

# Lisa Robinson

## OR Bee Atlas Collection and Identification Report

### 1 Your 2023 Collections

Lisa Robinson caught 82 bees across 7 counties from June 01, 2023 to September 20, 2023, representing 28 unique taxa, including 15 unique species.

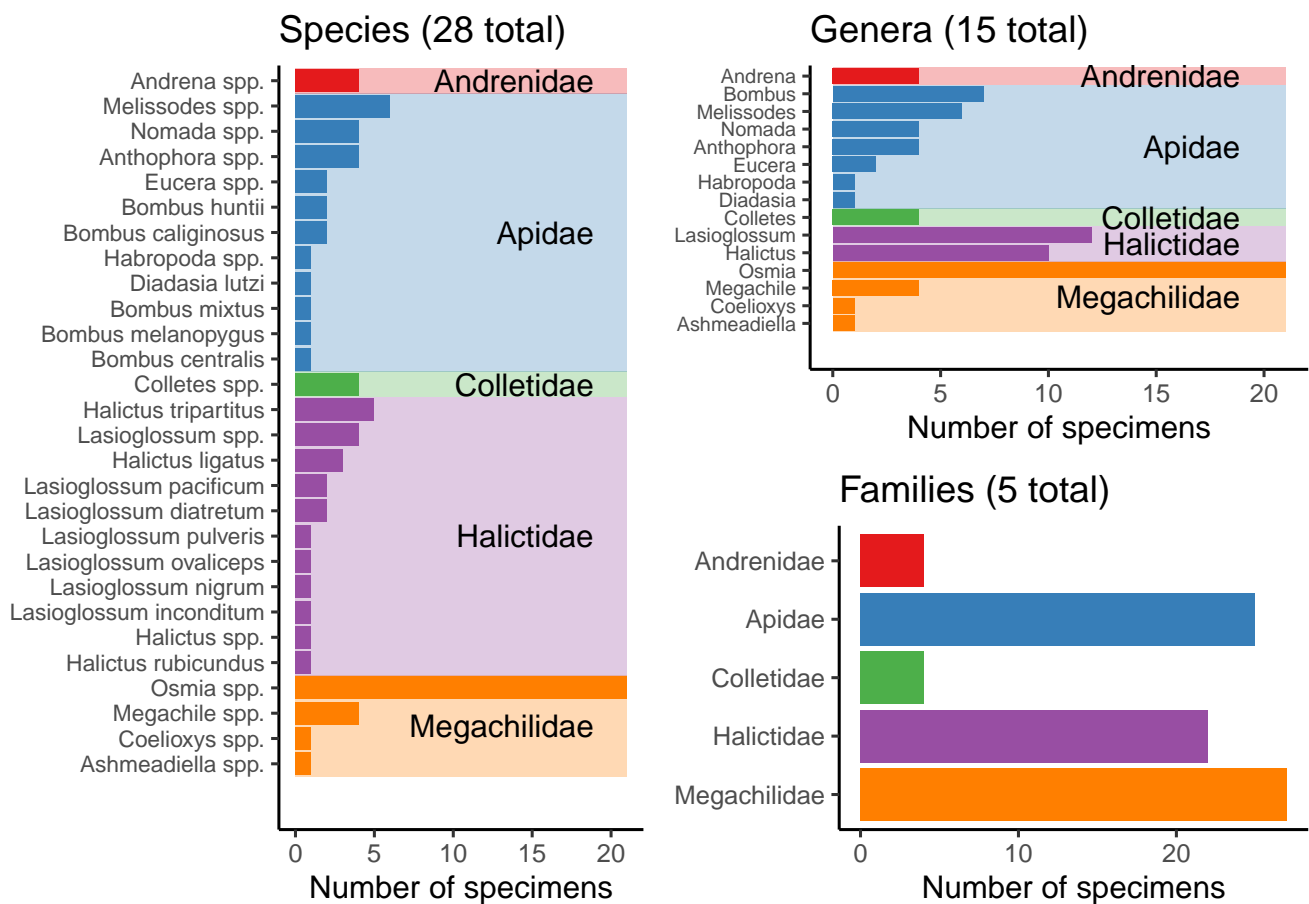


Figure 1: Bees caught by Lisa Robinson, broken down by species, genus, and family.

# 2 All Your Collections

Lisa Robinson caught 333 bees across 12 counties from July 24, 2020 to September 20, 2023, representing 62 unique taxa, including 43 unique species.

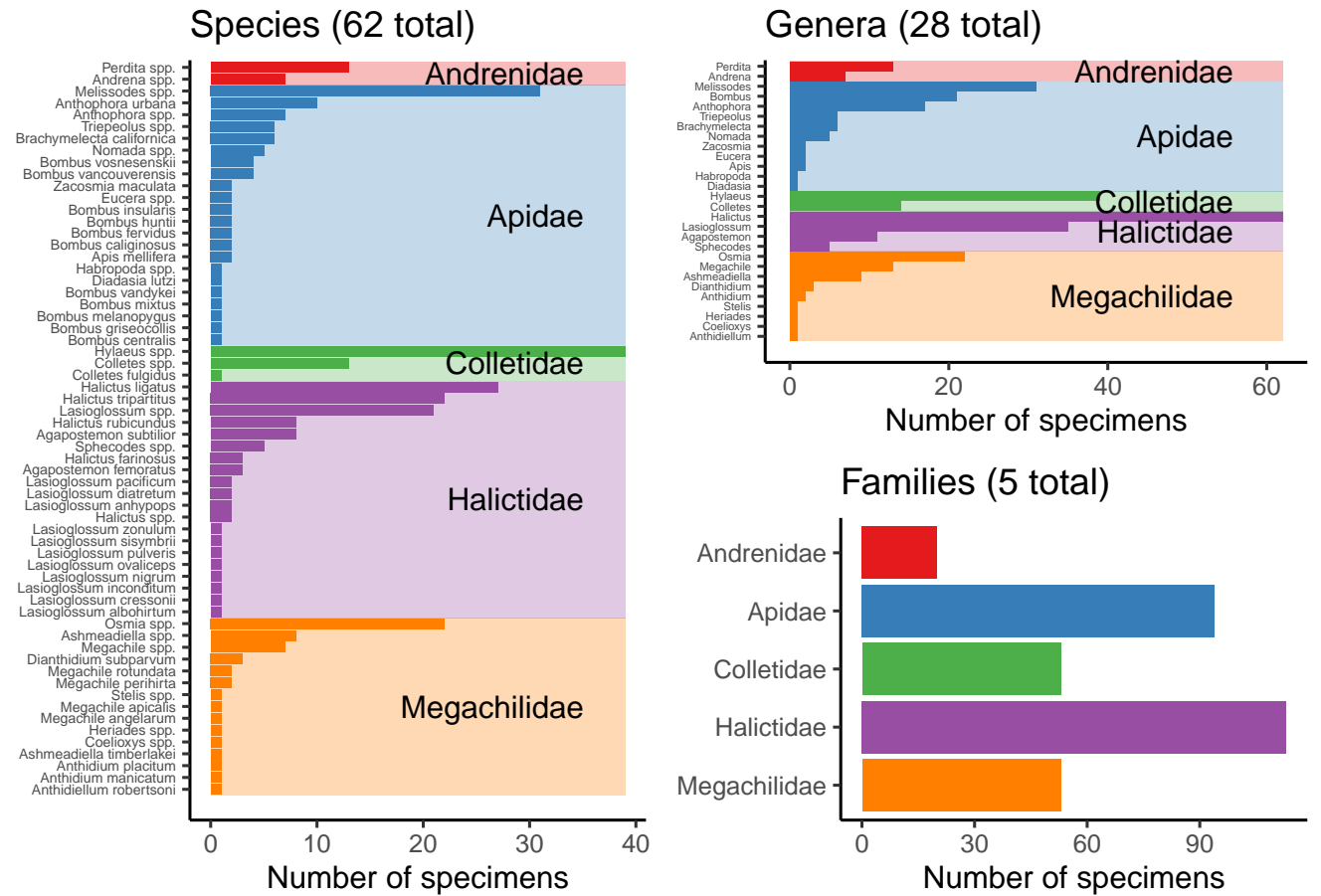


Figure 2: Bees caught by Lisa Robinson, broken down by species, genus, and family.

