425	<a href="#">IBIHM1278-22</a>	<a href="#">BOLD:AER7475'</a>	<a href="#">OR796551</a>
Megachilidae	<i>Hoplitis praestans</i> (Morawitz, 1894)	INV12415	<a href="#">IBIHM1268-22</a>	<a href="#">BOLD:AER7476'</a>	<a href="#">OR796883</a>
Megachilidae	<i>Hoplitis ravouxi</i> (Pérez, 1902)	INV12417	<a href="#">IBIHM1270-22</a>	<a href="#">BOLD:AAI1840</a>	<a href="#">OR796297</a>
Megachilidae	<i>Hoplitis ravouxi</i> (Pérez, 1902)	INV12418	<a href="#">IBIHM1271-22</a>	<a href="#">BOLD:AET2330'</a>	<a href="#">OR796284</a>
Megachilidae	<i>Hoplitis stecki</i> (Frey-Gessner, 1908)	INV02288	<a href="#">IBIHM012-19</a>	<a href="#">BOLD:ACF9884</a>	<a href="#">OR796747</a>
Megachilidae	<i>Hoplitis stecki</i> (Frey-Gessner, 1908)	INV12577	<a href="#">IBIHM548-21</a>	<a href="#">BOLD:ACF9884</a>	<a href="#">OR796934</a>
Megachilidae	<i>Hoplitis tridentata</i> (Dufour & Perris, 1840)	INV12592	<a href="#">IBIHM563-21</a>	<a href="#">BOLD:AAF2246</a>	<a href="#">OR796545</a>
Megachilidae	<i>Icterantheidium grohmanni</i> (Spinola, 1838)	INV12221	<a href="#">IBIHM292-21</a>	<a href="#">BOLD:AEH0395</a>	<a href="#">OR796554</a>
Megachilidae	<i>Icterantheidium grohmanni</i> (Spinola, 1838)	INV13353	<a href="#">IBIHM923-21</a>	<a href="#">BOLD:AEH0395</a>	<a href="#">OR796612</a>
Megachilidae	<i>Lithurgus chrysurus</i> Fonscolombe, 1834	INV12234	<a href="#">IBIHM305-21</a>	<a href="#">BOLD:AAV7690</a>	<a href="#">OR796128</a>
Megachilidae	<i>Lithurgus tibialis</i> Morawitz, 1875	INV12235	<a href="#">IBIHM306-21</a>	<a href="#">BOLD:ABW1174</a>	<a href="#">OR796131</a>
Megachilidae	<i>Megachile albisecta</i> (Klug, 1817)	INV12237	<a href="#">IBIHM308-21</a>	<a href="#">BOLD:AEO5749</a>	<a href="#">OR796529</a>
Megachilidae	<i>Megachile albisecta</i> (Klug, 1817)	INV02293	<a href="#">IBIHM043-19</a>	<a href="#">BOLD:AEO5750</a>	<a href="#">OR796820</a>
Megachilidae	<i>Megachile albonotata</i> Radoszkowski, 1886#	INV12236	<a href="#">IBIHM307-21</a>	<a href="#">BOLD:AAV7863</a>	<a href="#">OR796644</a>
Megachilidae	<i>Megachile apicalis</i> Spinola, 1808	INV12238	<a href="#">IBIHM309-21</a>	<a href="#">BOLD:AAF4159</a>	<a href="#">OR796843</a>
Megachilidae	<i>Megachile apicalis</i> Spinola, 1808	INV13127	<a href="#">IBIHM698-21</a>	<a href="#">BOLD:AAF4159</a>	<a href="#">OR796073</a>
Megachilidae	<i>Megachile apicalis</i> Spinola, 1808	INV13342	<a href="#">IBIHM912-21</a>	<a href="#">BOLD:AAF4159</a>	<a href="#">OR796453</a>



Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Megachilidae	<i>Megachile argentata</i> (Fabricius, 1793)	INV03735	<a href="#">IBIHM048-19</a>	<a href="#">BOLD:AAD7803</a>	<a href="#">OR796463</a>
Megachilidae	<i>Megachile argentata</i> (Fabricius, 1793)	INV12437	<a href="#">IBIHM1290-22</a>	<a href="#">BOLD:AAD7803</a>	<a href="#">OR796168</a>
Megachilidae	<i>Megachile argentata</i> (Fabricius, 1793)	INV12438	<a href="#">IBIHM1291-22</a>	<a href="#">BOLD:AAD7803</a>	<a href="#">OR796062</a>
Megachilidae	<i>Megachile argentata</i> (Fabricius, 1793)	INV13129	<a href="#">IBIHM700-21</a>	<a href="#">BOLD:AAD7803</a>	<a href="#">OR796759</a>
Megachilidae	<i>Megachile argentata</i> (Fabricius, 1793)	INV13343	<a href="#">IBIHM913-21</a>	<a href="#">BOLD:AAD7803</a>	<a href="#">OR796717</a>
Megachilidae	<i>Megachile argentata</i> (Fabricius, 1793)	INV13348	<a href="#">IBIHM918-21</a>	<a href="#">BOLD:AAD7803</a>	<a href="#">OR795928</a>
Megachilidae	<i>Megachile argentata</i> (Fabricius, 1793)	INV15662	<a href="#">IBIHY006-22</a>	<a href="#">BOLD:AAD7803</a>	<a href="#">OR796548</a>
Megachilidae	<i>Megachile argentata</i> (Fabricius, 1793)	INV15675	<a href="#">IBIHY018-22</a>	<a href="#">BOLD:AAD7803</a>	<a href="#">OR796040</a>
Megachilidae	<i>Megachile centuncularis</i> (Linnaeus, 1758)	INV12239	<a href="#">IBIHM310-21</a>	<a href="#">BOLD:AAA8356</a>	<a href="#">OR796591</a>
Megachilidae	<i>Megachile centuncularis</i> (Linnaeus, 1758)	INV13130	<a href="#">IBIHM701-21</a>	<a href="#">BOLD:AAA8356</a>	<a href="#">OR796214</a>
Megachilidae	<i>Megachile centuncularis</i> (Linnaeus, 1758)	INV15682	<a href="#">IBIHY024-22</a>	<a href="#">BOLD:AAA8356</a>	<a href="#">OR795976</a>
Megachilidae	<i>Megachile circumcincta</i> (Kirby, 1802)	INV12240	<a href="#">IBIHM311-21</a>	<a href="#">BOLD:AAC0049</a>	<a href="#">OR796424</a>
Megachilidae	<i>Megachile ericetorum</i> Lepeletier, 1841	INV12241	<a href="#">IBIHM312-21</a>	<a href="#">BOLD:AEA9090</a>	<a href="#">OR796315</a>
Megachilidae	<i>Megachile giraudi</i> Gerstäcker, 1869	INV12242	<a href="#">IBIHM313-21</a>	<a href="#">BOLD:AA7848</a>	<a href="#">OR796814</a>
Megachilidae	<i>Megachile giraudi</i> Gerstäcker, 1869	INV12250	<a href="#">IBIHM321-21</a>	<a href="#">BOLD:AA7848</a>	<a href="#">OR795983</a>
Megachilidae	<i>Megachile lagopoda</i> (Linnaeus, 1761)	INV12243	<a href="#">IBIHM314-21</a>	<a href="#">BOLD:AAE8874</a>	<a href="#">OR796800</a>
Megachilidae	<i>Megachile leachella</i> Curtis, 1828	INV12244	<a href="#">IBIHM315-21</a>	<a href="#">BOLD:AAD2767</a>	<a href="#">OR796799</a>
Megachilidae	<i>Megachile leachella</i> Curtis, 1828	INV13126	<a href="#">IBIHM697-21</a>	<a href="#">BOLD:AAD2767</a>	<a href="#">OR796560</a>
Megachilidae	<i>Megachile lefebvrei</i> (Lepeletier, 1841)	INV12245	<a href="#">IBIHM316-21</a>	<a href="#">BOLD:ABW1753</a>	<a href="#">OR796585</a>
Megachilidae	<i>Megachile marginata</i> Smith, 1853	INV12256	<a href="#">IBIHM327-21</a>	<a href="#">BOLD:AAK6960</a>	<a href="#">OR796666</a>
Megachilidae	<i>Megachile maritima</i> (Kirby, 1802)	INV12246	<a href="#">IBIHM317-21</a>	<a href="#">BOLD:AAD7888</a>	<a href="#">OR796336</a>
Megachilidae	<i>Megachile melanopyga</i> Costa, 1863	INV12247	<a href="#">IBIHM318-21</a>	<a href="#">BOLD:AAE8870</a>	<a href="#">OR796688</a>
Megachilidae	<i>Megachile melanopyga</i> Costa, 1863	INV13128	<a href="#">IBIHM699-21</a>	<a href="#">BOLD:AAE8870</a>	<a href="#">OR796692</a>
Megachilidae	<i>Megachile octosignata</i> Nylander, 1852	INV12248	<a href="#">IBIHM319-21</a>	<a href="#">BOLD:ADM5545</a>	<a href="#">OR796519</a>
Megachilidae	<i>Megachile opacifrons</i> Pérez, 1897	INV12249	<a href="#">IBIHM320-21</a>	<a href="#">BOLD:ACF9800</a>	<a href="#">OR796342</a>
Megachilidae	<i>Megachile pusilla</i> Pérez, 1884	INV12254	<a href="#">IBIHM325-21</a>	<a href="#">BOLD:AAQ0516</a>	<a href="#">OR796440</a>
Megachilidae	<i>Megachile pusilla</i> Pérez, 1884	INV15709	<a href="#">IBIHY032-22</a>	<a href="#">BOLD:AAQ0516</a>	<a href="#">OR796806</a>
Megachilidae	<i>Megachile pyrenaica</i> Lepeletier, 1841	INV12251	<a href="#">IBIHM322-21</a>	<a href="#">BOLD:AAO0637</a>	<a href="#">OR795950</a>
Megachilidae	<i>Megachile rotundata</i> (Fabricius, 1787)	INV12252	<a href="#">IBIHM323-21</a>	<a href="#">BOLD:AEO2625'</a>	<a href="#">OR796888</a>

Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Megachilidae	<i>Megachile sicula</i> (Rossi, 1792)	INV12253	<a href="#">IBIHM324-21</a>	<a href="#">BOLD:AEO4733</a>	<a href="#">OR796310</a>
Megachilidae	<i>Megachile thevestensis</i> Ferton, 1909#	INV12439	<a href="#">IBIHM1292-22</a>	<a href="#">BOLD:AEU0213'</a>	<a href="#">OR796095</a>
Megachilidae	<i>Megachile versicolor</i> Smith, 1844	INV12440	<a href="#">IBIHM1293-22</a>	<a href="#">BOLD:AAD5414</a>	<a href="#">OR796286</a>
Megachilidae	<i>Megachile versicolor</i> Smith, 1844	INV12441	<a href="#">IBIHM1294-22</a>	<a href="#">BOLD:AAD5414</a>	<a href="#">OR796813</a>
Megachilidae	<i>Megachile willughbiella</i> (Kirby, 1802)	INV12255	<a href="#">IBIHM326-21</a>	<a href="#">BOLD:ACE6545</a>	<a href="#">OR796784</a>
Megachilidae	<i>Osmia anceyi</i> Pérez, 1879#	INV12435	<a href="#">IBIHM1288-22</a>	<a href="#">BOLD:AEO4345'</a>	<a href="#">OR795934</a>
Megachilidae	<i>Osmia anceyi</i> Pérez, 1879#	INV12436	<a href="#">IBIHM1289-22</a>	<a href="#">BOLD:AEO4345'</a>	<a href="#">OR796078</a>
Megachilidae	<i>Osmia anceyi</i> Pérez, 1879#	INV13361	<a href="#">IBIHM931-21</a>	<a href="#">BOLD:AEO4345'</a>	<a href="#">OR796194</a>
Megachilidae	<i>Osmia andrenoides</i> Spinola, 1808	INV12585	<a href="#">IBIHM556-21</a>	<a href="#">BOLD:AEO0032'</a>	<a href="#">OR796613</a>
Megachilidae	<i>Osmia argyropyga</i> Pérez, 1879#	INV12582	<a href="#">IBIHM553-21</a>	<a href="#">BOLD:AEO4346'</a>	<a href="#">OR796318</a>
Megachilidae	<i>Osmia aurulenta</i> (Panzer, 1799)	INV12580	<a href="#">IBIHM551-21</a>	<a href="#">BOLD:AAE5409</a>	<a href="#">OR796218</a>
Megachilidae	<i>Osmia aurulenta</i> (Panzer, 1799)	INV13131	<a href="#">IBIHM702-21</a>	<a href="#">BOLD:AAE5409</a>	<a href="#">OR796819</a>
Megachilidae	<i>Osmia bicornis</i> (Linnaeus, 1758)	INV12434	<a href="#">IBIHM1287-22</a>	<a href="#">BOLD:AAD6282</a>	<a href="#">OR796570</a>
Megachilidae	<i>Osmia bicornis</i> (Linnaeus, 1758)	INV12590	<a href="#">IBIHM561-21</a>	<a href="#">BOLD:AAD6282</a>	<a href="#">OR796571</a>
Megachilidae	<i>Osmia bicornis</i> (Linnaeus, 1758)	INV13140	<a href="#">IBIHM711-21</a>	<a href="#">BOLD:AAD6282</a>	<a href="#">OR796206</a>
Megachilidae	<i>Osmia bicornis</i> (Linnaeus, 1758)	INV13141	<a href="#">IBIHM712-21</a>	<a href="#">BOLD:AAD6282</a>	<a href="#">OR796069</a>
Megachilidae	<i>Osmia brevicornis</i> (Fabricius, 1798)	INV12586	<a href="#">IBIHM557-21</a>	<a href="#">BOLD:AEF6206</a>	<a href="#">OR796722</a>
Megachilidae	<i>Osmia caeruleascens</i> (Linnaeus, 1758)	INV01272	<a href="#">IBIHM024-19</a>	<a href="#">BOLD:AAD0313</a>	<a href="#">OR796932</a>
Megachilidae	<i>Osmia caeruleascens</i> (Linnaeus, 1758)	INV12389	<a href="#">IBIHM460-21</a>	<a href="#">BOLD:AAD0313</a>	<a href="#">OR796122</a>
Megachilidae	<i>Osmia caeruleascens</i> (Linnaeus, 1758)	INV13132	<a href="#">IBIHM703-21</a>	<a href="#">BOLD:AAD0313</a>	<a href="#">OR796264</a>
Megachilidae	<i>Osmia caeruleascens</i> (Linnaeus, 1758)	INV13133	<a href="#">IBIHM704-21</a>	<a href="#">BOLD:AAD0313</a>	<a href="#">OR796121</a>
Megachilidae	<i>Osmia caeruleascens</i> (Linnaeus, 1758)	INV13136	<a href="#">IBIHM707-21</a>	<a href="#">BOLD:AAD0313</a>	<a href="#">OR796831</a>
Megachilidae	<i>Osmia caeruleascens</i> (Linnaeus, 1758)	INV13362	<a href="#">IBIHM932-21</a>	<a href="#">BOLD:AAD0313</a>	<a href="#">OR796700</a>
Megachilidae	<i>Osmia caeruleascens</i> (Linnaeus, 1758)	INV13364	<a href="#">IBIHM934-21</a>	<a href="#">BOLD:AAD0313</a>	<a href="#">OR796822</a>
Megachilidae	<i>Osmia cephalotes</i> Morawitz, 1870	INV12584	<a href="#">IBIHM555-21</a>	<a href="#">BOLD:AEN9982'</a>	<a href="#">OR796902</a>
Megachilidae	<i>Osmia cyanoxantha</i> Pérez, 1879#	INV12387	<a href="#">IBIHM458-21</a>	<a href="#">BOLD:AEO1610'</a>	<a href="#">OR796769</a>
Megachilidae	<i>Osmia dimidiata</i> Morawitz, 1870	INV12583	<a href="#">IBIHM554-21</a>	<a href="#">BOLD:AEO3684</a>	<a href="#">OR796840</a>
Megachilidae	<i>Osmia emarginata</i> Lepeletier, 1841	INV12589	<a href="#">IBIHM560-21</a>	<a href="#">BOLD:AAE4126</a>	<a href="#">OR796550</a>
Megachilidae	<i>Osmia ferruginea</i> Latreille, 1811	INV12390	<a href="#">IBIHM461-21</a>	<a href="#">BOLD:AEN8200'</a>	<a href="#">OR796956</a>
Megachilidae	<i>Osmia gallarum</i> Spinola, 1808	INV12388	<a href="#">IBIHM459-21</a>	<a href="#">BOLD:AAO8736</a>	<a href="#">OR796919</a>

Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Megachilidae	<i>Osmia iberica</i> van der Zanden, 1987#	INV12581	<a href="#">IBIHM552-21</a>	<a href="#">BOLD:AEN8862'</a>	<a href="#">OR796166</a>
Megachilidae	<i>Osmia labialis</i> Pérez, 1879	INV12591	<a href="#">IBIHM562-21</a>	<a href="#">BOLD:ADY8979</a>	<a href="#">OR796634</a>
Megachilidae	<i>Osmia labialis</i> Pérez, 1879	INV13360	<a href="#">IBIHM930-21</a>	<a href="#">BOLD:ADY8979</a>	<a href="#">OR796812</a>
Megachilidae	<i>Osmia latreillei</i> (Spinola, 1806)	INV12397	<a href="#">IBIHM468-21</a>	<a href="#">BOLD:AAZ7870</a>	<a href="#">OR796226</a>
Megachilidae	<i>Osmia leaiana</i> (Kirby, 1802)	INV12433	<a href="#">IBIHM1286-22</a>	<a href="#">BOLD:AAI1846</a>	<a href="#">OR795900</a>
Megachilidae	<i>Osmia ligurica</i> Morawitz, 1868	INV12391	<a href="#">IBIHM462-21</a>	<a href="#">BOLD:ADH8891</a>	<a href="#">OR796157</a>
Megachilidae	<i>Osmia ligurica</i> Morawitz, 1868	INV13134	<a href="#">IBIHM705-21</a>	<a href="#">BOLD:ADH8891</a>	<a href="#">OR796542</a>
Megachilidae	<i>Osmia lunata</i> Benoist, 1928#	INV12594	<a href="#">IBIHM565-21</a>	<a href="#">BOLD:AEO3079'</a>	<a href="#">OR796181</a>
Megachilidae	<i>Osmia melanogaster</i> Spinola, 1808	INV12392	<a href="#">IBIHM463-21</a>	<a href="#">BOLD:AEN4264</a>	<a href="#">OR796787</a>
Megachilidae	<i>Osmia niveata</i> (Fabricius, 1804)	INV12399	<a href="#">IBIHM470-21</a>	<a href="#">BOLD:AAP2416</a>	<a href="#">OR796451</a>
Megachilidae	<i>Osmia niveata</i> (Fabricius, 1804)	INV13137	<a href="#">IBIHM708-21</a>	<a href="#">BOLD:AAP2416</a>	<a href="#">OR796054</a>
Megachilidae	<i>Osmia niveata</i> (Fabricius, 1804)	INV13138	<a href="#">IBIHM709-21</a>	<a href="#">BOLD:AAP2416</a>	<a href="#">OR796289</a>
Megachilidae	<i>Osmia niveata</i> (Fabricius, 1804)	INV13363	<a href="#">IBIHM933-21</a>	<a href="#">BOLD:AAP2416</a>	<a href="#">OR796743</a>
Megachilidae	<i>Osmia niveocincta</i> Pérez, 1879#	INV12394	<a href="#">IBIHM465-21</a>	<a href="#">BOLD:AEO5031'</a>	<a href="#">OR796088</a>
Megachilidae	<i>Osmia niveocincta</i> Pérez, 1879#	INV12432	<a href="#">IBIHM1285-22</a>	<a href="#">BOLD:AEO5031'</a>	<a href="#">OR796215</a>
Megachilidae	<i>Osmia rufohirta</i> Latreille, 1811	INV12396	<a href="#">IBIHM467-21</a>	<a href="#">BOLD:AEO0004'</a>	<a href="#">OR796661</a>
Megachilidae	<i>Osmia scutellaris</i> Morawitz, 1868	INV12428	<a href="#">IBIHM1281-22</a>	<a href="#">BOLD:AEJ4270</a>	<a href="#">OR795981</a>
Megachilidae	<i>Osmia scutellaris</i> Morawitz, 1868	INV12429	<a href="#">IBIHM1282-22</a>	<a href="#">BOLD:AEJ4270</a>	<a href="#">OR796066</a>
Megachilidae	<i>Osmia signata</i> Erichson, 1839	INV12395	<a href="#">IBIHM466-21</a>	<a href="#">BOLD:AEA2838</a>	<a href="#">OR796369</a>
Megachilidae	<i>Osmia signata</i> Erichson, 1839	INV13139	<a href="#">IBIHM710-21</a>	<a href="#">BOLD:AEA2838</a>	<a href="#">OR796012</a>
Megachilidae	<i>Osmia submicans</i> Morawitz, 1870	INV12385	<a href="#">IBIHM456-21</a>	<a href="#">BOLD:AAK5820</a>	<a href="#">OR796167</a>
Megachilidae	<i>Osmia submicans</i> Morawitz, 1870	INV13135	<a href="#">IBIHM706-21</a>	<a href="#">BOLD:AAK5820</a>	<a href="#">OR796821</a>
Megachilidae	<i>Osmia tergestensis</i> Ducke, 1897	INV12426	<a href="#">IBIHM1279-22</a>	<a href="#">BOLD:AES2567</a>	<a href="#">OR796151</a>
Megachilidae	<i>Osmia tergestensis</i> Ducke, 1897	INV12427	<a href="#">IBIHM1280-22</a>	<a href="#">BOLD:AES2567</a>	<a href="#">OR796693</a>
Megachilidae	<i>Osmia tricornis</i> Latreille, 1811	INV12587	<a href="#">IBIHM558-21</a>	<a href="#">BOLD:AEN7876</a>	<a href="#">OR796603</a>
Megachilidae	<i>Osmia unicomis</i> Pérez, 1895#	INV12430	<a href="#">IBIHM1283-22</a>	<a href="#">BOLD:AET6037'</a>	<a href="#">OR796119</a>
Megachilidae	<i>Osmia unicomis</i> Pérez, 1895#	INV12431	<a href="#">IBIHM1284-22</a>	<a href="#">BOLD:AET6037'</a>	<a href="#">OR796632</a>
Megachilidae	<i>Osmia versicolor</i> Latreille, 1811	INV12384	<a href="#">IBIHM455-21</a>	<a href="#">BOLD:AAZ7638</a>	<a href="#">OR796491</a>
Megachilidae	<i>Protosmia asensioi</i> Griswold & Parker, 1987#	INV12409	<a href="#">IBIHM1262-22</a>	<a href="#">BOLD:AET0069'</a>	<a href="#">OR796232</a>
Megachilidae	<i>Protosmia capitata</i> (Schletterer, 1889)#	INV12595	<a href="#">IBIHM566-21</a>	<a href="#">BOLD:AEO6065'</a>	<a href="#">OR796234</a>

Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Megachilidae	<i>Protosmia exenterata</i> (Pérez, 1895)#	INV12407	<a href="#">IBIHM1260-22</a>	<a href="#">BOLD:ACL7801</a>	<a href="#">OR796481</a>
Megachilidae	<i>Protosmia exenterata</i> (Pérez, 1895)#	INV12408	<a href="#">IBIHM1261-22</a>	<a href="#">BOLD:ACL7801</a>	<a href="#">OR796034</a>
Megachilidae	<i>Protosmia glutinosa</i> (Giraud, 1871)#	INV12405	<a href="#">IBIHM1258-22</a>	<a href="#">BOLD:AET0068'</a>	<a href="#">OR796626</a>
Megachilidae	<i>Protosmia glutinosa</i> (Giraud, 1871)#	INV12406	<a href="#">IBIHM1259-22</a>	<a href="#">BOLD:AET0068'</a>	<a href="#">OR796923</a>
Megachilidae	<i>Pseudoanthidium eximium</i> (Giraud, 1863)	INV12222	<a href="#">IBIHM293-21</a>	<a href="#">BOLD:AEO0467</a>	<a href="#">OR796544</a>
Megachilidae	<i>Pseudoanthidium melanurum</i> (Klug, 1832)	INV12223	<a href="#">IBIHM294-21</a>	<a href="#">BOLD:AEN8472'</a>	<a href="#">OR796397</a>
Megachilidae	<i>Pseudoanthidium reticulatum</i> (Mocsáry, 1884)	INV12226	<a href="#">IBIHM297-21</a>	<a href="#">BOLD:AEO1983</a>	<a href="#">OR796518</a>
Megachilidae	<i>Pseudoanthidium scapulare</i> (Latreille, 1809)	INV12224	<a href="#">IBIHM295-21</a>	<a href="#">BOLD:AAK2762</a>	<a href="#">OR796572</a>
Megachilidae	<i>Pseudoanthidium scapulare</i> (Latreille, 1809)	INV13351	<a href="#">IBIHM921-21</a>	<a href="#">BOLD:AAK2762</a>	<a href="#">OR796139</a>
Megachilidae	<i>Pseudoanthidium scapulare</i> (Latreille, 1809)	INV13352	<a href="#">IBIHM922-21</a>	<a href="#">BOLD:AAK2762</a>	<a href="#">OR796446</a>
Megachilidae	<i>Pseudoanthidium stigmaticorne</i> (Dours, 1873)	INV12225	<a href="#">IBIHM296-21</a>	<a href="#">BOLD:ABV1020</a>	<a href="#">OR795943</a>
Megachilidae	<i>Rhodanthidium infuscatum</i> (Erichson, 1839)	INV12233	<a href="#">IBIHM304-21</a>	<a href="#">BOLD:AEO5272</a>	<a href="#">OR796410</a>
Megachilidae	<i>Rhodanthidium septemdentatum</i> (Latreille, 1809)	INV12232	<a href="#">IBIHM303-21</a>	<a href="#">BOLD:AAV5674</a>	<a href="#">OR796686</a>
Megachilidae	<i>Rhodanthidium siculum</i> (Spinola, 1838)	INV12230	<a href="#">IBIHM301-21</a>	<a href="#">BOLD:AEA0375</a>	<a href="#">OR796863</a>
Megachilidae	<i>Rhodanthidium sticticum</i> (Fabricius, 1787)	INV12231	<a href="#">IBIHM302-21</a>	<a href="#">BOLD:AEH2459</a>	<a href="#">OR796679</a>
Megachilidae	<i>Stelis breviscula</i> (Nylander, 1848)	INV12026	<a href="#">IBIHM097-21</a>	<a href="#">BOLD:ACE4655</a>	<a href="#">OR796532</a>
Megachilidae	<i>Stelis breviscula</i> (Nylander, 1848)	INV13357	<a href="#">IBIHM927-21</a>	<a href="#">BOLD:ACE4655</a>	<a href="#">OR796105</a>
Megachilidae	<i>Stelis nasuta</i> (Latreille, 1809)	INV12000	<a href="#">IBIHM071-21</a>	<a href="#">BOLD:AEC4732</a>	<a href="#">OR796907</a>
Megachilidae	<i>Stelis ortizi</i> M.Schwarz & Gusenleitner, 2010#	INV12023	<a href="#">IBIHM094-21</a>	<a href="#">BOLD:AEO2242'</a>	<a href="#">OR796249</a>
Megachilidae	<i>Stelis phaeoptera</i> (Kirby, 1802)	INV12024	<a href="#">IBIHM095-21</a>	<a href="#">BOLD:AAV9796</a>	<a href="#">OR796535</a>
Megachilidae	<i>Stelis punctulatissima</i> (Kirby, 1802)	INV12025	<a href="#">IBIHM096-21</a>	<a href="#">BOLD:AAJ4972</a>	<a href="#">OR795972</a>
Megachilidae	<i>Trachusa byssina</i> (Panzer, 1798)	INV12228	<a href="#">IBIHM299-21</a>	<a href="#">BOLD:AAF1587</a>	<a href="#">OR796792</a>
Megachilidae	<i>Trachusa interrupta</i> (Fabricius, 1781)	INV12229	<a href="#">IBIHM300-21</a>	<a href="#">BOLD:ACW1366</a>	<a href="#">OR796154</a>
Megachilidae	<i>Trachusa laeiventris</i> (Dours, 1873)	INV12227	<a href="#">IBIHM298-21</a>	<a href="#">BOLD:AEN7816</a>	<a href="#">OR796437</a>
Melittidae	<i>Dasypoda cingulata</i> Erichson, 1835	INV12480	<a href="#">IBIHM1333-22</a>	<a href="#">BOLD:ACK7071</a>	<a href="#">OR796071</a>
Melittidae	<i>Dasypoda cingulata</i> Erichson, 1835	INV12481	<a href="#">IBIHM1334-22</a>	<a href="#">BOLD:ACK7071</a>	<a href="#">OR796577</a>