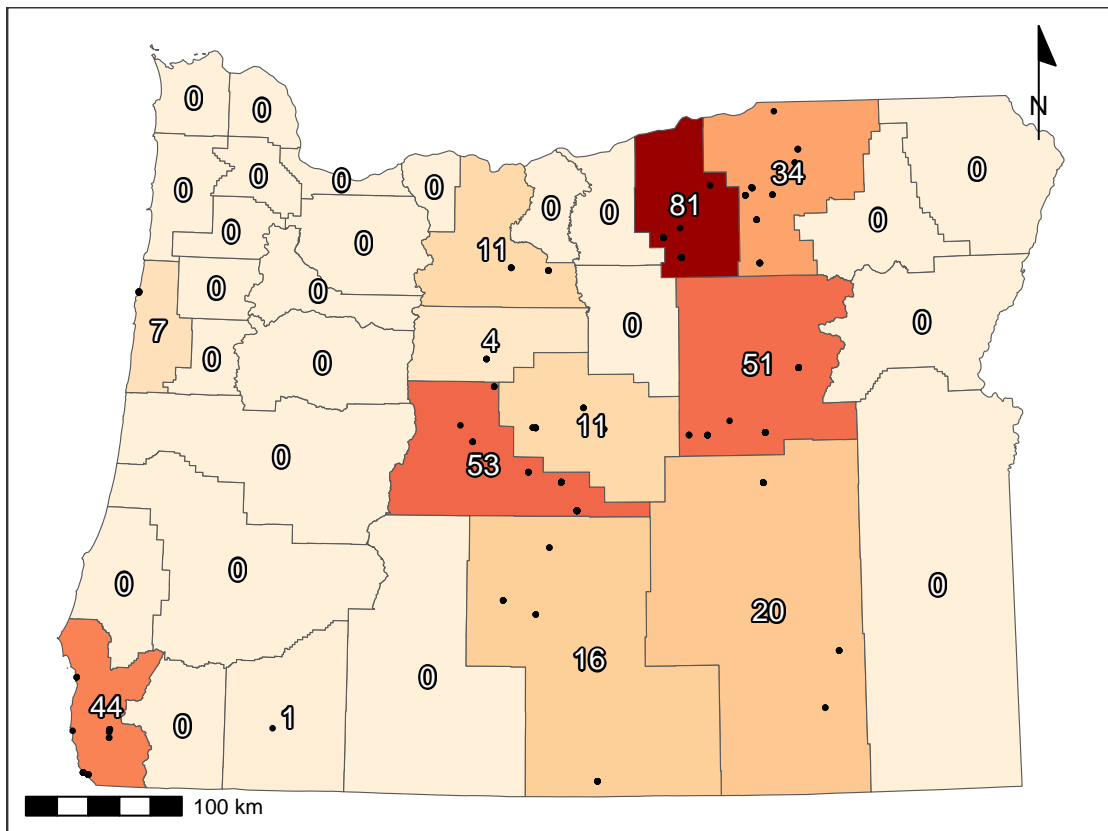


Figure 3: Bee catch locations for Lisa Robinson (within ^OR\$), along with total catches per county.

### 3 Total Catches

Volunteers from the Oregon Bee Atlas project caught 22478 bees across 36 counties from January 24, 2023 to December 13, 2023, representing 90 unique species and 48 unique genera. The **Nimble Net Kudos** (most specimens collected) goes to Scott Sublette, Dan O'Loughlin, and Michael O'Loughlin, who caught a total of 2274, 1283, and 1255 specimens. The *positive* kind of **Darwin Award** (most species collected) goes to Scott Sublette, Ellen Silva, and Michael O'Loughlin, who caught a total of 77, 74, and 72 unique species. Well done!

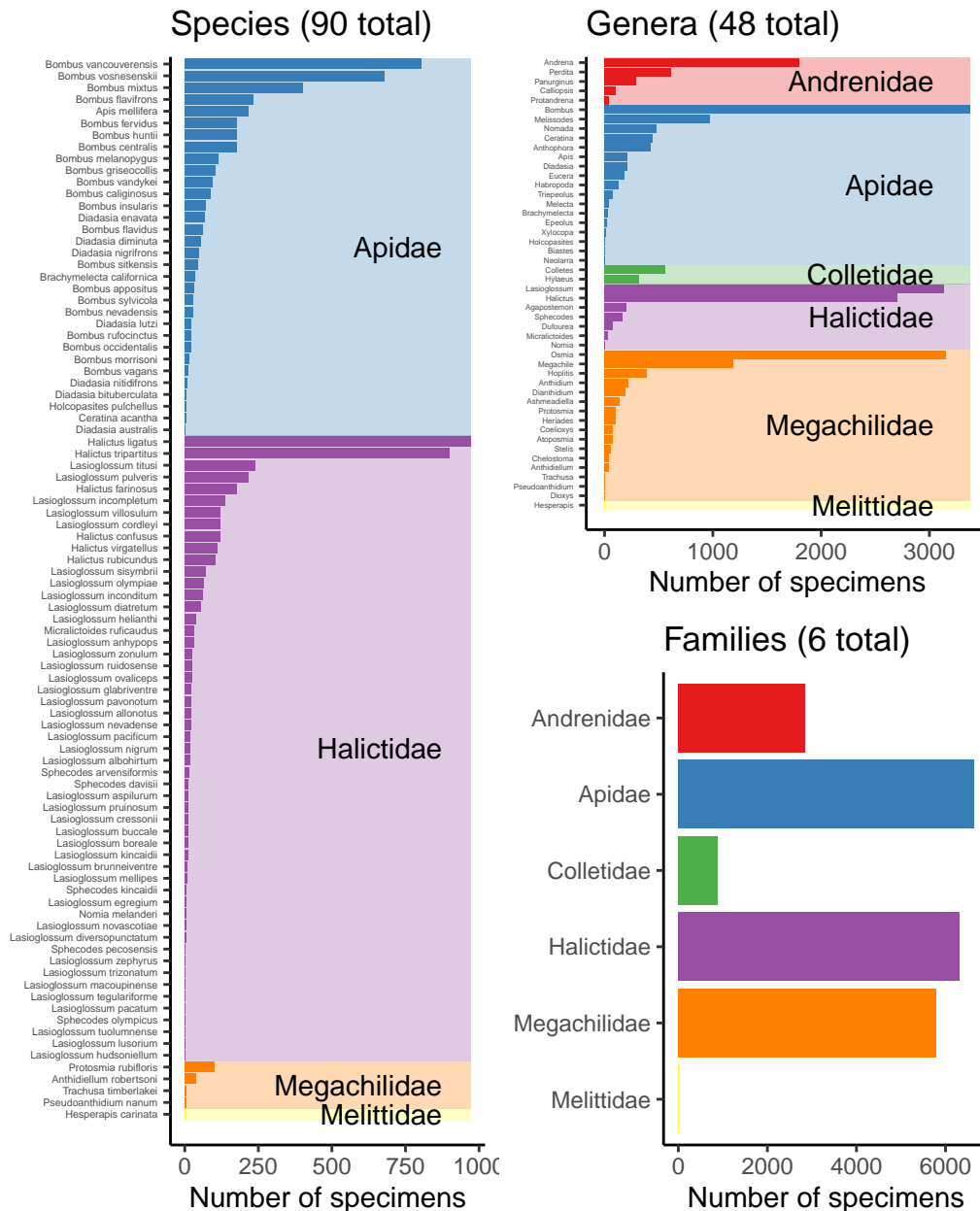


Figure 4: Bees caught by all volunteers, broken down by species, genus, and family.

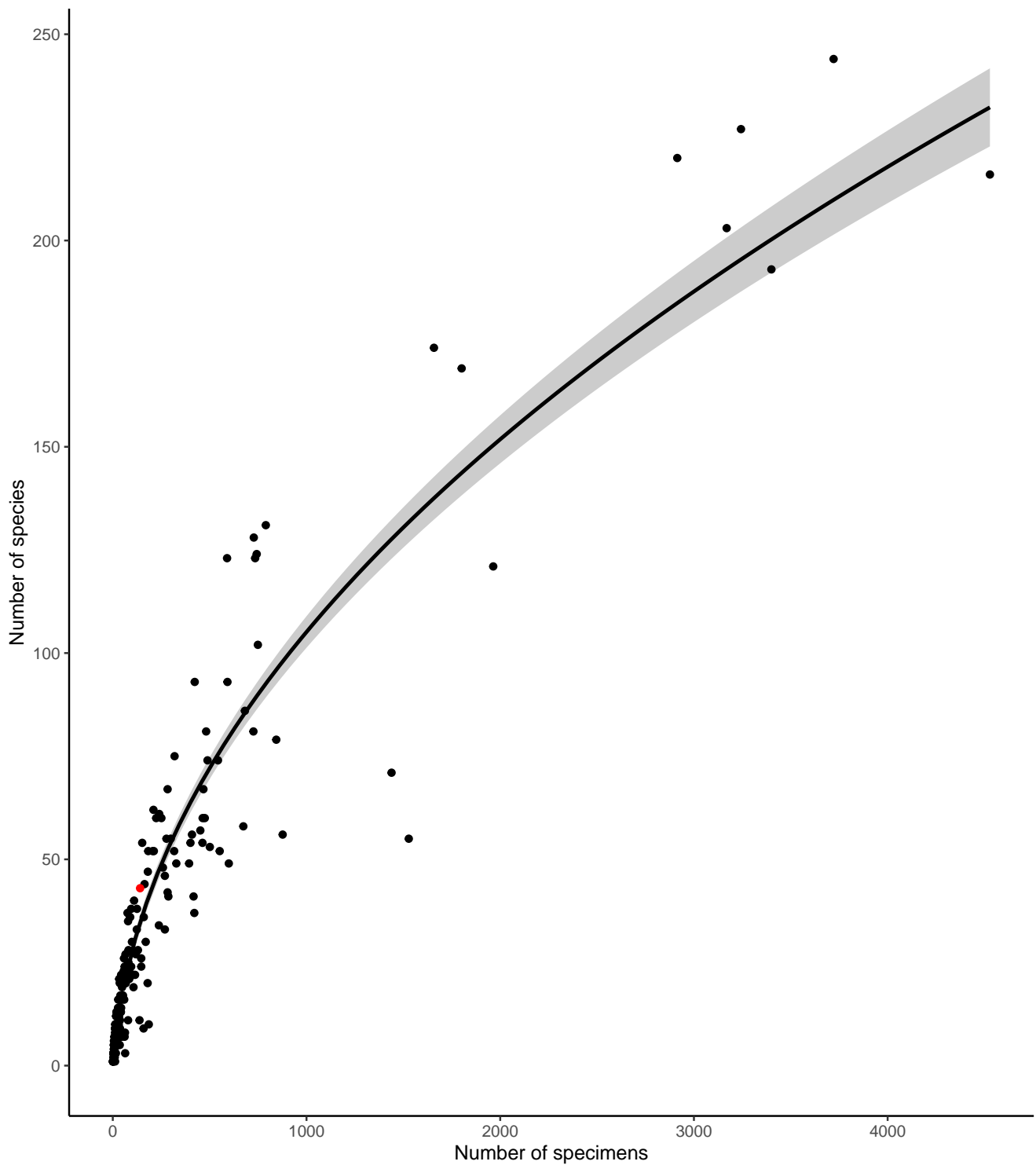


Figure 5: Number of bee specimens and unique bee species caught by all volunteers, with your effort shown in red. This graph should give you an idea of how many specimens you would need to catch to begin seeing rarer bee species.

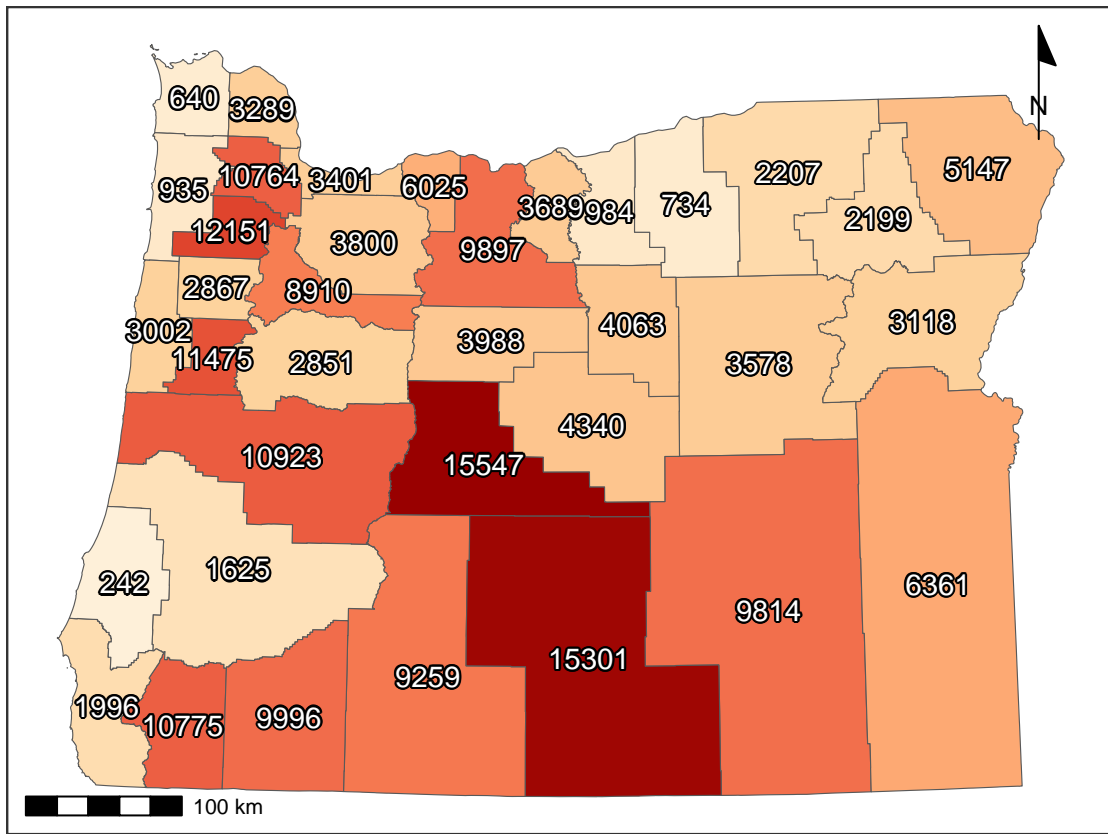


Figure 6: Total specimens caught per county, along with catch location of each specimen (black dots). For genus- and species-specific information for each county, see Tables 3 and 4.

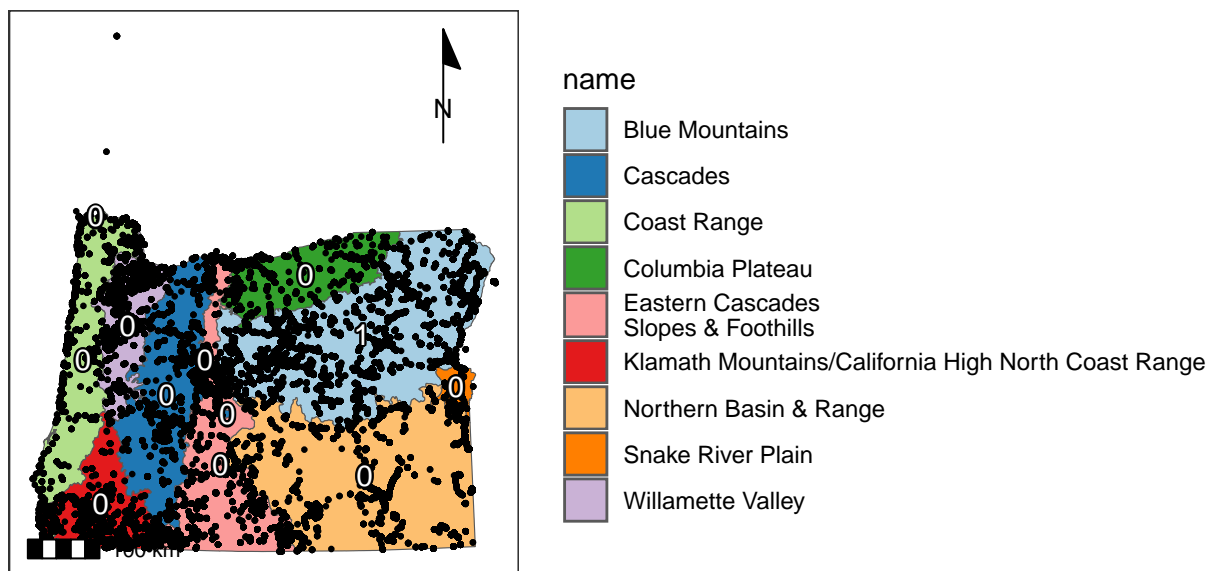


Figure 7: Total catches per (Level III) ecoregion, along with catch location of each specimen (black dots).