Family	Species	IBI code	BOLD code	BOLD BIN	GenBank
Melittidae	<i>Dasypoda cingulata</i> Erichson, 1835	INV13148	<a href="#">IBIHM719-21</a>	<a href="#">BOLD:ACK7071</a>	<a href="#">OR796207</a>
Melittidae	<i>Dasypoda crassicornis</i> Friese, 1896	INV12366	<a href="#">IBIHM437-21</a>	<a href="#">BOLD:AEO3711</a>	<a href="#">OR795961</a>
Melittidae	<i>Dasypoda crassicornis</i> Friese, 1896	INV13311	<a href="#">IBIHM881-21</a>	<a href="#">BOLD:AEO3711</a>	<a href="#">OR796874</a>
Melittidae	<i>Dasypoda crassicornis</i> Friese, 1896	INV13313	<a href="#">IBIHM883-21</a>	<a href="#">BOLD:AEO3711</a>	<a href="#">OR796331</a>
Melittidae	<i>Dasypoda dusmeti</i> Quilis, 1928	INV12363	<a href="#">IBIHM434-21</a>	<a href="#">BOLD:ACK5966</a>	<a href="#">OR796505</a>
Melittidae	<i>Dasypoda dusmeti</i> Quilis, 1928	INV13144	<a href="#">IBIHM715-21</a>	<a href="#">BOLD:ACK5966</a>	<a href="#">OR796584</a>
Melittidae	<i>Dasypoda dusmeti</i> Quilis, 1928	INV13152	<a href="#">IBIHM723-21</a>	<a href="#">BOLD:ACK5966</a>	<a href="#">OR796682</a>
Melittidae	<i>Dasypoda hirtipes</i> (Fabricius, 1793)	INV12365	<a href="#">IBIHM436-21</a>	<a href="#">BOLD:AEO2254'</a>	<a href="#">OR796810</a>
Melittidae	<i>Dasypoda hirtipes</i> (Fabricius, 1793)	INV13145	<a href="#">IBIHM716-21</a>	<a href="#">BOLD:AEO2254'</a>	<a href="#">OR796001</a>
Melittidae	<i>Dasypoda hirtipes</i> (Fabricius, 1793)	INV13151	<a href="#">IBIHM722-21</a>	<a href="#">BOLD:AEO2254'</a>	<a href="#">OR796845</a>
Melittidae	<i>Dasypoda morotei</i> Quilis, 1928	INV12362	<a href="#">IBIHM433-21</a>	<a href="#">BOLD:AEN9179</a>	<a href="#">OR796897</a>
Melittidae	<i>Dasypoda morotei</i> Quilis, 1928	INV12478	<a href="#">IBIHM1331-22</a>	<a href="#">BOLD:AEN9179</a>	<a href="#">OR796496</a>
Melittidae	<i>Dasypoda morotei</i> Quilis, 1928	INV12479	<a href="#">IBIHM1332-22</a>	<a href="#">BOLD:AEN9179</a>	<a href="#">OR795926</a>
Melittidae	<i>Dasypoda morotei</i> Quilis, 1928	INV13312	<a href="#">IBIHM882-21</a>	<a href="#">BOLD:AEN9179</a>	<a href="#">OR796109</a>
Melittidae	<i>Dasypoda pyrotrichia</i> Förster, 1855	INV12476	<a href="#">IBIHM1329-22</a>	<a href="#">BOLD:AES3843'</a>	<a href="#">OR796042</a>
Melittidae	<i>Dasypoda radchenkoi</i> Ghisbain & Wood, 2023	INV12361	<a href="#">IBIHM432-21</a>	<a href="#">BOLD:AEO4511'</a>	<a href="#">OR796794</a>
Melittidae	<i>Dasypoda radchenkoi</i> Ghisbain & Wood, 2023	INV12477	<a href="#">IBIHM1330-22</a>	<a href="#">BOLD:AEO4511'</a>	<a href="#">OR796019</a>
Melittidae	<i>Dasypoda visnaga</i> (Rossi, 1790)	INV12367	<a href="#">IBIHM438-21</a>	<a href="#">BOLD:AEO0075</a>	<a href="#">OR796650</a>
Melittidae	<i>Macropis fulvipes</i> (Fabricius, 1804)	INV12360	<a href="#">IBIHM431-21</a>	<a href="#">BOLD:AAJ1462</a>	<a href="#">OR795995</a>
Melittidae	<i>Macropis fulvipes</i> (Fabricius, 1804)	INV13321	<a href="#">IBIHM891-21</a>	<a href="#">BOLD:AAJ1462</a>	<a href="#">OR796427</a>
Melittidae	<i>Melitta leporina</i> (Panzer, 1799)	INV12368	<a href="#">IBIHM439-21</a>	<a href="#">BOLD:AAF4411</a>	<a href="#">OR796838</a>

The BOLD BIN system uses algorithms to cluster sequences into operational taxonomic units (OTUs) that closely correspond to species (Ratnasingham and Hebert 2013). A total of 535 BINs were retrieved by BOLD (Ratnasingham and Hebert 2007) and 112 BINs are unique to our dataset (Table 1, Suppl. material 1). Sequences from two specimens were not attributed to BINs as their sequences were only 418 or 326 base pairs in length (Suppl. material 1). To our knowledge, this is the first study to systematically focus on DNA barcoding bees in the Iberian Peninsula. This study shows that DNA barcode sequences, based on the COI mitochondrial gene fragment, can be highly useful in identifying Iberian bee samples to species level with 486 of the 514 species (94.9%) assigned to unique BINs. However, 27 species were assigned to at least two BINs (Table 2); these cases are discussed below.

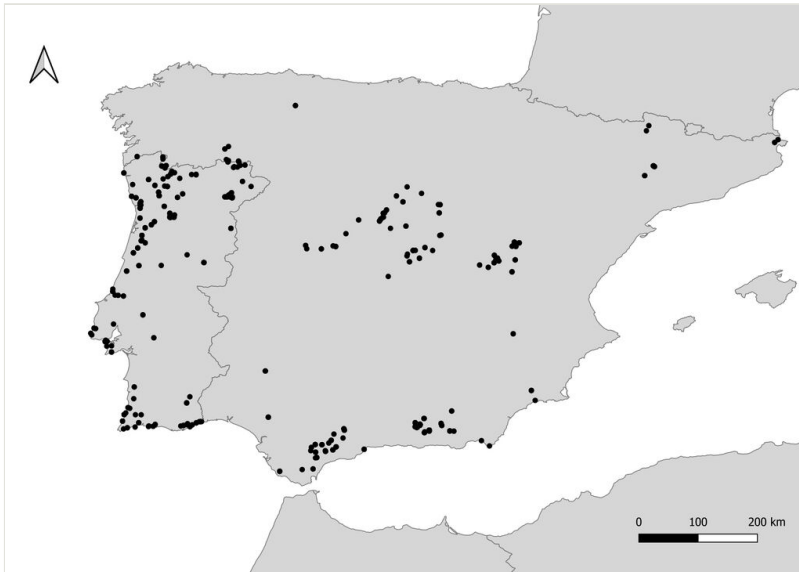


Figure 1. [doi](#)

Sampling localities of the bees specimens analysed in this study.

While it is possible to consider that the taxonomy of Iberian Bees is currently better understood than in its recent past and the number of species currently known is close to the real number of species of the region, there are still some groups that require further research. High genetic diversity within a nominal species might be a signal of unresolved taxonomy, cryptic diversity or a signature of evolutionary history of the group that lead to the differentiation of isolated populations within the same species. These phenomena are well known for many organisms in the Iberian Peninsula as a result of the occurrence of several refugia within the Peninsula itself, referred to as “refugia within refugia” (Gómez and Lunt 2007, Abellán and Svenning 2014, de Sousa et al. 2023). Therefore, several species that present a rather homogeneous genetic signature across their European ranges can exhibit more than one genetically differentiated population within the Iberian Peninsula, potentially resulting in the classification of specimens in more than one BIN.

In this context, it is important to note immediately that the placement of nominal species into multiple BINs can only be considered an initial step in the recognition of potential overlooked or cryptic diversity. There are multiple cases within the global (e.g. Gibbs (2018)) or European (Gueuning et al. 2020) bee faunas where barcodes cannot resolve taxonomic issues alone and each problem must be dealt with on a case-by-case basis due to the variation in mechanisms underpinning each species or species-complex.

Overall, our results confirm that a DNA barcode library is an essential tool for incorporating DNA metabarcoding and environmental DNA techniques in biodiversity monitoring and to unveil the networks of species interactions that drive ecological and evolutionary dynamics in the ecosystems. Our results constitute a first and major step in the construction of a DNA barcode database of Iberian bee species.





Figure 2.

Examples of the diversity of bee species included here as part of the DNA barcode dataset for Iberian Bees. All photos by Thomas Wood.

a: *Andrena leucolippa* Pérez, 1895 (Andrenidae) - BIN URI [BOLD:AE02473](https://doi.org/10.26008/1033-BOLD:AE02473). [doi](https://doi.org/10.26008/1033-BOLD:AE02473)

b: *Anthophora podagra* Lapeletier, 1841 (Apidae) - BIN URI [BOLD:AE02867](https://doi.org/10.26008/1033-BOLD:AE02867). [doi](https://doi.org/10.26008/1033-BOLD:AE02867)

c: *Hoplitis bisulca* (Gerstäcker, 1869) (Megachilidae) - BIN URI [BOLD:AE00529](https://doi.org/10.26008/1033-BOLD:AE00529). [doi](https://doi.org/10.26008/1033-BOLD:AE00529)

d: *Pseudoanthidium eximium* (Giraud, 1863) (Megachilidae) - BIN URI [BOLD:AE00467](https://doi.org/10.26008/1033-BOLD:AE00467).

[doi](https://doi.org/10.26008/1033-BOLD:AE00467)

e: *Dasygaster visnaga* (Rossi, 1790) (Melittidae) - BIN URI [BOLD:AE00075](https://doi.org/10.26008/1033-BOLD:AE00075). [doi](https://doi.org/10.26008/1033-BOLD:AE00075)

f: *Pasites maculatus* Jurine, 1807 (Apidae) - BIN URI [BOLD:AAL3976](https://doi.org/10.26008/1033-BOLD:AAL3976). [doi](https://doi.org/10.26008/1033-BOLD:AAL3976)

### Outstanding taxonomic uncertainties

As noted above, 27 nominal species were assigned to at least two BINs. The greatest number of cases were found in the genera *Andrena* (six species), *Lasioglossum* (five



species) and *Nomada* (five species), which is not surprising since these are the three largest genera in Iberia and those that present the most difficult taxonomy.

### ***Amegilla albigena* (Lepeletier, 1841)**

Three specimens of *Amegilla albigena* are separated in two BINs, one that we consider to be the true *A. albigena* ([BOLD:AEL4482](#)) (Wood & Rasmont, *additional unpublished data*) and the other considered to be *A. talaris* (Pérez, 1895) ([BOLD:AEO2968](#)) that is not currently recognised as a species (Ghisbain & Rosa et al. 2023), but is clearly separated genetically from *Amegilla albigena* by a maximum genetic distance of 14.02%. In the key of Ortiz-Sánchez and Jiménez-Rodríguez (1991), specimens of *A. talaris* key out as *A. fasciata* (Fabricius, 1775). True *A. fasciata* (sequenced here, [BOLD:AEN9315](#)) keys out as *A. andresi* Friese, 1914, but this species appears to be absent from Iberia (Wood & Rasmont, *unpublished data*). The formal elevation and recognition of *A. talaris* as a good species will be carried out in a future work; both *A. albigena* and *A. talaris* are widespread throughout Iberia.

Table 2.

Bee species from Iberia that were assigned to two or more BINs. Percentage of divergence represents the maximum sequence distance between specimens from our dataset in the BINs nominally comprising a species.

No.	Species	No. of BINs	% Divergence	Sympatric	Geographic origin	BIN
1	<i>Amegilla albigena</i> (Lepeletier, 1841)	2	14.02	No	Spain (Murcia)	<a href="#">BOLD:AEL4482</a>
					Portugal (Castelo Branco), Spain (Granada)	<a href="#">BOLD:AEO2968</a>
2	<i>Andrena ampla</i> Warncke, 1967	2	2.81	No	Portugal (Aveiro)	<a href="#">BOLD:ABA2611</a>
					Spain (Ávila)	<a href="#">BOLD:AES0278</a>
3	<i>Andrena hesperia</i> Smith, 1853	2	10.20	Yes	Portugal (Beja)	<a href="#">BOLD:AEN4997</a>
					Portugal (Beja; Castelo Branco)	<a href="#">BOLD:AEO5653</a>
4	<i>Andrena limata</i> Smith, 1853	2	3.77	Yes	Portugal (Castelo Branco), Spain (Girona)	<a href="#">BOLD:AAE1815</a>
					Portugal (Castelo Branco)	<a href="#">BOLD:AEX3903</a>
5	<i>Andrena morio</i> Brullé, 1832	2	2.64	Yes	Portugal (Faro, Castelo Branco)	<a href="#">BOLD:AAJ2141</a>
					Portugal (Castelo Branco)	<a href="#">BOLD:AER2061</a>

No.	Species	No. of BINs	% Divergence	Sympatric	Geographic origin	BIN
6	<i>Andrena propinqua</i> Schenck, 1853	2	5.41	Yes	Portugal (Castelo Branco, Coimbra), Spain (Málaga)	<a href="#">BOLD:AAJ2115</a>
					Portugal (Aveiro, Castelo Branco, Coimbra)	<a href="#">BOLD:AEN9473</a>
7	<i>Andrena russula</i> Lepeletier, 1841	2	5.60	No	Portugal (Castelo Branco, Santarém)	<a href="#">BOLD:AAZ1205</a>
					Portugal (Faro, Setubal)	<a href="#">BOLD:AEN8931</a>
8	<i>Anthidium diadema</i> Latreille, 1809	2	2.81	Yes	Spain (Madrid)	<a href="#">BOLD:AER0584</a>
					Spain (Madrid)	<a href="#">BOLD:AET3713</a>
9	<i>Anthophora plumipes</i> (Pallas, 1772)	2	5.86	No	Portugal (Coimbra), Spain (Cádiz)	<a href="#">BOLD:AEN8725</a>
					Portugal (Braga)	<a href="#">BOLD:AEO1358</a>
10	<i>Chelostoma campanularum</i> (Kirby, 1802)	2	4.25	No	Portugal (Viseu)	<a href="#">BOLD:AAB1123</a>
					Spain (Granada, Málaga)	<a href="#">BOLD:AET7155</a>
11	<i>Colletes hylaeiformis</i> Eversmann, 1852	2	4.70	No	Portugal (Castelo Branco)	<a href="#">BOLD:AEU8542</a>
					Spain (Ávila)	<a href="#">BOLD:AEW0951</a>
12	<i>Flavipanurgus granadensis</i> (Warncke, 1987)	2	5.93	No	Spain (Cádiz)	<a href="#">BOLD:AEO4846</a>
					Spain (Murcia)	<a href="#">BOLD:AEO4847</a>
13	<i>Halictus maculatus</i> Smith, 1848	2	3.60	No	Portugal (Porto)	<a href="#">BOLD:ACH4344</a>
					Spain (Granada)	<a href="#">BOLD:AEO0160</a>
14	<i>Hoplitis ravouxi</i> (Pérez, 1902)	2	2.64	No	Spain (Teruel)	<a href="#">BOLD:AAI1840</a>
					Spain (Málaga)	<a href="#">BOLD:AET2330</a>
15	<i>Hylaeus angustatus</i> (Schenck, 1861)	2	6.84%	No	Spain (León, Teruel)	<a href="#">BOLD:AAK3477</a>
					Portugal (Castelo Branco, Viseu)	<a href="#">BOLD:AEN9677</a>

No.	Species	No. of BINs	% Divergence	Sympatric	Geographic origin	BIN
16	<i>Lasioglossum calceatum</i> (Scopoli, 1763)	2	6.55	No	Portugal (Aveiro, Viana do Castelo)	<a href="#">BOLD:AAB0353</a>
					Spain (Málaga)	<a href="#">BOLD:AEO1453</a>
17	<i>Lasioglossum leucozonium</i> (Schrank, 1781)	2	6.42	Yes	Portugal (Aveiro)	<a href="#">BOLD:AAA2322</a>
					Portugal (Aveiro, Leiria), Spain (Granada)	<a href="#">BOLD:AEN9620</a>
18	<i>Lasioglossum malachurum</i> (Kirby, 1802)	2	13.66	No	Spain (Málaga)	<a href="#">BOLD:AAE5496</a>
					Portugal (Aveiro)	<a href="#">BOLD:AEO8786</a>
19	<i>Lasioglossum transitorium</i> (Schenck, 1868)	2	2.01	No	Portugal (Aveiro), Spain (Cuenca, Granada)	<a href="#">BOLD:AEM8844</a>
					Spain (Lleida)	<a href="#">BOLD:AER6557</a>
20	<i>Lasioglossum xanthopus</i> (Kirby, 1802)	2	2.01	No	Spain (Granada)	<a href="#">BOLD:AAE1789</a>
					Portugal (Castelo Branco)	<a href="#">BOLD:AEW1421</a>
21	<i>Megachile albisecta</i> (Klug, 1817)	2	2.17	No	Spain (Granada)	<a href="#">BOLD:AEO5749</a>
					Portugal (Bragança)	<a href="#">BOLD:AEO5750</a>
22	<i>Nomada basalis</i> Herrich-Schäffer, 1839	3	5.71	No	Portugal (Castelo Branco)	<a href="#">BOLD:AEK6178</a>
					Spain (Cuenca)	<a href="#">BOLD:AEN3462</a>
					Portugal (Lisbon), Spain (Madrid, Málaga)	<a href="#">BOLD:AEO4155</a>
23	<i>Nomada distinguenda</i> Morawitz, 1874	2	3.60	No	Portugal (Aveiro)	<a href="#">BOLD:ACY0250</a>
					Portugal (Bragança)	<a href="#">BOLD:AET5764</a>
24	<i>Nomada femoralis</i> Morawitz, 1869	2	7.05	No	Spain (Granada)	<a href="#">BOLD:AAI2830</a>
					Portugal (Aveiro, Faro), Spain (Ávila)	<a href="#">BOLD:AEO6156</a>
25	<i>Nomada glaucopsis</i> Pérez, 1890	2	3.11	No	Portugal (Castelo Branco)	<a href="#">BOLD:AEJ1237</a>