## 4 Flight Phenology

## 5 Plant genera

Volunteers collected specimens from a total of 636 unique flower genera, with most volunteers sampling from 19 flower genera (median value). The **Flower Power Kudos** (most sampled flower genera) goes to Michael O'Loughlin, Lori Humphreys, and Dan O'Loughlin, who collected bees from a total of 246, 210, and 188 genera of flowers. Well done!

The flower genera that had the most specimens caught on them were *Ericameria*, *Phacelia*, and *Penstemon*, which yielded a total of 6308, 4129, and 3416 specimens. The flower genera that were popular with the most species of bees were *Phacelia*, *Penstemon*, and *Ericameria*, hosting a total of 179, 167, and 140 unique bee species. See Tables 1 and 2 for more details.

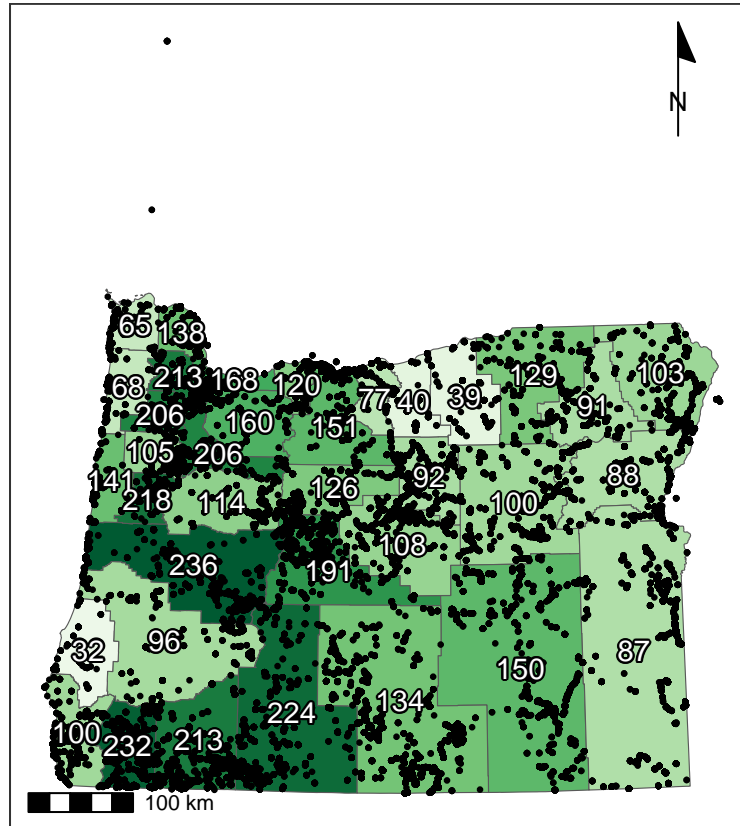


Figure 8: Recorded number of flower genera per county.

Table 1: Number of bee specimens collected from each plant genus. Plants with few records are great targets for future sampling.

Genus	Count	Genus	Count	Genus	Count	Genus	Count	Genus	Count	Genus	Count	Genus	Count
<i>Ericameria</i>	6308	<i>Chaenactis</i>	274	<i>Rupertia</i>	65	<i>Anchusa</i>	26	<i>Alyssum</i>	10	<i>Abronia</i>	5	<i>Actaea</i>	2
<i>Phacelia</i>	4129	<i>Acer</i>	271	<i>Adelinia</i>	64	<i>Caryopteris</i>	25	<i>Cercis</i>	10	<i>Apium</i>	5	<i>Allophylum</i>	2
<i>Penstemon</i>	3416	<i>Sphaeralcea</i>	271	<i>Ageratina</i>	64	<i>Navaretia</i>	25	<i>Doronicum</i>	10	<i>Cistus</i>	5	<i>Bauhinia</i>	2
<i>Grindelia</i>	2857	<i>Heracleum</i>	270	<i>Calyptridium</i>	64	<i>Pedicularis</i>	25	<i>Echinops</i>	10	<i>Anthriscus</i>	4	<i>Betonica</i>	2
<i>Rubus</i>	2658	<i>Gaillardia</i>	263	<i>Glebionis</i>	64	<i>Petrosedum</i>	25	<i>Heliopsis</i>	10	<i>Aruncus</i>	4	<i>Bromus</i>	2
<i>Ceanothus</i>	2350	<i>Crataegus</i>	261	<i>Crocidium</i>	62	<i>Pieris</i>	25	<i>Hemerocallis</i>	10	<i>Asperugo</i>	4	<i>Cardionema</i>	2
<i>Cirsium</i>	2349	<i>Acmispon</i>	258	<i>Agoseris</i>	60	<i>Erythraea</i>	24	<i>Kickxia</i>	10	<i>Beta</i>	4	<i>Castanea</i>	2
<i>Salix</i>	2169	<i>Gilia</i>	247	<i>Cotinus</i>	60	<i>Lewisia</i>	24	<i>Layia</i>	10	<i>Crassula</i>	4	<i>Celosia</i>	2
<i>Solidago</i>	1914	<i>Malus</i>	243	<i>Hirschfeldia</i>	59	<i>Lobularia</i>	24	<i>Aliciella</i>	9	<i>Damasonium</i>	4	<i>Comandra</i>	2
<i>Potentilla</i>	1842	<i>Marah</i>	234	<i>Iliamna</i>	59	<i>Rhaponticum</i>	24	<i>Choisya</i>	9	<i>Datura</i>	4	<i>Cormus</i>	2
<i>Prunus</i>	1726	<i>Vaccinium</i>	223	<i>Persicaria</i>	59	<i>Sambucus</i>	24	<i>Diplacus</i>	9	<i>Elymus</i>	4	<i>Crocus</i>	2
<i>Chrysothamnus</i>	1684	<i>Veronica</i>	213	<i>Arbutus</i>	57	<i>Stewartia</i>	24	<i>Draba</i>	9	<i>Gypsophila</i>	4	<i>Cydonia</i>	2
<i>Eriogonum</i>	1597	<i>Philadelphus</i>	204	<i>Foeniculum</i>	57	<i>Calluna</i>	23	<i>Frazinus</i>	9	<i>Helleborus</i>	4	<i>Danthonia</i>	2
<i>Helianthus</i>	1572	<i>Astragalus</i>	202	<i>Blepharipappus</i>	56	<i>Cardamine</i>	23	<i>Lagophylla</i>	9	<i>Holcus</i>	4	<i>Daphne</i>	2
<i>Lupinus</i>	1495	<i>Raphanus</i>	199	<i>Dalea</i>	55	<i>Chamaebatiaria</i>	23	<i>Maianthemum</i>	9	<i>Impatiens</i>	4	<i>Dianthus</i>	2
<i>Ribes</i>	1419	<i>Amsinckia</i>	197	<i>Eryngium</i>	55	<i>Phlox</i>	23	<i>Melissa</i>	9	<i>Kopsiopsis</i>	4	<i>Dipterostemon</i>	2
<i>Symphoricarpon</i>	1418	<i>Convolvulus</i>	194	<i>Lithospermum</i>	55	<i>Robinia</i>	23	<i>Mimulus</i>	9	<i>Mutarda</i>	4	<i>Echinocephala</i>	2
<i>Hypochaeris</i>	1392	<i>Hydrophyllum</i>	180	<i>Mertensia</i>	55	<i>Smithiastrum</i>	23	<i>Papaver</i>	9	<i>Patonia</i>	4	<i>Eucephalus</i>	2
<i>Arctostaphylos</i>	1333	<i>Polemonium</i>	179	<i>Sorbus</i>	54	<i>Aralia</i>	22	<i>Vernonia</i>	9	<i>Pastinaca</i>	4	<i>Festuca</i>	2
<i>Lomatium</i>	1308	<i>Taraxia</i>	179	<i>Lamium</i>	53	<i>Erythronium</i>	22	<i>Vitez</i>	9	<i>Prosartes</i>	4	<i>Achlys</i>	1
<i>Taraxacum</i>	1286	<i>Coreopsis</i>	178	<i>Styrax</i>	53	<i>Leptosiphon</i>	22	<i>Aesculus</i>	8	<i>Pseudognaphalium</i>	4	<i>Actinidia</i>	1
<i>Melilotus</i>	1241	<i>Iris</i>	178	<i>Antennaria</i>	52	<i>Pseudotsuga</i>	22	<i>Aronia</i>	8	<i>Romanoffia</i>	4	<i>Allotropa</i>	1
<i>Calochortus</i>	1224	<i>Amelanchier</i>	177	<i>Cynoglossum</i>	52	<i>Quercus</i>	22	<i>Baptisia</i>	8	<i>Scabiosa</i>	4	<i>Alnus</i>	1
<i>Eriophyllum</i>	1198	<i>Arnica</i>	166	<i>Cytisus</i>	52	<i>Artemisia</i>	21	<i>Calandrinia</i>	8	<i>Swainsona</i>	4	<i>Alstroemeria</i>	1
<i>Erigeron</i>	1177	<i>Angelica</i>	159	<i>Geum</i>	52	<i>Conium</i>	21	<i>Canadanthus</i>	8	<i>Tephrosieris</i>	4	<i>Amaranthus</i>	1
<i>Lotus</i>	1147	<i>Delphinium</i>	158	<i>Ilex</i>	52	<i>Eurybia</i>	21	<i>Cordylanthus</i>	8	<i>Tiarella</i>	4	<i>Anemone</i>	1
<i>Centauria</i>	1106	<i>Medicago</i>	158	<i>Aurinia</i>	51	<i>Hemizonella</i>	21	<i>Eruca</i>	8	<i>Trudescantia</i>	4	<i>Anethum</i>	1
<i>Trifolium</i>	1072	<i>Castilleja</i>	154	<i>Boykinia</i>	51	<i>Micanthes</i>	21	<i>Eupatorium</i>	8	<i>Triantha</i>	4	<i>Arctium</i>	1
<i>Leucanthemum</i>	989	<i>Calendula</i>	142	<i>Caragana</i>	51	<i>Sisyrinchium</i>	21	<i>Ficaria</i>	8	<i>Tribulus</i>	4	<i>Argemone</i>	1
<i>Vicia</i>	988	<i>Nemophila</i>	142	<i>Viburnum</i>	51	<i>Cicuta</i>	20	<i>Lithodora</i>	8	<i>Tropaeolum</i>	4	<i>Atriplex</i>	1
<i>Chamaenerion</i>	983	<i>Tanacetum</i>	139	<i>Linum</i>	50	<i>Pinus</i>	20	<i>Nasturtium</i>	8	<i>Zeltnera</i>	4	<i>Begonia</i>	1
<i>Balsamorhiza</i>	914	<i>Marrubium</i>	138	<i>Scandix</i>	50	<i>Populus</i>	20	<i>Phyllodoce</i>	8	<i>Aegopodium</i>	3	<i>Betula</i>	1
<i>Lepidium</i>	862	<i>Cornus</i>	135	<i>Nothochelone</i>	49	<i>Bellardia</i>	19	<i>Poa</i>	8	<i>Armeria</i>	3	<i>Cacaliopsis</i>	1
<i>Achillea</i>	828	<i>Linnaea</i>	133	<i>Brodiaea</i>	48	<i>Clematis</i>	19	<i>Spergula</i>	8	<i>Asparagus</i>	3	<i>Calibrachoa</i>	1
<i>Apocynum</i>	804	<i>Verbena</i>	132	<i>Cotoneaster</i>	48	<i>Hymenoxys</i>	19	<i>Astrantia</i>	8	<i>Stranleya</i>	3	<i>Carex</i>	1
<i>Mentha</i>	786	<i>Carduus</i>	123	<i>Tragopogon</i>	48	<i>Ladearia</i>	19	<i>Tagetes</i>	8	<i>Aucuba</i>	3	<i>Catalpa</i>	1
<i>Sidalcea</i>	767	<i>Mentzelia</i>	122	<i>Tetradymia</i>	47	<i>Abelia</i>	18	<i>Xerophyllum</i>	8	<i>Brunnera</i>	3	<i>Cerinth</i>	1
<i>Eschscholzia</i>	766	<i>Triteleia</i>	118	<i>Teucrium</i>	47	<i>Alisma</i>	18	<i>Ajuga</i>	7	<i>Buzus</i>	3	<i>Chaenomeles</i>	1
<i>Ranunculus</i>	765	<i>Dasiphora</i>	114	<i>Echinacea</i>	46	<i>Amorpha</i>	18	<i>Centaurium</i>	7	<i>Calocedrus</i>	3	<i>Chamaecnium</i>	1
<i>Holodiscus</i>	693	<i>Dipsacus</i>	112	<i>Kolkwitzia</i>	44	<i>Euonymus</i>	18	<i>Croton</i>	7	<i>Camellia</i>	3	<i>Chimaphila</i>	1
<i>Allium</i>	667	<i>Hosackia</i>	111	<i>Orthocarpus</i>	44	<i>Physaria</i>	18	<i>Cymopterus</i>	7	<i>Centranthus</i>	3	<i>Corydalis</i>	1
<i>Bellis</i>	662	<i>Fraseria</i>	109	<i>Stellaria</i>	44	<i>Salsola</i>	18	<i>Delosperma</i>	7	<i>Centromadia</i>	3	<i>Cypripedium</i>	1
<i>Plagiobothrys</i>	656	<i>Euthamia</i>	108	<i>Chrysopsis</i>	43	<i>Bassia</i>	17	<i>Eucyphia</i>	7	<i>Chrysopsis</i>	3	<i>Eremothera</i>	1
<i>Camassia</i>	648	<i>Lonicera</i>	107	<i>Opuntia</i>	42	<i>Olsynium</i>	17	<i>Clandora</i>	7	<i>Circaea</i>	3	<i>Filipendula</i>	1
<i>Spiraea</i>	640	<i>Bistorta</i>	105	<i>Petroselinum</i>	42	<i>Vancouveria</i>	17	<i>Gleditsia</i>	7	<i>Clinopodium</i>	3	<i>Forsythia</i>	1