No.	Species	No. of BINs	% Divergence	Sympatric	Geographic origin	BIN
					Spain (Granada, Guadalajara, Madrid, Málaga)	<a href="#">BOLD:AEO3423</a>
26	<i>Nomada integra</i> Brullé, 1832	3	3.43	No	Spain (Ávila)	<a href="#">BOLD:ABZ1320</a>
					Portugal (Castelo Branco), Spain (Málaga)	<a href="#">BOLD:AEN8926</a>
					Spain (Segovia)	<a href="#">BOLD:AEO3904</a>
27	<i>Sphecodes alternatus</i> Smith, 1853	2	7.97	Yes	Portugal (Castelo Branco), Spain (Madrid, Granada)	<a href="#">BOLD:ACD7802</a>
					Portugal (Castelo Branco)	<a href="#">BOLD:AEO6580</a>

### ***Andrena ampla* Warncke, 1967**

The BOLD system identified two BINs for *Andrena ampla*, [BOLD:ABA2611](#) from northern Portugal and [BOLD:AES0278](#) from central Spain. The status of the species within the *Andrena proxima*-group (including *A. ampla*, the only member of the group present in Iberia) has recently been conclusively resolved in Central Europe (McLaughlin et al. 2022). The BIN [BOLD:ABA2611](#) containing the sequence from northern Portugal is the typical Central European BIN for *A. ampla* containing around 35 other sequences from Morocco, Spain (Granada, not sequenced in this study, published in dataset attached to Wood (2023)), France, Switzerland, Germany, Italy and the United Kingdom. The sequence from central Spain falling into BIN [BOLD:AES0278](#) is unique and contains only this sequence. Whilst the genetic distance between the two specimens presented here (central Spain and northern Portugal) is 2.81%, the smallest distance between the sequence from central Spain and other members of the *A. ampla* BIN [BOLD:AES0278](#) is 1.68%.

Since the overall geographic distribution of the typical *A. ampla* BIN ([BOLD:AES0278](#)) encompasses that of the unique specimen from central Spain and there do not appear to be morphological differences between specimens from central Spain and elsewhere, this observed genetic distance could simply be variation. Alternatively, the unique sequence could be a NUMT (nuclear-embedded mitochondrial DNA sequence) and, thus, does not represent a genuine mitochondrial sequence. Given these points, specimens from central Spain are considered to be conspecific with *A. ampla* pending further study.

### ***Andrena hesperia* Smith, 1853**

Four sequences of this widely-distributed species were generated. Two sequences from southern Portugal (Beja) fell into [BOLD:AEN4997](#), which also includes a sequence from south-western Morocco ([WPATW632-22](#)). These sequences were strongly separated (maximum genetic distance of 10.20%) from two sequences from southern (Beja) and

central (Castelo Branco) Portugal which fell into [BOLD:AE05653](#), with this BIN also containing three sequences from Spain (Granada, Málaga, Toledo) generated by Wood (2023). Barcoding members of the subgenus *Chrysandrena* Hedicke, 1933, to which *Andrena hesperia* belongs, does not appear to be straightforward, with multiple mitochondrial lineages present in addition to those presented here (Wood, unpublished data). The three specimens from southern Portugal (Beja) were collected from the same site on the same day, with two mitochondrial lineages present and no apparent morphological differences. Further study is required, but based on morphology, the judgement is made that, at the present time, there is no justification to split up *A. hesperia*.

### ***Andrena limata* Smith, 1853 and *A. thoracica* (Kirby, 1802)**

*Andrena* (*Melandrena*) species often present complex COI data (Wood 2023). Specimens identified in our study as *Andrena limata* and *Andrena thoracica* were found to share a BIN ([BOLD:AAE1815](#)) and *A. limata* sequences were also placed in an additional BIN ([BOLD:AEX3903](#)). These two BINs were separated by a maximum genetic distance of 3.77%. Though we did not sequence any Iberian specimens of *A. nitida* (Müller, 1766), these three species combined present serious taxonomic problems regarding their consistent recognition across their range due to variable expression of morphological characters. Analysis of additional sequences from inside and outside of Iberia (Wood 2023) identified five mitochondrial clades covering these three nominal species, one for *A. thoracica*, one for *A. nitida* and three for *A. limata*.

From the data we present here, the *A. limata/A. thoracica* BIN [BOLD:AAE1815](#) contains sequences from Portugal, Spain, Italy, Germany, Austria, Poland, Romania, Turkey, Lebanon, Israel and Kazakhstan and corresponds to the *limata* #1 + *thoracica* lineages of Wood (2023). The *A. limata* BIN [BOLD:AEX3903](#) contains sequences from Morocco, Portugal, Spain and France and corresponds to the *limata* #2 lineage of Wood (2023). Though none of the data we presented fell into this BIN, an additional BIN [BOLD:AEW6788](#) is available containing *A. limata/A. nitida* sequences from Spain, France, Switzerland, United Kingdom, Belgium, the Netherlands, Germany, Austria, Finland and Russia and corresponding to the *limata* #3 + *nitida* lineages of Wood (2023). The five clades of Wood (2023), therefore, fall into three BINs, but without agreement with the existing morphological concepts.

In this context, the results presented here fit into this broader pattern of complex COI data. It is clear that more powerful genetic techniques are required to resolve species boundaries in this difficult group of species and, thus, no action is taken here.

### ***Andrena morio* Brullé, 1832**

Sequences of *Andrena morio* produced two BINs, with specimens from central Portugal (Castelo Branco) falling into both BINs, which were minimally separated by a maximum genetic distance of 2.64%. *Andrena morio* produces a range of barcodes, with a broad species concept followed by Wood (2023) who synonymised the predominantly Iberian *A. hispania* Warncke, 1967 with it. The genetic distances reported here are considered to

represent variation when considered across the entire range of *A. morio* and the genetic differentiation that it presents (Wood 2023).

### ***Andrena propinqua* Schenck, 1853**

*Andrena propinqua* has been a somewhat controversial taxon and has been placed either in synonymy with or as a subspecies of *A. dorsata* (Kirby, 1802) in the past. The current evidence supports its species status, based on analysis of Ultra-conserved Elements (Gueuning et al. 2020), as barcodes alone are insufficient to allow for consistent separation. Sequences from central Portugal (Castelo Branco and Coimbra) and southern Spain (Málaga) fell into [BOLD:AAJ2115](#) which contains a mixture of *A. dorsata* and *A. propinqua* sequences from across Europe, whereas sequences from central and northern Portugal (Aveiro, Castelo Branco, Coimbra) fell into [BOLD:AEN9473](#) which currently contains five sequences from Iberia only. The two BINs were separated by a maximum genetic distance of 5.41%. Based on morphological analysis, *A. dorsata* is restricted in Iberia to northern Spain, from Galicia across the Cantabrian mountains to the Pyrenees (Wood 2023). Given the complexity present, no taxonomic action is taken, as these variable barcodes are considered to represent only variation, following the study of Gueuning et al. (2020).

### ***Andrena russula* Lapeletier, 1841**

Praz et al. (2022) recently resolved many classification issues within the subgenus *Taeniandrena* Hedicke, 1933, including for *Andrena russula*. Sequences of the true *A. russula* were generated from central Portugal (Castelo Branco, Santarém), falling into [BOLD:AAZ1205](#), along with sequences from Portugal, Spain, Morocco and Italy. More broadly, these sequences correspond to the *A. russula* of Praz et al. (2022) and the *A. russula* #1 of Wood (2023). However, in southern Portugal (Faro, Setubal), this mitochondrial lineage is replaced by [BOLD:AEN8931](#) which is strongly separated from the previous BIN (maximum genetic distance of 5.60%) and which conforms to the "*sp. nov. 2*" lineage of Praz et al. (2022) and the *A. russula* #2 lineage of Wood (2023). Morphologically, there are no apparent differences between the two lineages. Interestingly, [BOLD:AEN8931](#) contains four currently unpublished sequences from France. Taxonomic revision is required to determine how to recognise this divergent mitochondrial lineage morphologically, as it likely represents yet another cryptic and undescribed *Taeniandrena* species in the west Mediterranean (Wood et al. 2021, Wood 2022, Praz et al. 2022). Given the occurrence in France, this lineage should be present also in southern and eastern Spain. No concrete action is taken here.

### ***Anthidium diadema* Latreille, 1809**

Two specimens of *Anthidium diadema*, both from Madrid, were separated by a genetic distance of 2.81% and consequently fell into separate BINs. The two specimens were male and female, so a comparison of morphological differences is not possible. No further action is taken here without further genetic sampling.

***Anthophora plumipes* (Pallas, 1772)**

*Anthophora plumipes* is the most abundant anthophorine species in the West Palaearctic. Specimens from central Portugal (Coimbra) and southern Spain (Cádiz) fell into [BOLD:AEN8725](#) which so far contains sequences from Iberia only. A specimen from northern Portugal (Braga) produced a sequence which fell into [BOLD:AEO1358](#) which contains sequences from across the West Palaearctic. Whilst the sequences were moderately separated (maximum genetic distance of 5.86%), in a broader analysis of samples of *A. plumipes* from across the West Palaearctic (Wood, Boustani & Rasmont, *unpublished data*), no clear geographically consistent clades could be observed. Moreover, the morphology of specimens was consistent across this range, with variation predominantly comprising hair colour. A broad species concept is, therefore, retained for *A. plumipes*.

***Chelostoma campanularum* (Kirby, 1802)**

Two specimens from northern Portugal (Viseu) fell into [BOLD:AAB1123](#) which contains typical *Chelostoma campanularum* sequences from across Europe (and Canada where the species is introduced). However, two specimens from southern Spain (Granada, Málaga) fell into [BOLD:AET7155](#) which was separated by a maximum genetic distance of 4.25%. These divergent sequences merit further study, as the taxonomy of the small-bodied *Chelostoma* species around *C. campanularum* (subgenus *Foveosmia*) is challenging; no action is taken at the present time.

***Colletes hylaeiformis* Eversmann, 1852**

Specimens from central Portugal (Castelo Branco, [BOLD:AEU8542](#)) and central Spain (Ávila, [BOLD:AEW0951](#)) were assigned to different BINS (maximum genetic distance 4.70%). Both BINS contained only a single sequence and neither BIN matched [BOLD:AAJ7533](#) which is the BIN for *Colletes hylaeiformis* sequences from Austria, France, Germany and Hungary. Further study is required to establish if Iberian material is simply genetically differentiated due to isolation by distance or whether these differences are more substantive.

***Flavipanurgus granadensis* (Warncke, 1987)**

*Flavipanurgus granadensis* was described with a *locus typicus* in the Sierra Nevada (Granada) in southern Spain. Sequences from south-western Spain (Cádiz, [BOLD:AEO4846](#)) and south-eastern Spain (Murcia, [BOLD:AEO4847](#)) fell into distinct BINS and were separated by a maximum genetic distance of 5.93%. The [BOLD:AEO4846](#) BIN additionally contains three sequences from Málaga and Cuenca (Wood & Boustani, *unpublished data*). Given the taxonomic complexity within *Flavipanurgus* (Cross and Wood 2018), it is not impossible that the specimen from Murcia represents an additional cryptic species, but dedicated study is necessary, as well as genotyping the population present on the Sierra Nevada.



***Halictus maculatus* Smith, 1848**

*Halictus maculatus* is a widespread species and a sequence from northern Portugal (Porto) fell into [BOLD:ACH4344](#) which contains sequences from Austria, France, Italy and Russia. However, a sequence from southern Spain (Granada) fell into [BOLD:AEO0160](#) which is a unique BIN, separated by a maximum genetic distance of 3.6%. The specimen is a female and it is not impossible that it represents the Spanish endemic species *H. toparensis* Ortiz-Sánchez & Pauly, 2017 which was described from a single male from southern Spain (Almería) and which is morphologically close to *H. maculatus* (Ortiz-Sánchez and Pauly 2017). This species has recently been found to be more widespread in central Spain (Álvarez Fidalgo et al. 2023) and so its presence also in Granada is possible. Further barcoding of *H. toparensis* males is required in order to definitively associate the female sex for this species. It should also be noted that none of our material fell into [BOLD:AA5383](#) which is the principal European BIN for *H. maculatus* (by number of sequences and geographical distribution), containing sequences from Austria, France, Italy, Germany and Switzerland. Further study is required.

***Hoplitis ravouxi*(Pérez, 1902)**

*Hoplitis ravouxi* is a widespread European species. A sequence from eastern Spain (Teruel, [BOLD:AAI1840](#)) fell into a BIN with sequences from France and Germany. A sequence from southern Spain (Málaga, [BOLD:AET2330](#)) was separated by a maximum genetic distance of 2.64%, with the resulting BIN being unique. Further study is required, as this southern sequence may simply represent separation by distance.

***Hylaeus angustatus*(Schenck, 1861)**

Four specimens of *Hylaeus angustatus* were separated in two BINs, one that we consider to be the true *H. angustatus* ([BOLD:AAK3477](#)) containing specimens from northern and eastern Spain (León, Teruel, as well as other sequences from France, Italy, Germany and Austria) and the other containing specimens from Portugal (Castelo Branco, Viseu; BIN known from Iberia only) considered to be what was reported from Iberia as *H. angustatus punctifrons* (Pérez, 1903) ([BOLD:AEN9677](#)) that is not currently recognised at the species level (Ghisbain & Rosa et al. 2023). However, this BIN was strongly separated genetically from *Hylaeus angustatus* by a high genetic distance of 6.84%. *Hylaeus angustatus* is a morphologically and genetically very variable species that most probably represents a species complex currently including two described species, *H. angustatus* and *H. mariannae* Theunert, 2013, this latter species being represented by an additional highly divergent BIN (Le Divelec, *unpublished data*) and which cannot be associated with Iberian material morphologically or genetically. The morphological boundaries of the two Iberian forms of *H. angustatus* are still unclear and further work is needed to clarify the taxonomy and nomenclature of this species group.

***Lasioglossum calceatum* (Scopoli, 1763)**

For this extremely common and widespread species, sequences from northern Portugal (Aveiro, Viana do Castelo, [BOLD:AAB0353](#)) fell into the typical BIN for this species with

hundreds of sequences from across the Palaearctic. However, a sequence from southern Spain (Málaga, [BOLD:AEO1453](#)) was placed in a unique BIN which was actually genetically closer to *L. albipes* (Fabricius, 1781). This BIN was separated from our typical *L. calceatum* BIN by a maximum genetic distance of 6.55%. Both *L. calceatum* and *L. albipes* are very rare in southern Iberia (Ortiz-Sánchez and Pauly 2017) and are more or less restricted to mountains. The specimen producing the unique BIN was collected at high altitude in the Sierra de las Nieves (between 1200 and 1600 m) and may represent an isolated population of *L. calceatum* or perhaps an undescribed species. Further study is required.