<i>Symphoricarpon</i>	614	<i>Dieteria</i>	105	<i>Aster</i>	41	<i>Hydrangea</i>	16	<i>Heliotropium</i>	7	<i>Clintonia</i>	3	<i>Fremontodendron</i>	1
<i>Geranium</i>	607	<i>Malva</i>	105	<i>Gayophytum</i>	41	<i>Kelloggia</i>	16	<i>Hyssopus</i>	7	<i>Conioselinum</i>	3	<i>Fuchsia</i>	1
<i>Berberis</i>	592	<i>Anthemis</i>	104	<i>Ligusticum</i>	41	<i>Lilium</i>	16	<i>Isatis</i>	7	<i>Crococoma</i>	3	<i>Glechoma</i>	1
<i>Rosa</i>	575	<i>Bidens</i>	104	<i>Primula</i>	41	<i>Toxicodendron</i>	16	<i>Kniphofia</i>	7	<i>Cucumis</i>	3	<i>Gnaphalium</i>	1
<i>Jacobaea</i>	555	<i>Thymus</i>	103	<i>Verbascum</i>	41	<i>Zinnia</i>	16	<i>Leucophyalis</i>	7	<i>Dahlia</i>	3	<i>Grayia</i>	1
<i>Senecio</i>	533	<i>Mahonia</i>	101	<i>Columbiadaria</i>	40	<i>Gentiana</i>	15	<i>Oralis</i>	7	<i>Deutzia</i>	3	<i>Helianthemum</i>	1
<i>Salvia</i>	520	<i>Chondrilla</i>	99	<i>Hieracium</i>	40	<i>Jaumea</i>	15	<i>Parthenocissus</i>	7	<i>Pritillaria</i>	3	<i>Knausia</i>	1
<i>Rhus</i>	493	<i>Oenothera</i>	97	<i>Leontodon</i>	40	<i>Oenanthe</i>	15	<i>Physalis</i>	7	<i>Galium</i>	3	<i>Lepechinia</i>	1
<i>Agastache</i>	489	<i>Stachys</i>	97	<i>Spergularia</i>	40	<i>Scorzoneroidea</i>	15	<i>Pilosella</i>	7	<i>Garrya</i>	3	<i>Leucocarpus</i>	1
<i>Madia</i>	484	<i>Purshia</i>	95	<i>Toxicoscordium</i>	40	<i>Boechera</i>	14	<i>Sanguisorba</i>	7	<i>Iva</i>	3	<i>Lycocystaria</i>	1
<i>Daucus</i>	482	<i>Heterotheca</i>	94	<i>Barbarea</i>	38	<i>Pyraecantha</i>	14	<i>Townsendia</i>	7	<i>Lippia</i>	3	<i>Limnium</i>	1
<i>Sedum</i>	457	<i>Cleome</i>	93	<i>Linaria</i>	38	<i>Umbellularia</i>	14	<i>Tulipa</i>	7	<i>Microsteris</i>	3	<i>Linnaea</i>	1
<i>Clarkia</i>	451	<i>Cucurbita</i>	93	<i>Erica</i>	36	<i>Arabis</i>	13	<i>Antirrhinum</i>	6	<i>Misopates</i>	3	<i>Ludwigia</i>	1
<i>Hackelia</i>	436	<i>Pyrrus</i>	93	<i>Lithophragma</i>	36	<i>Cerastium</i>	13	<i>Arum</i>	6	<i>Olea</i>	3	<i>Lunaria</i>	1
<i>Sisymbrium</i>	430	<i>Polygonum</i>	91	<i>Borago</i>	35	<i>Dicentra</i>	13	<i>Cakile</i>	6	<i>Osmanthus</i>	3	<i>Lycopus</i>	1
<i>Brassica</i>	426	<i>Plantago</i>	89	<i>Microseris</i>	35	<i>Glycyrrhiza</i>	13	<i>Caltha</i>	6	<i>Pedicularis</i>	3	<i>Machaeranthera</i>	1
<i>Drymocallis</i>	421	<i>Thermopsis</i>	89	<i>Oreocarya</i>	35	<i>Hylotelephium</i>	13	<i>Capsella</i>	6	<i>Petasites</i>	3	<i>Magnolia</i>	1
<i>Asclepias</i>	411	<i>Heuchera</i>	88	<i>Cercocarpus</i>	34	<i>Ipomopsis</i>	13	<i>Distichlis</i>	6	<i>Phoeniculus</i>	3	<i>Melaleuca</i>	1
<i>Claytonia</i>	403	<i>Perideridia</i>	86	<i>Pyrrhocoma</i>	34	<i>Nothocalais</i>	13	<i>Galanthus</i>	6	<i>Physoctegia</i>	3	<i>Moenchia</i>	1
<i>Physocarpus</i>	403	<i>Doellingeria</i>	84	<i>Agapanthus</i>	32	<i>Notholithocarpus</i>	13	<i>Gratiola</i>	6	<i>Silphium</i>	3	<i>Myrcia</i>	1
<i>Anaphalis</i>	401	<i>Fagopyrum</i>	81	<i>Campanula</i>	32	<i>Pentaglottis</i>	13	<i>Hastingsia</i>	6	<i>Valeriana</i>	3	<i>Nicotiana</i>	1
<i>Prunella</i>	401	<i>Trichostema</i>	80	<i>Chorispora</i>	32	<i>Platanthera</i>	13	<i>Hemizonia</i>	6	<i>Vinca</i>	3	<i>Nuphar</i>	1
<i>Fragaria</i>	383	<i>Myosotis</i>	79	<i>Collomia</i>	32	<i>Reynoutria</i>	13	<i>Hibiscus</i>	6	<i>Hyacinthus</i>	2	<i>Nymphaea</i>	1
<i>Plectritis</i>	381	<i>Thlaspi</i>	79	<i>Lasthenia</i>	32	<i>Sanicula</i>	13	<i>Ivesia</i>	6	<i>Juglans</i>	2	<i>Onobrychis</i>	1
<i>Nepeta</i>	376	<i>Cosmos</i>	78	<i>Satureja</i>	32	<i>Scutellaria</i>	13	<i>Juniperus</i>	6	<i>Ligularia</i>	2	<i>Oplopanax</i>	1
<i>Lavandula</i>	372	<i>Hesperochiron</i>	78	<i>Eremogone</i>	31	<i>Teesdadia</i>	13	<i>Nestotis</i>	6	<i>Ligustrum</i>	2	<i>Osteospermum</i>	1
<i>Horkelia</i>	352	<i>Solanum</i>	78	<i>Escallonia</i>	31	<i>Tithonia</i>	13	<i>Rheum</i>	6	<i>Lobelia</i>	2	<i>Orytheca</i>	1
<i>Lathyrus</i>	345	<i>Oreostemma</i>	77	<i>Hyacinthoides</i>	31	<i>Abies</i>	12	<i>Securigera</i>	6	<i>Lysimachia</i>	2	<i>Parnassia</i>	1
<i>Wyethia</i>	341	<i>Syringa</i>	77	<i>Scrophularia</i>	31	<i>Cortandrum</i>	12	<i>Tolmiea</i>	6	<i>Mochringia</i>	2	<i>Pedicularis</i>	1
<i>Monardella</i>	339	<i>Downingia</i>	76	<i>Alcea</i>	30	<i>Elaeagnus</i>	12	<i>Veronicastrum</i>	6	<i>Ocimum</i>	2	<i>Phedimus</i>	1
<i>Erythranthe</i>	338	<i>Digitalis</i>	75	<i>Cuscuta</i>	30	<i>Sinapis</i>	12	<i>Corylus</i>	5	<i>Omphalodes</i>	2	<i>Platycodon</i>	1
<i>Rudbeckia</i>	330	<i>Erodium</i>	75	<i>Aconitum</i>	29	<i>Weigela</i>	12	<i>Eriastrum</i>	5	<i>Patrinia</i>	2	<i>Pteleacanthus</i>	1
<i>Gutierrezia</i>	324	<i>Oenothera</i>	75	<i>Argentina</i>	29	<i>Arenaria</i>	11	<i>Fagus</i>	5	<i>Pelargonium</i>	2	<i>Polystichum</i>	1
<i>Collinsia</i>	321	<i>Packera</i>	74	<i>Lapsana</i>	29	<i>Buddleja</i>	11	<i>Hedera</i>	5	<i>Petunia</i>	2	<i>Rhamnus</i>	1
<i>Helenium</i>	300	<i>Rorippa</i>	74	<i>Sonchus</i>	29	<i>Kalmia</i>	11	<i>Hesperis</i>	5	<i>Picea</i>	2	<i>Romneya</i>	1
<i>Origanum</i>	297	<i>Baccharis</i>	73	<i>Wisteria</i>	29	<i>Luetkea</i>	11	<i>Inula</i>	5	<i>Portulaca</i>	2	<i>Santolina</i>	1
<i>Epilobium</i>	295	<i>Aquilegia</i>	72	<i>Cynara</i>	28	<i>Matricaria</i>	11	<i>Lagerstroemia</i>	5	<i>Pulmonaria</i>	2	<i>Saponaria</i>	1
<i>Onopordum</i>	294	<i>Whipplea</i>	72	<i>Echium</i>	28	<i>Sherardia</i>	11	<i>Laurus</i>	5	<i>Rumex</i>	2	<i>Sempervivum</i>	1
<i>Cichorium</i>	291	<i>Euphorbia</i>	71	<i>Valeriana</i>	28	<i>Urtica</i>	11	<i>Minuartia</i>	5	<i>Saussurea</i>	2	<i>Sisylia</i>	1
<i>Crepis</i>	291	<i>Frangula</i>	70	<i>Helianthella</i>	27	<i>Liatris</i>	10	<i>Montia</i>	5	<i>Silphium</i>	2	<i>Stokesia</i>	1
<i>Cryptantha</i>	290	<i>Gaultheria</i>	70	<i>Kyhosia</i>	27	<i>Nocca</i>	10	<i>Muscari</i>	5	<i>Skimmia</i>	2	<i>Streptanthus</i>	1
<i>Hypericum</i>	286	<i>Lactuca</i>	70	<i>Tonella</i>	27	<i>Sabulina</i>	10	<i>Narthecium</i>	5	<i>Smyrnium</i>	2	<i>Styphnolobium</i>	1
<i>Descurainia</i>	285	<i>Viola</i>	70	<i>Calystegia</i>	26	<i>Silene</i>	10	<i>Photinia</i>	5	<i>Tiquilla</i>	2	<i>Tilia</i>	1
<i>Eriodictyon</i>	282	<i>Sericocarpus</i>	69	<i>Dichlostemma</i>	26	<i>Symphylitum</i>	10	<i>Sarcobatus</i>	5	<i>Torilis</i>	2	<i>Trillium</i>	1
<i>Thelypodium</i>	281	<i>Monarda</i>	66	<i>Lythrum</i>	26	<i>Tellima</i>	10	<i>Smelowskia</i>	5	<i>Triodanis</i>	2	<i>Xerochrysus</i>	1

Table 2: Number of bee species collected from each plant genus

Genus	Count	Genus	Count	Genus	Count	Genus	Count	Genus	Count	Genus	Count
Phacelia	179	Fraseria	41	Aster	19	Coriandrum	10	Alyssum	5	Abronia	3
Penstemon	167	Triteleia	41	Boykinia	19	Cynara	10	Baptisia	5	Aliciella	3
Ericameria	140	Angelica	40	Alcea	18	Dicentra	10	Canadanthus	5	Anthriscus	3
Grindelia	133	Bellis	40	Antennaria	18	Hymenozys	10	Croton	5	Armeria	3
Rubus	129	Collinsia	40	Arbutus	18	Lythrum	10	Delosperma	5	Asparagus	3
Cirsium	126	Marrubium	40	Caragana	18	Orthocarpus	10	Diplacus	5	Astrantia	3
Eriophyllum	123	Onopordum	40	Cosmos	18	Primula	10	Galanthus	5	Bassia	3
Erigeron	120	Lonicera	39	Hesperochiron	18	Erythronium	9	Glandora	5	Boechera	3
Potentilla	120	Cryptantha	38	Hieracium	18	Euonymus	9	Heliotropium	5	Brunnera	3
Symphotrichum	119	Heacleum	38	Lactuca	18	Hydrangea	9	Isatis	5	Capsella	3
Solidago	117	Raphanus	38	Lamium	18	Leptosiphon	9	Kalmia	5	Centromadia	3
Ceanothus	115	Dasiphora	37	Lasthenia	18	Narcissus	9	Leucophysalis	5	Chrysopsis	3
Melilotus	113	Medicago	37	Ligusticum	18	Oreocarya	9	Matricaria	5	Circaea	3
Eriogonum	109	Anthemis	36	Plantago	18	Petrosedum	9	Notholithocarpus	5	Clinopodium	3
Lupinus	109	Crataegus	35	Adelina	17	Platanthera	9	Pilosella	5	Conioselinum	3
Trifolium	109	Tanacetum	35	Calestegia	17	Salsola	9	Rheum	5	Crassula	3
Salix	105	Claytonia	34	Columbiadortia	17	Scrophularia	9	Sambucus	5	Cucumis	3
Chrysanthemum	102	Eridictyon	34	Cotoneaster	17	Aconitum	8	Symphytum	5	Cynopterus	3
Calochortus	100	Hydrophyllum	34	Downingia	17	Aronia	8	Aesculus	4	Dahlia	3
Chamaenerion	98	Castilleja	33	Foeniculum	17	Bellardia	8	Ajuga	4	Datura	3
Achillea	97	Cornus	33	Hirschfeldia	17	Calluna	8	Aruncus	4	Deutzia	3
Centaurea	96	Descraineria	33	Linaria	17	Cardamine	8	Asperugo	4	Echinops	3
Senecio	96	Oenothera	33	Linum	17	Cercis	8	Cakile	4	Eriastrum	3
Ribes	95	Rhus	33	Persicaria	17	Chorizopora	8	Calandrinia	4	Frazinus	3
Rosa	90	Amlanlanchier	32	Viburnum	17	Cuscuta	8	Choisya	4	Fritillaria	3
Geranium	85	Dipsacus	32	Dichelostemma	16	Elacagnus	8	Cistus	4	Galtum	3
Helianthus	84	Marah	32	Kolkwitzia	16	Escallonia	8	Cordylanthus	4	Actaea	2
Leucantheum	84	Oreostemma	32	Lapsana	16	Hemizonella	8	Damasosium	4	Aegopodium	2
Prunus	84	Sphaeralcea	32	Leontodon	16	Jaumea	8	Distichlis	4	Allophyllum	2
Vicia	83	Coreopsis	31	Mertensia	16	Lobularia	8	Draba	4	Apium	2
Allium	82	Delphinium	31	Nothochelone	16	Pieris	8	Eruca	4	Arum	2
Camassia	81	Philadelphus	31	Stephanomeria	16	Robinia	8	Hemerocallis	4	Bauhinia	2
Spiraea	81	Thymus	31	Styrax	16	Tonella	8	Hesperis	4	Beta	2
Sidalcea	80	Vaccinium	31	Blepharipappus	15	Weigela	8	Hibiscus	4	Bromus	2
Arctostaphylos	79	Acer	30	Crocidium	15	Zinnia	8	Hylotelephium	4	Camellia	2
Taraxacum	79	Carduus	30	Echinacea	15	Abelia	7	Imula	4	Cardionema	2
Plagiobothrys	78	Fraseria	30	Ilex	15	Agapanthus	7	Lagerstroemia	4	Castanea	2
Salvia	77	Amstinkia	29	Microseris	15	Amorpha	7	Layia	4	Celosia	2
Hypochaeris	76	Ilama	29	Pyrocoma	15	Aralia	7	Luetkea	4	Centranthus	2
Lotus	75	Mentzelia	29	Trichostema	15	Cerastium	7	Melissa	4	Comandra	2
Balsamorhiza	74	Nemophila	29	Borago	14	Conium	7	Mimulus	4	Crocosmia	2
Symphoricarpos	74	Polemonium	29	Collomia	14	Cotinus	7	Muscari	4	Crocus	2
Lomatium	72	Mahonia	28	Erysimum	14	Doronicum	7	Nartheicum	4	Cydonia	2
Anaphalis	71	Viola	28	Sonchus	14	Picaria	7	Nasturtium	4	Danthonia	2
Erythranthe	70	Myosotis	27	Stellaria	14	Glycyrrhiza	7	Oenanthe	4	Daphne	2
Agastache	69	Purshia	27	Tragopogon	14	Ipomopsis	7	Ozalis	4	Dianthus	2
Apocynum	68	Verbena	27	Artemisia	13	Lilium	7	Pastinaca	4	Dipterostemon	2
Nepeta	68	Bistorta	26	Campanula	13	Oleynium	7	Photinia	4	Echinocystis	2
Asclepias	67	Fagopyrum	26	Cercocarpus	13	Papaver	7	Phyllodoce	4	Eucephalus	2
Mentha	65	Packera	26	Chrysopsis	13	Pedicularis	7	Physalis	4	Eucryphia	2
Ranunculus	65	Solanum	26	Gayophytum	13	Pentaglottis	7	Pinus	4	Festuca	2
Wyethia	65	Whipples	26	Helianthella	13	Physaria	7	Quercus	4	Garrya	2
Sisymbrium	64	Acnison	25	Oenleria	13	Populus	7	Regnoultria	4	Gratiola	2
Clarkia	62	Dalea	25	Phlox	13	Sabulina	7	Romanzoffia	4	Kniphofia	2
Drymoallis	62	Doellingeria	25	Satureja	13	Scandix	7	Scabiosa	4	Kopsiopsis	2
Eschscholzia	61	Erodium	25	Sisyrinchium	13	Scutellaria	7	Swainsona	4	Lagophylla	2
Gilia	61	Monarda	25	Anchusa	12	Sinapis	7	Tithonia	4	Laurus	2
Jacobaea	61	Polygonum	25	Argentina	12	Tellima	7	Tradescantia	4	Ligularia	2
Plectritis	61	Syringa	25	Baccharis	12	Abies	6	Vancouveria	4	Ligustrum	2
Hackelia	59	Calendula	24	Barbarea	12	Antirrhinum	6	Veronicastrum	4	Lobelia	2
Rudbeckia	59	Cucurbita	24	Caryopteris	12	Arenaria	6	Gleditsia	3	Lysimachia	2
Sedum	59	Aquilegia	23	Chondrilla	12	Aurinia	6	Gypsophila	3	Microsteris	2
Thelypodium	58	Calyptridium	23	Erica	12	Buddleja	6	Hedera	3	Moehringia	2
Brassica	57	Clemella	23	Eryngium	12	Caltha	6	Helleborus	3	Nothocalais	2
Helenium	53	Cytisus	23	Eurybia	12	Centaurium	6	Hemizonia	3	Olea	2
Holodiscus	53	Hosackia	23	Heterotheca	12	Cicuta	6	Impatiens	3	Omphalodes	2
Horkelia	53	Malva	23	Lithophragma	12	Eupatorium	6	Iva	3	Parthenocissus	2
Monardella	53	Ageratina	22	Navarretia	12	Gentiana	6	Ivesia	3	Patrinia	2
Lepidium	52	Agoseris	22	Opuntia	12	Hastingsia	6	Juniperus	3	Pelargonium	2
Crepis	51	Brodiaea	22	Rupertia	12	Heliopsis	6	Lippia	3	Petunia	2
Lavandula	51	Dieteria	22	Spergularia	12	Hyssopus	6	Minuartia	3	Phoenicautis	2
Berberis	50	Perideridia	22	Teucrium	12	Kelloggia	6	Misopates	3	Physostegia	2
Chaenactis	50	Stachys	22	Valeriana	12	Kickxia	6	Montia	3	Picea	2
Hypericum	49	Cynoglossum	21	Alisma	11	Kyphosa	6	Mutarda	3	Portulaca	2
Caillardia	48	Euphorbia	21	Arabis	11	Liatris	6	Nestotes	3	Prosartes	2
Prunella	48	Euthamia	21	Chamaebatiaria	11	Lithodora	6	Paeonia	3	Pseudognaphalium	2
Veronica	48	Geum	21	Clematis	11	Maianthemum	6	Pedicularis	3	Pulmonaria	2
Madia	46	Bidens	20	Echium	11	Noccaea	6	Petasites	3	Rumex	2
Epilobium	45	Frangula	20	Eremogone	11	Petroselinum	6	Poa	3	Silphium	2
Lathyrus	45	Gutierrezia	20	Gaultheria	11	Sanguisorba	6	Pyraacantha	3	Smyrnum	2
Taraxia	45	Limnanthes	20	Hyacinthoides	11	Scorzoneroideis	6	Sanicula	3	Spergula	2
Cichorium	44	Lithospermum	20	Ladeana	11	Sherardia	6	Securigera	3	Stanleya	2
Arnica	43	Rorippa	20	Lewisia	11	Silene	6	Silybum	3	Tiarela	2
Astragalus	43	Thlaspi	20	Micranthes	11	Tagetes	6	Smelowskia	3	Tolmiea	2
Iris	43	Verbascum	20	Pseudotsuga	11	Teesdalia	6	Tephrosieris	3	Torilis	2
Malus	43	Digitalis	19	Pyrus	11	Toxicodendron	6	Triantha	3	Tridanea	2
Rhododendron	43	Glebionis	19	Rhaponticum	11	Vernonia	6	Tribulus	3	Tripleurospermum	2
Convolvulus	42	Heuchera	19	Tetradymia	11	Xerophyllum	6	Tropaeolum	3	Tulipa	2
Daucus	42	Sericocarpus	19	Toxicoscordium	11	Townsendia	5	Umbellularia	3	Vernatrum	2
Origanum	42	Sorbus	19	Wisteria	11	Vitex	5	Urtica	3	Zeltnera	2
Physocarpus	42	Thermopsis	19	Smithiastrum	10			Valerianella	3	Zantedeschia	1
										Xerochrysum	1