***Lasioglossum leucozonium* (Schrank, 1781) and *Lasioglossum leucozonium cedri* Ebmer, 1976**

*Lasioglossum leucozonium* is a widespread Palaearctic species and a sequence from northern Portugal (Aveiro, [BOLD:AAA2322](#)) fell into the typical *L. leucozonium* BIN with hundreds of sequences from Europe to Central Asia, as well as North America where it is introduced. However, sequences from northern and central Portugal (Aveiro, Leiria) and southern Spain (Granada) fell into [BOLD:AEN9620](#) which contains sequences from Portugal, Spain and Morocco. This BIN was separated by a maximum genetic distance of 6.42% and represents the taxon ssp. *cedri* which is not currently recognised at species level. A revision of the subgenus *Leuchalictus* Warncke, 1975 to which these taxa belong is currently in preparation (S. Flaminio, *pers. comm.*) and so no taxonomic action is taken here.

***Lasioglossum malachurum* (Kirby, 1802)**

A sequence from southern Spain (Málaga, [BOLD:AAE5496](#)) fell into the typical *L. malachurum* BIN with hundreds of sequences from the West Palaearctic. Surprisingly, a specimen from northern Portugal (Aveiro, [BOLD:AEO8786](#)) was strongly separated by a maximum genetic distance of 13.66%, though it was closest to the typical *L. malachurum* BIN. Further study is required.

***Lasioglossum transitorium* (Schenck, 1868) and *L. transitorium planulum* (Pérez, 1903)**

*Lasioglossum transitorium planulum* is the western subspecies of *L. transitorium* and is found across Iberia (Ortiz-Sánchez and Pauly 2017). Sequences from northern Portugal (Aveiro) and eastern and southern Spain (Cuenca, Granada) fell into [BOLD:AEM8844](#) that contains sequences from only Spain and Portugal. However, a specimen from north-eastern Spain (Lleida) fell into [BOLD:AER6557](#) (containing additional sequences from France and Switzerland) which was separated by a maximum genetic distance of 2.01%. Detailed study is required to establish whether these represent the taxa *L. transitorium planulum* and *L. transitorium s. str.*, respectively and whether they should be treated as distinct species or not.

***Lasioglossum xanthopus* (Kirby, 1802) and *L. xanthopus soreli* (Dours, 1872)**

A sequence from southern Spain (Granada, [BOLD:AAE1789](#)) fell into the typical *L. xanthopus* BIN with sequences from Belgium, France, Germany, Kyrgyzstan, the Netherlands, Switzerland, Turkey and the United Kingdom. A sequence from central Portugal (Castelo Branco) fell into [BOLD:AEW1421](#) which contains one other sequence from Morocco (Wood, *unpublished data*) and which was separated by a maximum genetic distance of 2.01%. Further study is required to establish whether this material represents a distinct species and whether it could be referable to the concept of *L. xanthopus soreli* (for which the type material is lost). *Lasioglossum soreli* was described from Algeria and, although the type material is lost, if further genetic analysis of Iberian and North African *xanthopus sensu lato* is conducted, the taxon *soreli* can be newly delineated.

***Megachile albisecta* (Klug, 1817)**

Sequences from southern Spain (Granada, [BOLD:AEO5749](#)) and northern Portugal (Bragança, [BOLD:AEO5750](#)) were separated by a maximum genetic distance of 2.17%. Both BINs also contained sequences from France and Italy in addition to the Spanish sequences. Given the low genetic distance, this is considered to simply represent variation.

***Nomada basalis* Herrich-Schäffer, 1839**

This morphologically highly variable species was placed in three BINs, specifically specimens from central Portugal (Castelo Branco, [BOLD:AEK6178](#), sequences also from France and Italy), eastern Spain (Cuenca, [BOLD:AEN3462](#), Iberia only) and central Portugal (Lisbon) and central and southern Spain (Madrid, Málaga, [BOLD:AEO4155](#), Iberia only). The maximum genetic distance between members of these BINs was 5.71%. [BOLD:AEK6178](#) also contains sequences from France and Italy, but the two other BINs are currently known only from Iberia. *Nomada basalis* is the brood-parasite of *Eucera* (*Hetereucera*) species, such as *E. elongatula* Vachal, 1907 (Baldock et al. 2018); this subgenus is diversified and species-rich in Iberia, offering many potential hosts for *N. basalis* and possibly unknown related taxa. A large number of names are available for *N. basalis* as, due to its morphological variation, it was described many times (Smit 2018). Taxonomic revision is required to establish whether *N. basalis* represents a species complex or whether it is simply a highly variable species.

***Nomada distinguenda* Morawitz, 1874**

A sequence from northern Portugal (Aveiro, [BOLD:ACY0250](#)) clustered with *N. distinguenda* from France, Italy and the Netherlands. However, an additional sequence from northern Portugal (Bragança, [BOLD:AET5764](#)) formed a unique BIN. The maximum genetic distance between these BINs was 3.6%. Importantly, none of the Iberian material fell into [BOLD:AAO6546](#) which contains *N. distinguenda* sequences from Bulgaria, France, Germany and Hungary or [BOLD:AEA0257](#) which contains *N. distinguenda* sequences from Austria, Israel and Italy. Detailed taxonomic revision is clearly required to resolve species concepts within *N. distinguenda* given the genetic variation visible here.

### ***Nomada femoralis* Morawitz, 1869**

A sequence from a female specimen from southern Spain (Granada, [BOLD:AAI2830](#)) clustered with *N. femoralis* sequences from Austria, France, Germany, Italy and Morocco. However, specimens from northern and southern Portugal (Aveiro, Faro) and central Spain (Ávila, [BOLD:AEO6156](#)) formed a distinct BIN, with an additional specimen from Morocco (Wood, *unpublished data*). The maximum genetic distance between the two BINs was 7.05%. This result is surprising, as *N. femoralis* is nominally one of the easiest European *Nomada* species to recognise in the male sex due to the form of shape of the anterior femorae which are produced ventrally into long triangular shapes (Smit 2018). The male specimen [IBIHM124-21](#) from Ávila morphologically appears inseparable from typical *N. femoralis* from Central Europe, presenting these modified anterior femorae. Adding complexity, the two female specimens that fell into this BIN were originally identified as *N. femoralis* ([IBIHM599-21](#), northern Portugal, Aveiro) and *N. corcyraea* Schmiedeknecht, 1882 ([IBIHM1246-22](#), southern Portugal, Faro). The morphological characters allowing recognition of the females are therefore unclear and a revision of this group of species is required. The aberrant "*femoralis*" BIN ([BOLD:AEO6156](#)) is genetically closest to *N. armata* Herrich-Schäffer, 1839 and is strongly differentiated from typical *N. femoralis*, at least based on these barcoding results.

### ***Nomada glaucopis* Pérez, 1890**

Most of the sequences we generated from across Spain (Granada, Guadalajara, Madrid, Málaga, [BOLD:AEO3423](#)) formed a BIN with additional sequences from France. However, a single sequence from central Portugal (Castelo Branco, [BOLD:AEJ1237](#)) was separated by a maximum genetic distance of 3.11%. Further study is required.

### ***Nomada integra* Brullé, 1832**

*Nomada integra* sequences were placed into three BINs, specifically with sequences from central Spain (Ávila, [BOLD:ABZ1320](#)), central Portugal (Castelo Branco) and southern Spain (Málaga, [BOLD:AEN8926](#)) and central Spain (Segovia, [BOLD:AEO3904](#)). The maximum genetic distance between these BINs was 3.43%. The sequence from Ávila ([BOLD:ABZ1320](#)) probably represents the true *N. integra*, with additional sequences from Austria, Belgium, Germany and Greece. The sequences from Portugal and southern Spain form a BIN ([BOLD:AEN8926](#)) with additional sequences from France and the sequence from Segovia ([BOLD:AEO3904](#)) forms a unique BIN. *Nomada integra* is a brood-parasite of members of the *Andrena* subgenus *Chlorandrena* Pérez, 1890 (Smit 2018), a subgenus that is highly diversified in Iberia (Wood 2023). Several lineages of *N. integra* may exist, possibly representing distinct species, all of which attack different *Chlorandrena* species. Detailed study is required to demonstrate this; for now, our data are presented simply as *N. integra*.

### ***Sphecodes alternatus* Smith, 1853 and *S. crassanus* Warncke, 1992**

Warncke (1992) described *S. crassanus* as distinct from *S. alternatus*, a position that has been largely followed by subsequent authors (Amiet et al. 2007, Bogusch and Straka 2012,

Ghisbain et al. 2023b). In the female sex, *S. crassanus* can be separated from *S. alternatus* due to the denser punctation anterior to the ocellar triangle, which is slightly convex and more sparsely punctate in *S. alternatus* (Bogusch and Straka 2012). However, two specimens of *S. crassanus* showed minimal genetic differentiation from a specimen of *S. alternatus* despite this clear morphological difference and were placed in the same BIN ([BOLD:ACD7802](#)). Furthermore, an additional specimen of "*S. alternatus*" from central Portugal was strongly separated genetically from both *S. crassanus* + *S. alternatus*. This latter Portuguese specimen represents *S. algeriensis* Alfken, 1914 (considered as a subspecies of *S. alternatus* by Warncke (1992)), based on its morphology with a more densely punctate frons than typical *S. alternatus* and also because the BIN ([BOLD:AEO6580](#)) includes an unpublished sequence from Egypt; *S. algeriensis* is not currently recognised as a good species and focused taxonomic work is required to formally establish its status. The maximum genetic distance between the two BINs was 7.97%.

### Species that cannot currently be identified

A single *Melecta* specimen from the Sierra Nevada (Granada, [IBIHM072-21](#)) fell into a unique BIN ([BOLD:AEO2855](#)) containing another unpublished sequence from Spain. The taxonomy of melectine bees is complicated and a full molecular revision is required to ensure that morphological concepts (Lieftinck 1980) actually work consistently given the extreme difficulty in species identification in this group.

### Confirmed or suspected synonymies

#### ***Eucera longicornis* (Linnaeus, 1758) and *Eucera hispaliensis* Pérez, 1902**

Dorchin (2023) concluded that *E. hispaliensis* was a junior synonym of the widespread *E. longicornis*. In line with this, sequences of "*E. hispaliensis*" generated from Portugal (Castelo Branco, Vila Real) and Spain (Granada, Málaga) fell into [BOLD:ABZ4790](#), which contains *E. longicornis* sequences from across Europe. The synonymy of Dorchin (2023) is, therefore, further supported by this genetic evidence.

#### ***Eucera nigrescens* Pérez, 1879 and *Eucera codinai* Dusmet y Alonso, 1926**

It is suspected that *E. codinai* is a junior synonym of the widespread *E. nigrescens* (*E. Dorchin, pers. comm.*). The Iberian distribution appears to be that *E. nigrescens* is present in the north, being replaced in central and southern Iberia by *E. codinai* (Baldock et al. 2018). Morphological differences are minor and are predominantly based on changes in hair colour. Analysis of "*E. codinai*" sequences from southern Spain (Cádiz) and central Portugal (Castelo Branco) showed that they fell into [BOLD:ABZ2397](#) which contains many sequences of *E. nigrescens* from across Europe eastwards to Japan. All our data are, therefore, presented as *E. nigrescens* and the formal synonymy of *E. codinai* with *E. nigrescens* is likely to be made in the future following type revision.

### Different species assigned to the same BIN

Finally, in addition to the nominal species which were assigned to multiple BINs, there are a few species that unexpectedly fell into the same BIN despite some morphological differences. These are highlighted here.

#### ***Colletes marginatus* Smith, 1846 and *Colletes pulchellus* Pérez, 1903**

These two species are challenging to separate morphologically and old records of *C. marginatus* from Iberia can be impossible to assign to either *C. marginatus* or *C. pulchellus* without a morphological re-examination of the specimens in question (Baldock et al. 2018, M. Kuhlmann, *pers. comm.*). Three specimens nominally belonging to *C. marginatus* and *C. pulchellus* produced sequences that fell into the same BIN ([BOLD:AAN3911](#)). The specimens comprised two specimens identified as *C. pulchellus* (IBIHM1342-22; one male from Granada, IBIHM1341-22; one female from Girona; both det. M. Kuhlmann) and one specimen identified as *C. marginatus* ([IBIHM429-21](#); one female from Segovia, det. M. Kuhlmann). This BIN contains specimens from Germany, the Netherlands, Finland, Norway, Spain and France and, thus, would certainly include sequences of the true *C. marginatus* which was described from Britain. Further study is required, as several *Colletes* species are very difficult to recognise through DNA barcoding alone, such as the *succinctus*-group (Kuhlmann et al. 2007, Zenz et al. 2021).

#### ***Nomada sheppardana* (Kirby, 1802) and *Nomada minuscula* Noskiewicz, 1930**

The species status of *N. minuscula* has proven controversial, more and more authors have recognised *N. minuscula* as distinct (e.g. Scheuchl 2000, Amiet et al. 2007, Schmidt et al. 2015, Scheuchl and Willner 2016, Smit 2018, Ghisbain et al. 2023b). Schmidt et al. (2015) found that specimens belonging to these two species were assigned to two BINs - [BOLD:AAP1578](#) for *N. minuscula* and [BOLD:ABA2390](#) for *N. sheppardana* - and, hence, the authors supported a position of two distinct species.

Analysis of one female of "*N. sheppardana*" from central Spain ([IBIMH160-21](#); Ávila) and one female of "*N. minuscula*" from southern Spain ([IBIHM146-21](#); Málaga) produced sequences that fell into the same BIN ([BOLD:AAP1578](#)), i.e. the BIN of *N. minuscula* only. The two specimens clearly differ morphologically and conform to the morphological concepts of *N. sheppardana* and *N. minuscula*. The same problem occurs in other parts of Europe, with all Swiss members of this species pair producing the same barcode and falling into the *N. minuscula* BIN (Praz et al. 2023: Figure 7). It is not clear why this is occurring or why specimens of "*N. sheppardana*" from Germany represent a distinct BIN. Dedicated taxonomic work is required, including generating sequences from the United Kingdom, from which *N. sheppardana* was originally described.

#### ***Hylaeus incongruus* Förster, 1871**

The taxonomy of the *Hylaeus gibbus*-group has a long and confused history (Dathe 1980, Straka and Bogusch 2011, Le Divelec 2022). Barcoding specimens of this group from Iberia produced sequences that fell into two BINs corresponding to *Hylaeus confusus*

Nylander, 1852 ([BOLD:AAD9315](#)) and *H. incongruus* ([BOLD:ABU9205](#)) in Central Europe. This caveat is important, as the scale of the analysis can impact interpretation, for example, when including data from the east Mediterranean (Le Divelec, *unpublished data*).

We sequenced one specimen morphologically identified as *H. confusus* from northern Spain (León) and this sequence clearly clusters with *H. confusus* sequences from across Europe (France, Switzerland, Belgium, the Netherlands, Ireland, United Kingdom, Germany, Austria, Denmark, Norway and Finland). In this context, the identification and genetic identity of *H. confusus* in Iberia does not appear to be problematic.

However, the situation with the remaining sequences generated from members of the *gibbus*-group is more challenging. A total of eight sequences were generated from across central and northern Iberia. Two sequences from north-western Iberia (INV12201; Bragança and INV12200; Ourense) were generated from specimens displaying red-markings on tergum 1 and were originally identified as *H. praenotatus* Förster, 1871. However, *H. praenotatus* as reported from Iberia by Ortiz-Sánchez et al. (2002) and Baldock et al. (2018) are *H. praenotatus* auctorum. True *H. praenotatus* is a synonym of *H. gibbus* Saunders, 1850 (Le Divelec 2022, see also Ghisbain et al. 2023b) which does not appear to occur in Iberia. The two sequences fell into the *H. incongruus* BIN [BOLD:ABU9205](#) (additional sequences from Morocco, France, Switzerland, Italy, Belgium, the Netherlands, Germany, Austria, Czechia, Norway, Finland, Greece, Cyprus, Lebanon and Egypt). Morphologically, these *H. praenotatus* auctorum specimens do not meaningfully differ from *H. incongruus* morphologically, except in the colour of tergum 1.

Sequencing of six additional specimens with entirely dark terga from Portugal (Aveiro, Bragança, Viana do Castelo and Viseu) and Spain (Lleida) that were originally identified as *H. gibbus* produced sequences that also fell into the same *H. incongruus* BIN [BOLD:ABU9205](#). Therefore, none of the eight specimens originally identified as either *H. praenotatus* or *H. gibbus* genetically matched with *H. gibbus* as currently delineated genetically (BIN [BOLD:AAE1200](#), sequences from France, Switzerland, Belgium, Italy, Germany, Austria and Hungary). There was a slight, but consistent genetic difference between the red-marked and dark specimens. This dark clade represents *H. purpurissatus* (Vachal, 1895), a taxon which was recently recognised at a specific level (Straka and Bogusch 2011, Le Divelec 2022). However, the morphological differences are small and inconsistent and may not represent good species (Le Divelec, *unpublished data*). Given these challenges associated with morphological delineation with species within the *gibbus*-group and these molecular results, we present all eight sequences from Iberia as *H. incongruus*; dedicated study of the *gibbus*-group across the Mediterranean Basin is required.

## Project description

**Title:** The InBIO Barcoding Initiative Database: DNA Barcodes of Iberian bees



**Personnel:** Thomas Wood, Romain Le Divelec and Denis Michez (taxonomists) are affiliated with the University of Mons; Hugo Gaspar (taxonomist), Sílvia Castro (ecologist) and João Loureiro (ecologist) are affiliated with the University of Coimbra; Pedro Beja (project coordinator), Sónia Ferreira (molecular biologist and IBI manager), Vanessa Mata (molecular biologist), Joana Veríssimo (molecular biologist), Teresa Luísa Silva (molecular biologist) are affiliated with the Associação BIOPOLIS / CIBIO-InBIO, University of Porto.

**Study area description:** The Iberian Peninsula (Fig. 1)

**Design description:** Specimens were collected during field expeditions in the Iberian Peninsula, from 2014 to 2022 ( $n = 1,059$  Fig. 1, Suppl. material 1), with nearly 90% of specimens collected in the period between 2019 and 2022. The majority of the specimens are deposited in the research collection of Thomas Wood (soon to be moved to the Naturalis Biodiversity Center, the Netherlands) (60%) and in the FLOWer Lab collection at the University of Coimbra (Portugal) (34%). Additional specimens are deposited in the Andreia Penado collection at the Natural History and Science Museum of the University of Porto (MHNC-UP) (Portugal) and in the InBIO Barcoding Initiative (IBI) reference collection (Vairão, Portugal).

DNA was extracted using two different kits: 96-Well Plate Animal Genomic DNA Mini-Preps Kit (Bio Basic, Ontario, Canada) or QIAmp DNA Micro Kit (Qiagen, Hilden, Germany). QIAmpDNA Micro Kit is designed to extract higher concentrations of genetic material from samples with small amounts of DNA. DNA amplification was performed using two different primer pairs, that amplify two overlapping fragments of the same 658 bp region of the COI mitochondrial gene. We used two primer pairs, LCO1490 (Folmer et al. 1994) + III\_C\_R (Shokralla et al. 2015) and BF3 (Elbrecht et al. 2019) + BR2 (Elbrecht and Leese 2017) (henceforth referred to as LC and B3, respectively) to amplify two overlapping fragments of 325 bp and 418 bp, respectively. PCRs were performed in 10  $\mu$ l reactions, containing 5  $\mu$ l of Multiplex PCR Master Mix (Qiagen, Germany), 0.3 – 0.4 mM of each primer and 1-2  $\mu$ l of DNA, with the remaining volume in water. PCR reactions were performed in T100 Thermal Cycler (Bio-Rad, California, USA) and carried out with an initial denaturation at 95°C for 15 min, followed by 45 cycles at 95°C for 30 sec, 45°C for 45 sec, 72°C for 45 sec; and a final elongation step at 60°C for 10 min. All PCR products were analysed by agarose gel electrophoresis and samples selected for sequencing proceeded for a indexing PCR. One of two types of index was used for each sequencing run. For Nextera indexes (Illumina, USA), PCR products were previously pooled into one plate as described in Shokralla et al. (2015) and then the indexing PCR was performed according to the manufacturer's instructions. When using custom indexes, based on Meyer and Kircher (2010), no pooling was required. A second PCR was then performed where the indexes and Illumina sequencing adapters were attached to the PCR product. The index PCR was performed in a volume of 10  $\mu$ l, including 5  $\mu$ l of Phusion® High-Fidelity PCR Kit (NewEngland Biolabs, U.S.A.) or KAPA HiFi PCR Kit (KAPA Biosystems, U.S.A.), 0.5  $\mu$ l of each index and 2  $\mu$ l of diluted PCR product (usually 1:4). This PCR reaction runs for 10 cycle at an annealing temperature of 55°C. The amplicons were purified using AMPure XP beads (Beckman Coulter Genomics, Massachusetts, United States) before quantification using NanoDrop 1000 (Thermo Fisher Scientific, Massachusetts, USA). Concentrations

between samples were then normalised and samples were pooled, based on used primer sets. Quantification of final pools was assessed through qPCR using the KAPA Library Quantification Kit Illumina® Platforms (Kapa Biosystems) and the 2200 TapeStation System (Agilent Technologies, California, USA) was used for fragment length analysis as described by Paupério et al. (2018). Sequencing was conducted at CIBIO facilities in an Illumina MiSeq benchtop system, using V2 MiSeq sequencing kits (2x 250 bp). Illumina sequencing reads were processed using OBITools (Boyer et al. 2015) and VSEARCH (Rognes et al. 2016). Briefly, paired-end reads were aligned, collapsed into exact sequence variants, filtered by length, denoised and checked for chimeras. The resulting sequences from both LC and BH fragments of each sample were further assembled using CAP3 (Huang and Madan 1999) to produce a single 658 bp contig per sample. The obtained DNA sequences were then compared against the Barcode of Life Data Systems (BOLD) database (Ratnasingham and Hebert 2007) using the built-in identification engine, based on the BLAST algorithm. Sequences were submitted to the BOLD database and the Barcode Index Numbers (BIN) for every sequence were retrieved and analysed (Suppl. materials 2, 1 Suppl. materials 1, 2, 3).

**Funding:** The present work was funded by National Funds through FCT-Fundação para a Ciência e a Tecnologia in the scope of the project LAP/0048/2020. InBIO Barcoding Initiative is co-funded by the European Union's Horizon 2020 Research and Innovation Programme under grant agreement No 668981 and the project PORBIOTA—Portuguese E-Infrastructure for Information and Research on Biodiversity (POCI-01-0145-FEDER-022127), supported by Operational Thematic Program for Competitiveness and Internationalization (POCI), under the PORTUGAL 2020 Partnership Agreement, through the European Regional Development Fund (FEDER) and by Horizon Europe under the Biodiversity, Circular Economy and Environment call (RE.A.B.3); co-funded by the Swiss State Secretariat for Education, Research and Innovation (SERI) under contract number 22.00173; and by the UK Research and Innovation under the Department for Business, Energy and Industrial Strategy's Horizon Europe Guarantee Scheme. JL, HG and SC were funded by the Integrated Program of Scientific Research and Technological Development CULTIVAR (CENTRO- 01- 0145-FEDER-000020), co-financed by the Regional Operational Programme Centro 2020, Portugal 2020 and European Union, through the European Fund for Regional Development (ERDF) and by The Portuguese Foundation for Science and Technology (FCT – Fundação para a Ciência e a Tecnologia, I.P.) within the project UID/BIA/04004/2020. SF, VM and SC were funded by the FCT through the programme 'Stimulus of Scientific Employment, Individual Support—3rd Edition (<https://doi.org/10.54499/2020.03526.CEECIND/CP1601/CT0010>; <https://doi.org/10.54499/2020.02547.CEECIND/CP1601/CT0006>; 2021.02697.CEECIND). JV and HG were funded by PhD grants (SFRH/BD/133159/2017; 2023.01736.BD) from FCT. PR is supported by the EU Project ORBIT (DG Env 09.029901/2021/848268/SER/ENV.D.2). TJW is supported by an F.R.S.-FNRS Fellowship "Chargé de recherches". DM, RLD and TJM are supported by SPRING - Strengthening Pollinator Recovery through Indicators and Monitoring, EC DG ENV project Contract No: 09.02001/2021/847887/SER/ENV.D.2; ORBIT- Taxonomic resources for European bees, EC DG Env project Contract No 09.029901/2021/848268/SER/ENV.D.2; PULSE - Providing technical and scientific support in measuring the pulse

of European biodiversity using the Red List Index, EC DG ENV project Contract No 07.027755/2020/840209/SER/ENV.D.2; SAFEGUARD - Safeguarding European wild pollinators, H2020 grant agreement No. 101003476.

## Sampling methods

**Sampling description:** Specimens were captured during direct searches of the environment, using mainly aerial-nets and hand-held sweep-nets. Specimens were euthanised, often through exposure to ethyl acetate, either subsequently pinned and dried immediately (the same day) or kept at -4°C for some days until pinning and drying. From each specimen, one tissue sample (a leg, sometimes two legs depending on specimen size) was removed and stored in 96% ethanol for DNA extraction at the IBI collection. Photos of vouchers of all new species /BINs to BOLD will be made publicly available later in the year.

**Quality control:** All DNA barcode sequences were compared against the BOLD database and the 99 top results were inspected in order to detect possible problems due to contaminations or misidentifications. Prior to GBIF submission, data were checked for errors and inconsistencies with OpenRefine 3.3 (<http://openrefine.org>).

**Step description:** Specimens were collected in 140 different localities in Portugal and 120 localities in Spain. Collections were carried out between 2014 and 2022. Specimens were collected during fieldwork by direct search of specimens, by sweeping the vegetation with a hand-net. Captured specimens were deposited in reference collections at the Naturalis Biodiversity Center (the Netherlands) (60%) and in the FLOWer Lab collection at the University of Coimbra (Portugal) (34%). Additional specimens are deposited in the Andreia Penado collection at the Natural History and Science Museum of the University of Porto (MHNC-UP) (Portugal) and in the InBIO Barcoding Initiative (IBI) reference collection (Vairão, Portugal). Specimens were morphologically identified using stereoscopic microscopes (Wild Heerbrugg M5). DNA barcodes were sequenced from all specimens. For this, one leg (sometimes two legs depending on specimen size) was removed from each individual, DNA was then extracted and two overlying DNA fragments were amplified and sequenced to 658 bp COI DNA barcode fragment. All obtained sequences were submitted to BOLD and GenBank databases and, to each sequenced specimen, the morphological identification, was contrasted with the results of the BLAST of the newly-generated DNA barcodes in the BOLD Identification Engine. Prior to submission to GBIF, data were checked for errors and inconsistencies with OpenRefine 3.3 (<http://openrefine.org/>).

## Geographic coverage

**Description:** Specimens were collected in the Iberian Peninsula, 590 specimens from 140 localities in mainland Portugal and 469 specimens from 120 localities in mainland Spain (Fig. 1, Suppl. material 1).

**Coordinates:** 0.691 and -9.484 Latitude; 42.983 and 36.268 Longitude.

## Taxonomic coverage

**Description:** This dataset is composed of data relating to 1,059 bee specimens. All specimens were determined to species level. Overall, 514 described species are represented in the dataset. These species belong to six families: Andrenidae, Apidae, Colletidae, Halictidae, Megachilidae and Melittidae.

## Collection data

**Collection name:** InBIO Barcoding Initiative

**Collection identifier:** 4ec2b246-f5fa-4b90-9a8d-ddafc2a3f970

**Specimen preservation method:** Dry

**Curatorial unit:** DNA extractions - 1 to 1,059.

## Usage licence

**Usage licence:** Creative Commons Public Domain Waiver (CC-Zero)

## Data resources

**Data package title:** The InBIO Barcoding Initiative Database: DNA barcodes of Iberian bees

**Resource link:** <http://dx.doi.org/10.5883/DS-IBIHY01>

**Number of data sets:** 1

**Data set name:** DS-IBIHY01 IBI Bees of Iberia

**Download URL:** [http://www.boldsystems.org/index.php/Public\\_SearchTerms?query=DS-IBIHY01](http://www.boldsystems.org/index.php/Public_SearchTerms?query=DS-IBIHY01)

**Data format:** dwc, xml, tsv, fasta

**Description:** The InBIO Barcoding Initiative Database: DNA Barcodes of Iberian bees dataset can be downloaded from the Public Data Portal of BOLD ([http://www.boldsystems.org/index.php/Public\\_SearchTerms?query=DS-IBIHY01](http://www.boldsystems.org/index.php/Public_SearchTerms?query=DS-IBIHY01)) in different formats (data as dwc, xml or tsv and sequences as fasta files). Alternatively, BOLD users can log-in and access the dataset via the Workbench platform of BOLD. All records are also searchable within BOLD, using the research function of the database.

Column label	Column description
processid	Unique identifier for the sample.
sampleid	Identifier for the sample being sequenced, i.e. IBI catalogue number at Cibio-InBIO, Porto University. Often identical to the "Field ID" or "Museum ID".
recordID	Identifier for specimen assigned in the field.
catalognum	Catalogue number.
fieldnum	Field number.
institution_storing	The full name of the institution that has physical possession of the voucher specimen.
bin_uri	Barcode Index Number system identifier.
phylum_taxID	Phylum taxonomic numeric code.
phylum_name	Phylum name.
class_taxID	Class taxonomic numeric code.
class_name	class_name.
order_taxID	Order taxonomic numeric code.
order_name	Order name.
family_taxID	Family taxonomic numeric code.
family_name	Family name.
subfamily_taxID	Subfamily taxonomic numeric code.
subfamily_name	Subfamily name.
genus_taxID	Genus taxonomic numeric code.
genus_name	Genus name.
species_taxID	Species taxonomic numeric code.
species_name	Species name.
identification_provided_by	Full name of primary individual who assigned the specimen to a taxonomic group.
identification_method	The method used to identify the specimen.
voucher_status	Status of the specimen in an accessioning process (BOLD controlled vocabulary).
tissue_type	A brief description of the type of tissue or material analysed.
collectors	The full or abbreviated names of the individuals or team responsible for collecting the sample in the field.
lifestage	The age class or life stage of the specimen at the time of sampling.
sex	The sex of the specimen.
lat	The geographical latitude (in decimal degrees) of the geographic centre of a location.

lon	The geographical longitude (in decimal degrees) of the geographic centre of a location.
elev	Elevation of sampling site (in metres above sea level).
country	The full, unabbreviated name of the country where the organism was collected.
province_state	The full, unabbreviated name of the province ("Distrito" in Portugal) where the organism was collected.
region	The full, unabbreviated name of the municipality ("Concelho" in Portugal) where the organism was collected.
exactsite	Additional name/text description regarding the exact location of the collection site relative to a geographic relevant landmark.
habitat	A category or description of the habitat in which the event occurred.
sampling_protocol	The name of, reference to, or description of the method or protocol used during an event.
subspecies_taxID	subspecies taxonomic numeric code.
subspecies_name	subspecies name.

## Acknowledgements

The present work was funded by National Funds through FCT-Fundação para a Ciência e a Tecnologia in the scope of the project LA/P/0048/2020. InBIO Barcoding Initiative is co-funded by the European Union's Horizon 2020 Research and Innovation Programme under grant agreement No 668981 and the project PORBIOTA—Portuguese E-Infrastructure for Information and Research on Biodiversity (POCI-01-0145- FEDER-022127), supported by Operational Thematic Program for Competitiveness and Internationalization (POCI), under the PORTUGAL 2020 Partnership Agreement, through the European Regional Development Fund (FEDER) and by Horizon Europe under the Biodiversity, Circular Economy and Environment call (REA.B.3); co-funded by the Swiss State Secretariat for Education, Research and Innovation (SERI) under contract number 22.00173; and by the UK Research and Innovation under the Department for Business, Energy and Industrial Strategy's Horizon Europe Guarantee Scheme. JL, HG and SC were funded by the Integrated Program of Scientific Research and Technological Development CULTIVAR (CENTRO- 01- 0145-FEDER-000020), co-financed by the Regional Operational Programme Centro 2020, Portugal 2020 and European Union, through the European Fund for Regional Development (ERDF) and by The Portuguese Foundation for Science and Technology (FCT – Fundação para a Ciência e a Tecnologia, I.P.) within the project UID/BIA/04004/2020. SF, VM and SC were funded by the FCT through the programme 'Stimulus of Scientific Employment, Individual Support—3rd Edition (<https://doi.org/10.54499/2020.03526.CEECIND/CP1601/CT0010>; <https://doi.org/10.54499/2020.02547.CEECIND/CP1601/CT0006>; 2021.02697.CEECIND). JV and HG were funded by PhD grants (SFRH/BD/133159/2017; 2023.01736.BD) from FCT. PR is supported by the EU Project ORBIT (DG Env 09.029901/2021/848268/SER/ENV.D.2). TJW is supported by an

F.R.S.-FNRS fellowship “Chargé de recherches”. DM, RLD and TJM are supported by SPRING - Strengthening Pollinator Recovery through Indicators and monitoring, EC DG ENV project Contract No: 09.02001/2021/847887/SER/ENV.D.2; ORBIT- Taxonomic resources for European bees, EC DG Env project Contract No 09.029901/2021/848268/SER/ENV.D.2; PULSE - Providing technical and scientific support in measuring the pulse of European biodiversity using the Red List Index, EC DG ENV project Contract No 07.027755/2020/840209/SER/ENV.D.2; SAFEGUARD - Safeguarding European wild pollinators, H2020 grant agreement No. 101003476. We also thank Ian Cross (United Kingdom) for sharing rare specimens of Iberian bees with us and Alain Pauly (Belgium), Andreas Müller (Switzerland), Michael Kuhlmann (Germany), Jakub Straka (Czechia) and Jan Smit (Netherlands) for determining challenging bee specimens.

## References

- Abellán P, Svenning J (2014) Refugia within refugia - patterns in endemism and genetic divergence are linked to Late Quaternary climate stability in the Iberian Peninsula. *Biological Journal of the Linnean Society* 113 (1): 13-28. <https://doi.org/10.1111/bij.12309>
- Álvarez Fidalgo P, Núñez Carbajal A, Álvarez Fidalgo M, Noval Fonseca N (2022) New and interesting data of wild bees (Hymenoptera, Apoidea, Anthophila) from the Cantabrian area (northern Spain), including a species newly recorded for Spain and the confirmation of the presence of *Nomada errans* Lepelletier, 1841 on the Iberian Peninsula. *Boletín de la Sociedad Entomológica Aragonesa (S.E.A.)* 68: 152-164.
- Álvarez Fidalgo P, Pascual Hergueta JI, Álvarez Fidalgo M, Noval Fonseca N (2023) New, noteworthy records of wild bees (Hymenoptera, Apoidea, Anthophila) from northern and central Spain. *Boletín de la Sociedad Entomológica Aragonesa (S.E.A.)* 73: 105-12.
- Amiet F, Hermann M, Müller A, Neumeyer R (2007) *Apidae 5 – Ammobates, Ammobatoidea, Anthophora, Biastes, Ceratina, Dasypoda, Epeoloides, Epeolus, Eucera, Macropis, Melecta, Melitta, Nomada, Pasites, Tetralonia, Thyreus, Xylocopa*. info fauna CSCF & SEG, Neuchâtel, 181 pp.
- Ascher JS, Pickering J (2023) Discover Life bee species guide and world checklist (Hymenoptera: Apoidea: Anthophila). [http://www.discoverlife.org/mp/20q?guide=Apoidea\\_species](http://www.discoverlife.org/mp/20q?guide=Apoidea_species). Accessed on: 2023-10-30.
- Baldock DW, Wood TJ, Cross I, Smit J (2018) The bees of Portugal (Hymenoptera: Apoidea: Anthophila). *Entomofauna* 22: 1-164.
- Bogusch P, Straka J (2012) Review and identification of the cuckoo bees of central Europe (Hymenoptera: Halictidae: Sphecodes). *Zootaxa* 3311 (1). <https://doi.org/10.11646/zootaxa.3311.1.1>
- Boyer F, Mercier C, Bonin A, Le Bras Y, Taberlet P, Coissac E (2015) obitools: a unix-inspired software package for DNA metabarcoding. *Molecular Ecology Resources* 16 (1): 176-182. <https://doi.org/10.1111/1755-0998.12428>
- Brasero N, Ghisbain G, Lecocq T, Michez D, Valterová I, Biella P, Monfared A, Williams PH, Rasmont P, Martinet B (2021) Resolving the species status of overlooked West-



- Palaeartic bumblebees. *Zoologica Scripta* 50 (5): 616-632. <https://doi.org/10.1111/zsc.12486>
- Castro S, Loureiro J, Ferrero V, Silveira P, Navarro L (2013) So many visitors and so few pollinators: variation in insect frequency and effectiveness governs the reproductive success of an endemic milkwort. *Plant Ecology* 214 (10): 1233-1245. <https://doi.org/10.1007/s11258-013-0247-1>
  - Cejas D, López-López A, Muñoz I, Ornosa C, De la Rúa P (2019) Unveiling introgression in bumblebee (*Bombus terrestris*) populations through mitogenome-based markers. *Animal Genetics* 51 (1): 70-77. <https://doi.org/10.1111/age.12874>
  - Chávez-Galarza J, Henriques D, Johnston JS, Carneiro M, Rufino J, Patton J, Pinto MA (2015) Revisiting the Iberian honey bee (*Apis mellifera iberiensis*) contact zone: maternal and genome-wide nuclear variations provide support for secondary contact from historical refugia. *Molecular Ecology* 24 (12): 2973-2992. <https://doi.org/10.1111/mec.13223>
  - Cross I, Wood TJ (2018) New data on the Iberian endemic bee genus *Flavipanurgus* Warncke Hymenoptera: Apoidea: Andrenidae): Ecological and genomic data reveal a hidden species. *Zootaxa* 4521 (4). <https://doi.org/10.11646/zootaxa.4521.4.5>
  - Cross I (2023) A new species of Hoplitis (*Stenosmia*) from southern Iberia (Hymenoptera: Megachilidae). *Entomologist's Monthly Magazine* 159: 79-86.
  - Dathe HH (1980) Die Arten der Gattung *Hylaeus* F. in Europa (Hymenoptera: Apoidea, Colletidae). *Mitteilungen des Zoologischen Museums Berlin* 56: 207-294.
  - de Sousa P, Henriques A, Silva S, Carvalheiro L, Smagghe G, Michez D, Wood T, Paulo O (2023) Genomic patterns of Iberian wild bees reveal levels of diversity, differentiation and population structure, supporting the “Refugia within Refugia” Hypothesis. *Diversity* 15 (6). <https://doi.org/10.3390/d15060746>
  - Dorchin A (2023) Revision of the historical type collections of long-horn bees (Hymenoptera: Apidae: Eucerini) preserved in the Muséum national d'Histoire naturelle, Paris. *Annales de la Société Entomologique de France (N.S.)* 59 (2): 115-149. <https://doi.org/10.1080/00379271.2023.2192693>
  - Drossart M, Rasmont P, Vanormelingen P, Dufrêne M, Folschweiller M, Pauly A, Vereecken NJ, Vray S, Zambra E, D'Haeseleer J, Michez D (2019) Belgian Red List of bees. *Presse universitaire de l'Université de Mons, Mons*, 140 pp.
  - Elbrecht V, Leese F (2017) Validation and development of COI metabarcoding primers for freshwater macroinvertebrate Bioassessment. *Frontiers in Environmental Science* 5 <https://doi.org/10.3389/fenvs.2017.00011>
  - Elbrecht V, Braukmann TA, Ivanova N, Prosser SJ, Hajibabaei M, Wright M, Zakharov E, Hebert PN, Steinke D (2019) Validation of COI metabarcoding primers for terrestrial arthropods. *PeerJ* 7 <https://doi.org/10.7717/peerj.7745>
  - Else GR, Edwards M (2018) *Handbook of the Bees of the British Isles*. The Ray Society, London, 775 pp.
  - Folmer O, Black M, Hoeh W, Lutz R, Vrijenhoek R (1994) DNA primers for amplification of mitochondrial cytochrome c oxidase subunit I from diverse metazoan invertebrates. *Molecular marine biology and biotechnology* 3 (5): 294-9.
  - Gardner J, Gibbs J (2023) Revision of the Nearctic species of the *Lasioglossum* (*Dialictus*) *gemmatum* species complex (Hymenoptera: Halictidae). *European Journal of Taxonomy* 858: 1-222. <https://doi.org/10.5852/ejt.2023.858.2041>

- Gaspar H, Loureiro J, Castro H, Siopa C, Castro M, Casais V, Castro S (2022) Impact of local practices and landscape on the diversity and abundance of pollinators in an insect-dependent crop. *Agriculture, Ecosystems & Environment* 326 <https://doi.org/10.1016/j.agee.2021.107804>
- Gaspar H, Wood TJ, Siopa C, Tavares D, Loureiro J, Castro S (2023) New contributions to the Portuguese bee fauna (Hymenoptera: Anthophila), with captures from recent pollination ecology studies. *Boletín de la Sociedad Entomológica Aragonesa (S.E.A.)* 72: 199-211.
- Ghisbain G, Radchenko V, Cejas D, Molina F, Michez D (2021a) Assessment and conservation status of an endemic bee in a diversity hotspot (Hymenoptera, Melittidae, Dasytidae). *Journal of Hymenoptera Research* 81: 127-142. <https://doi.org/10.3897/jhr.81.60811>
- Ghisbain G, Martinet B, Wood T, Przybyla K, Cejas D, Gérard M, Rasmont P, Monfared A, Valterová I, Michez D (2021b) A worthy conservation target? Revising the status of the rarest bumblebee of Europe. *Insect Conservation and Diversity* 14 (5): 661-674. <https://doi.org/10.1111/icad.12500>
- Ghisbain G, Michez D, Rosa P, Ferreira S, Wood TJ (2023a) Unexpected discovery of a near cryptic *Dasytidae* species in southern Spain (Hymenoptera: Melittidae). *Osmia* 11: 27-38. <https://doi.org/10.47446/OSMIA>
- Ghisbain G, Rosa P, Bogusch P, Flaminio S, Le Divelec R, Dorchin A, Kasperek M, Kuhlmann M, Litman J, Mignot M, Müller A, Praz C, Radchenko VG, Rasmont P, Risch S, Roberts SP, Smit J, Wood TJ, Michez D, Reverté S (2023b) The new annotated checklist of the wild bees of Europe (Hymenoptera: Anthophila). *Zootaxa* 5327 (1): 1-147. <https://doi.org/10.11646/zootaxa.5327.1.1>
- Gibbs J (2018) DNA barcoding a nightmare taxon: assessing barcode index numbers and barcode gaps for sweat bees. *Genome* 61 (1): 21-31. <https://doi.org/10.1139/gen-2017-0096>
- Gómez A, Lunt D (2007) Refugia within refugia: Patterns of phylogeographic concordance in the Iberian Peninsula. *Phylogeography of Southern European Refugia* 155-188. [https://doi.org/10.1007/1-4020-4904-8\\_5](https://doi.org/10.1007/1-4020-4904-8_5)
- Gueuning M, Frey J, Praz C (2020) Ultraconserved yet informative for species delimitation: Ultraconserved elements resolve long-standing systematic enigma in Central European bees. *Molecular Ecology* 29 (21): 4203-4220. <https://doi.org/10.1111/mec.15629>
- Huang X, Madan A (1999) CAP3: A DNA sequence assembly program. *Genome Research* 9 (9): 868-877. <https://doi.org/10.1101/gr.9.9.868>
- Kasperek M, Wood T, Ferreira S, Benarfa N (2023) Taxonomic status of the disjunct populations of the resin bee *Anthidiellum brevisculum* (Pérez, 1890) s.l. in the Mediterranean (Apoidea: Anthidiini). *Journal of Natural History* 56: 2047-2063. <https://doi.org/10.1080/00222933.2022.2152749>
- Kuhlmann M, Else G, Dawson A, Quicke D (2007) Molecular, biogeographical and phenological evidence for the existence of three western European sibling species in the *Colletes succinctus* group (Hymenoptera: Apidae). *Organisms Diversity & Evolution* 7 (2): 155-165. <https://doi.org/10.1016/j.ode.2006.04.001>
- LeBuhn G, Vargas Luna J (2021) Pollinator decline: what do we know about the drivers of solitary bee declines? *Current Opinion in Insect Science* 46: 106-111. <https://doi.org/10.1016/j.cois.2021.05.004>

- Le Divelec R (2022) A taxonomic account on the *Hylaeus gibbus* species-group (Hymenoptera: Apoidea: Colletidae). *Annales de la Société entomologique de France* (N.S.) 58 (3): 229-249. <https://doi.org/10.1080/00379271.2022.2085627>
- Lhomme P, Michez D, Christmann S, Scheuchl E, El Abdouni I, Hamroud L, Ihsane O, Sentil A, Smaili MC, Schwarz M, Dathe HH, Straka J, Pauly A, Schmid-Egger C, Patiny S, Terzo M, Müller A, Praz C, Risch S, Kasperek M, Kuhlmann M, Wood TJ, Bogusch P, Ascher JS, Rasmont P (2020) The wild bees (Hymenoptera: Apoidea) of Morocco. *Zootaxa* 4892 (1). <https://doi.org/10.11646/zootaxa.4892.1.1>
- Lieftinck M (1980) Prodrôme to a monograph of the Palaearctic species of the genus *Melecta* Latreille, 1802 (Hymenoptera, Anthophoridae). *Tijdschrift voor Entomologie* 123: 129-349.
- Litman JR, Fateryga AV, Griswold TL, Aubert M, Proshchalykin MY, Le Divelec R, Burrows S, Praz CJ (2021) Paraphyly and low levels of genetic divergence in morphologically distinct taxa: revision of the *Pseudoanthidium scapulare* complex of carder bees (Apoidea: Megachilidae: Anthidiini). *Zoological Journal of the Linnean Society* 195 (4): 1287-1337. <https://doi.org/10.1093/zoolinnean/zlab062>
- Magnacca K, Brown MF (2012) DNA barcoding a regional fauna: Irish solitary bees. *Molecular Ecology Resources* 12 (6): 990-998. <https://doi.org/10.1111/1755-0998.12001>
- McLaughlin G, Gueuning M, Genoud D, Frey J, Praz C (2022) Why are there so many species of mining bees (Hymenoptera, Andrenidae)? The possible roles of phenology and *Wolbachia* incompatibility in maintaining species boundaries in the *Andrena proxima*-complex. *Systematic Entomology* 48 (1): 127-141. <https://doi.org/10.1111/syen.12566>
- Mendes SB, Timóteo S, Loureiro J, Castro S (2021) The impact of habitat loss on pollination services for a threatened dune endemic plant. *Oecologia* 198 (1): 279-293. <https://doi.org/10.1007/s00442-021-05070-y>
- Mota L, Hevia V, Rad C, Alves J, Silva A, González J, Ortega-Marcos J, Aguado O, Alcorlo P, Azcárate F, Chapinal L, López C, Loureiro J, Marks EN, Siopa C, Sousa JP, Castro S (2022) Flower strips and remnant semi-natural vegetation have different impacts on pollination and productivity of sunflower crops. *Journal of Applied Ecology* 59 (9): 2386-2397. <https://doi.org/10.1111/1365-2664.14241>
- Orr M, Hughes A, Chesters D, Pickering J, Zhu C, Ascher J (2021) Global patterns and drivers of bee distribution. *Current Biology* 31 (3): 451-458. <https://doi.org/10.1016/j.cub.2020.10.053>
- Ortiz-Sánchez FJ, Jiménez-Rodríguez AJ (1991) Actualización del catálogo de las especies españolas de Anthophorini (Hymenoptera, Anthophoridae). *Boletín de la Asociación Española de Entomología* 15: 297-315.
- Ortiz-Sánchez FJ, Ormosa C, Dathe HH (2002) Catálogo sinónimo de los Colletidae ibéricos. I, subfamilia Hylaeinae (Hymenoptera, Apoidea). *Entomofauna* 23 (21): 249-266.
- Ortiz-Sánchez FJ (2020) Checklist de Fauna Ibérica. Serie Anthophila (Insecta: Hymenoptera: Apoidea) en la península Ibérica e islas Baleares (edición 2020). In: Ramos MA, Sánchez Ruiz M (Eds) Documentos Fauna Ibérica. 14. Museo Nacional de Ciencias Naturales, CSIC., Madrid, 83 pp.
- Ortiz-Sánchez J, Pauly A (2017) Contribution à la connaissance des Halictinae d'Espagne, avec un atlas des espèces de la Péninsule Ibérique (Hymenoptera: Apoidea: Halictidae). *Belgian Journal of Entomology* 54: 1-92.

- Packer L, Ruz L (2017) DNA barcoding the bees (Hymenoptera: Apoidea) of Chile: species discovery in a reasonably well known bee fauna with the description of a new species of *Lonchopria* (Colletidae). *Genome* 60 (5): 414-430. <https://doi.org/10.1139/gen-2016-0071>
- Pauly A, Noël G, Sonet G, Notton D, Boevé J (2019) Integrative taxonomy resuscitates two species in the *Lasioglossum villosulum* complex (Kirby, 1802) (Hymenoptera: Apoidea: Halictidae). *European Journal of Taxonomy* 541: 1-43. <https://doi.org/10.5852/ejt.2019.541>
- Paupério J, Fonseca N, Egeter B, Galhardo M, Ferreira S, Oxelfelt F, Aresta S, Martins F, Mata V, Veríssimo J, Puppo P, Pinto JC, Chaves C, Garcia-Raventós A, Peixoto S, da Silva LP, Vasconcelos S, Gil P, Khalatbari L, Jarman S, Beja P (2018) Deliverable 4.4 (D4.4): Protocol for next-gen analysis of eDNA samples, EnMetaGen project (Grant Agreement No 668981). Zenodo <https://doi.org/10.5281/zenodo.2586884>
- Peeters TM, Nieuwenhuijsen H, Smit J, van der Meer F, Raemakers IP, Heitmans WR, van Achterberg K, Kwak M, Loonstra AJ, de Rond J, Roos M, Reemer M (2012) *De Nederlandse Bijen*. [Bees of the Netherlands]. KNNV Uitgeverij, Zeist, 544 pp. [In Dutch].
- Praz C, Genoud D, Vaucher K, Bénon D, Monks J, Wood T (2022) Unexpected levels of cryptic diversity in European bees of the genus *Andrena* subgenus *Taeniandrena* (Hymenoptera, Andrenidae): implications for conservation. *Journal of Hymenoptera Research* 91: 375-428. <https://doi.org/10.3897/jhr.91.82761>
- Praz C, Bénon D (2023) Revision of the leachella group of *Megachile* subgenus *Eutricharaea* in the Western Palaearctic (Hymenoptera, Apoidea, Megachilidae): A renewed plea for DNA barcoding type material. *Journal of Hymenoptera Research* 95: 143-198. <https://doi.org/10.3897/jhr.95.96796>
- Praz C, Müller A, Bénon D, Herrmann M, Neumeyer R (2023) Annotated checklist of the Swiss bees (Hymenoptera, Apoidea, Anthophila): hotspots of diversity in the xeric inner Alpine valleys. *Alpine Entomology* 7: 219-267. <https://doi.org/10.3897/alpento.7.112514>
- Rasmont P, Devalez J, Pauly A, Michez D, Radchenko V (2017) Addition to the checklist of IUCN European wild bees (Hymenoptera: Apoidea). *Annales de la Société Entomologique de France (N.S.)* 53 (1): 17-32. <https://doi.org/10.1080/00379271.2017.1307696>
- Ratnasingham S, Hebert PD (2007) bold: The Barcode of Life Data System (<http://www.barcodinglife.org>). *Molecular Ecology Notes* 7 (3): 355-364. <https://doi.org/10.1111/j.1471-8286.2007.01678.x>
- Ratnasingham S, Hebert PN (2013) A DNA-Based Registry for All Animal Species: The Barcode Index Number (BIN) System. *PLoS ONE* 8 (7). <https://doi.org/10.1371/journal.pone.0066213>
- Reverté S, Miličić M, Ačanski J, Andrić A, Aracil A, Aubert M, Balzan MV, Bartomeus I, Bogusch P, Bosch J, Budrys E, Cantú-Salazar L, Castro S, Cornalba M, Demeter I, Devalez J, Dorchin A, Dufrière E, Đorđević A, Fisler L, Fitzpatrick Ú, Flaminio S, Földesi R, Gaspar H, Genoud D, Geslin B, Ghisbain G, Gilbert F, Gogala A, Grković A, Heimbürg H, Herrera-Mesías F, Jacobs M, Janković Milosavljević M, Janssen K, Jensen J, Ješovnik A, Józán Z, Karlis G, Kaspárek M, Kovács-Hostyánszki A, Kuhlmann M, Le Divelec R, Leclercq N, Likov L, Litman J, Ljubomirov T, Madsen HB, Marshall L, Mazánek L, Milić D, Mignot M, Mudri-Stojnić S, Müller A, Nedeljković Z, Nikolić P, Ødegaard F, Patiny S, Paukkunen J, Pennards G, Pérez-Bañón C, Perrard A,

- Petanidou T, Pettersson L, Popov G, Popov S, Praz C, Prokhorov A, Quaranta M, Radchenko V, Radenković S, Rasmont P, Rasmussen C, Reemer M, Ricarte A, Risch S, Roberts SM, Rojo S, Ropars L, Rosa P, Ruiz C, Sentil A, Shparyk V, Smit J, Sommaggio D, Soon V, Ssymank A, Ståhls G, Stavrinides M, Straka J, Tarlap P, Terzo M, Tomozii B, Tot T, van der Ent L, van Steenis J, van Steenis W, Varnava A, Vereecken N, Veselić S, Vesnić A, Weigand A, Wisniowski B, Wood T, Zimmermann D, Michez D, Vujčić A (2023) National records of 3000 European bee and hoverfly species: A contribution to pollinator conservation. *Insect Conservation and Diversity* <https://doi.org/10.1111/icad.12680>
- Rognes T, Flouri T, Nichols B, Quince C, Mahé F (2016) VSEARCH: a versatile open source tool for metagenomics. *PeerJ* 4 <https://doi.org/10.7717/peerj.2584>
  - Scheuchl E (2000) *Illustrierte Bestimmungstabellen der Wildbienen Deutschlands und Österreichs Band I: Anthophoridae 2. erweiterte Auflage*. Eigen Verlag, Velden, 189 pp.
  - Scheuchl E, Willner W (2016) *Taschenlexikon der Wildbienen Mitteleuropas. Alle Arten im Porträt*. Quelle & Meyer Verlag, Wiebelsheim, 917 pp.
  - Schmidt S, Schmid-Egger C, Morinière J, Haszprunar G, Hebert PN (2015) DNA barcoding largely supports 250 years of classical taxonomy: identifications for Central European bees (Hymenoptera, Apoidea partim). *Molecular Ecology Resources* 15 (4): 985-1000. <https://doi.org/10.1111/1755-0998.12363>
  - Shokralla S, Porter T, Gibson J, Dobosz R, Janzen D, Hallwachs W, Golding GB, Hajibabaei M (2015) Massively parallel multiplex DNA sequencing for specimen identification using an Illumina MiSeq platform. *Scientific Reports* 5 (1). <https://doi.org/10.1038/srep09687>
  - Smit J (2018) Identification key to the European species of the bee genus *Nomada* Scopoli, 1770 (Hymenoptera: Apidae), including 23 new species. *Entomofauna* 3: 1-253.
  - Stefanescu C, Asís J, Baños-Picón L, Cerdà X, Marcos García MA, Micó E, Ricarte A, Tormos J (2018) Diversity of insect pollinators in the Iberian Peninsula. *Ecosistemas* 27 (2): 9-22. <https://doi.org/10.7818/ecos.1391>
  - Straka J, Bogusch P (2011) Contribution to the taxonomy of the *Hylaeus gibbus* species group in Europe (Hymenoptera, Apoidea and Colletidae). *Zootaxa* 2932 (1). <https://doi.org/10.11646/zootaxa.2932.1.6>
  - Villalta I, Ledet R, Baude M, Genoud D, Bouget C, Cornillon M, Moreau S, Courtial B, Lopez-Vaamonde C (2021) A DNA barcode-based survey of wild urban bees in the Loire Valley, France. *Scientific Reports* 11 (1). <https://doi.org/10.1038/s41598-021-83631-0>
  - Warncke K (1992) Die westpaläarktischen Arten der Bienengattung *Sphecodes* Latr. (Hymenoptera, Apidae, Halictinae). *Bericht der Naturforschenden Gesellschaft Augsburg* 52: 9-64.
  - Williams P, Altanchimeg D, Byvaltsev A, De Jonghe R, Jaffar S, Japoshvili G, Kahono S, Liang H, Mei M, Monfared A, Nidup T, Raina R, Ren Z, Thanosing C, Zhao Y, Orr M (2020) Widespread polytypic species or complexes of local species? Revising bumblebees of the subgenus *Melanobombus* world-wide (Hymenoptera, Apidae, *Bombus*). *European Journal of Taxonomy* 719 (1). <https://doi.org/10.5852/ejt.2020.719.1107>
  - Wood T, Ghisbain G, Michez D, Praz C (2021) Revisions to the faunas of *Andrena* of the Iberian Peninsula and Morocco with the descriptions of four new species

- (Hymenoptera: Andrenidae). *European Journal of Taxonomy* 758: 147-193. <https://doi.org/10.5852/ejt.2021.758.1431>
- Wood T (2023) The genus *Andrena* Fabricius, 1775 in the Iberian Peninsula (Hymenoptera, Andrenidae). *Journal of Hymenoptera Research* 96: 241-484. <https://doi.org/10.3897/jhr.96.101873>
  - Wood TJ, Cross I, Baldock DW (2020) Updates to the bee fauna of Portugal with the description of three new Iberian *Andrena* species (Hymenoptera: Apoidea: Anthophila). *Zootaxa* 4790 (2). <https://doi.org/10.11646/zootaxa.4790.2.1>
  - Wood TJ (2022) Two new overlooked bee species from Spain (Hymenoptera: Anthophila: Andrenidae, Apidae). *Osmia* 10: 1-12. <https://doi.org/10.47446/OSMIA>
  - Wood TJ, Le Divelec R (2022) Cryptic diversity revealed in a revision of West Palearctic *Nomiapis* and *Systropha* (Hymenoptera: Halictidae). *Diversity* 14 (11). <https://doi.org/10.3390/d14110920>
  - Zattara E, Aizen M (2021) Worldwide occurrence records suggest a global decline in bee species richness. *One Earth* 4 (1): 114-123. <https://doi.org/10.1016/j.oneear.2020.12.005>
  - Zenz K, Zettel H, Kuhlmann M, Krenn H (2021) Morphology, pollen preferences and DNA-barcoding of five Austrian species in the *Colletes succinctus* group (Hymenoptera, Apidae). *Deutsche Entomologische Zeitschrift* 68 (1): 101-138. <https://doi.org/10.3897/dez.68.55732>

## Supplementary materials

### Suppl. material 1: DS-IBIHY01 IBI Bees of Iberia library - Specimen details [doi](#)

**Authors:** Thomas Wood, Hugo Gaspar, Romain Le Divelec, Andreia Penado, Teresa Luisa Silva, Vanessa Mata, Joana Veríssimo, Deniz Michez, Sílvia Castro, João Loureiro, Pedro Beja, Sónia Ferreira

**Data type:** Record information - specimen data

**Brief description:** The file includes information about all records in BOLD for the DS-IBIHY01 IBI Bees of Iberia library. It contains collection and identification data.

[Download file](#) (370.61 kb)

### Suppl. material 2: DS-IBIHY01 IBI Bees of Iberia library - DNA sequences [doi](#)

**Authors:** Thomas Wood, Hugo Gaspar, Romain Le Divelec, Andreia Penado, Teresa Luisa Silva, Vanessa Mata, Joana Veríssimo, Deniz Michez, Sílvia Castro, João Loureiro, Pedro Beja, Sónia Ferreira

**Data type:** Genomic data, DNA sequences

**Brief description:** COI sequences in fasta format. Each sequence is identified by the BOLD ProcessID, species name, marker and GenBank accession number, separated by pipe.

[Download file](#) (718.06 kb)

**Suppl. material 3: DS-IBIHY01 IBI Bees of Iberia library - Darwin Core Standard**[doi](#)

**Authors:** Thomas Wood, Hugo Gaspar, Romain Le Divelec, Andreia Penado, Teresa Luisa Silva, Vanessa Mata, Joana Veríssimo, Deniz Michez, Sílvia Castro, João Loureiro, Pedro Beja, Sónia Ferreira

**Data type:** Record information - specimen data in Darwin Core Standard format

**Brief description:** The file includes information about all records in BOLD for the DS-IBIHY01 IBI Bees of Iberia library. It contains collection and identification data.

[Download file](#) (413.16 kb)

**Suppl. material 4: NJ tree of bee DNA barcodes** [doi](#)

**Authors:** Thomas Wood, Hugo Gaspar, Romain Le Divelec, Andreia Penado, Teresa Luisa Silva, Vanessa Mata, Joana Veríssimo, Deniz Michez, Sílvia Castro, João Loureiro, Pedro Beja, Sónia Ferreira

**Data type:** Phylogenetic tree

**Brief description:** NJ tree of all Bee DNA barcodes generated in the InBIO Barcoding Initiative Database: DNA barcodes of Iberian Bees.

[Download file](#) (44.67 kb)

**Suppl. material 5: BOLD Systems Hitlist of Portuguese Bees** [doi](#)

**Authors:** Thomas Wood, Sónia Ferreira

**Data type:** Species list

**Brief description:** List of bee species with occurrence known in Portugal, but lacking specimens and/or sequences and/or DNA barcodes in BOLD database on 8 February 2024.

[Download file](#) (11.51 kb)