## 6 County records

Table 3: Your determination accuracy in 2023.

Taxon
No specimens identified

## 7 Taxonomic Accuracy, 2023

In 2023, you identified 0 of your 82 specimens to genus level and 0 to species level (see Table 3). In total, volunteers from the Oregon Bee Atlas project identified 44.5 % (9993) of the 22478 bee specimens to the level of genus, with an average accuracy of 94.5%. Volunteers also identified 8.4% (1887) of the specimens to species level, and had an average accuracy of 88.9% (see Table 4). Nicely done!

Table 4: Determination accuracy for all volunteers in 2023.

Taxon	Specimens ID-ed	Correct ID	% Correct
<b>Family</b>			
<i>Andrenidae</i>	1171	1121	95.7
<i>Apidae</i>	3080	3039	98.7
<i>Colletidae</i>	422	396	93.8
<i>Halictidae</i>	2297	2266	98.7
<i>Megachilidae</i>	3020	2970	98.3
<i>Melittidae</i>	4	1	25.0
<i>TOTAL</i>	9994	9793	98.0
<b>Genus</b>			
<i>Agapostemon</i>	86	86	100.0
<i>Andrena</i>	682	662	97.1
<i>Anthidiellum</i>	30	7	23.3
<i>Anthidium</i>	125	124	99.2
<i>Anthophora</i>	198	184	92.9
<i>Apis</i>	85	85	100.0
<i>Ashmeadiella</i>	58	47	81.0
<i>Atoposmia</i>	46	44	95.7
<i>Biastes</i>	3	3	100.0
<i>Bombus</i>	1671	1670	99.9
<i>Brachymelecta</i>	5	5	100.0
<i>Calliopsis</i>	21	10	47.6
<i>Ceratina</i>	273	268	98.2
<i>Chelostoma</i>	27	24	88.9
<i>Coelioxys</i>	43	42	97.7
<i>Colletes</i>	265	245	92.5
<i>Diadasia</i>	71	59	83.1
<i>Dianthidium</i>	97	78	80.4
<i>Dioxys</i>	2	1	50.0
<i>Dufourea</i>	53	52	98.1
<i>Epeolus</i>	10	9	90.0
<i>Eucera</i>	60	57	95.0
<i>Habropoda</i>	49	47	95.9
<i>Halictus</i>	902	862	95.6
<i>Heriades</i>	40	29	72.5
<i>Hesperapis</i>	4	1	25.0
<i>Holcopasites</i>	1	1	100.0
<i>Hoplitis</i>	231	195	84.4
<i>Hylaeus</i>	157	151	96.2
<i>Lasioglossum</i>	1163	1101	94.7

Table 4: Determination accuracy for all volunteers in 2023. (*continued*)

Taxon	Specimens ID-ed	Correct ID	% Correct
<i>Megachile</i>	562	546	97.2
<i>Melecta</i>	21	20	95.2
<i>Melissodes</i>	370	322	87.0
<i>Micralictoides</i>	14	14	100.0
<i>Neolarra</i>	3	3	100.0
<i>Nomada</i>	207	201	97.1
<i>Osmia</i>	1670	1639	98.1
<i>Panurginus</i>	140	120	85.7
<i>Perdita</i>	319	249	78.1
<i>Protandrena</i>	8	7	87.5
<i>Protosmia</i>	48	33	68.8
<i>Pseudoanthidium</i>	4	1	25.0
<i>Sphecodes</i>	79	65	82.3
<i>Stelis</i>	31	21	67.7
<i>Trachusa</i>	6	5	83.3
<i>Triepeolus</i>	43	41	95.3
<i>Xylocopa</i>	10	9	90.0
<i>TOTAL</i>	9993	9445	94.5
<b>Species</b>			
<i>Anthidiellum robertsoni</i>	7	7	100.0
<i>Apis mellifera</i>	68	68	100.0
<i>Bombus appositus</i>	8	7	87.5
<i>Bombus caliginosus</i>	32	24	75.0
<i>Bombus centralis</i>	43	38	88.4
<i>Bombus fervidus</i>	43	43	100.0
<i>Bombus flavidus</i>	23	22	95.7
<i>Bombus flavifrons</i>	57	54	94.7
<i>Bombus frigidus</i>	3	0	0.0
<i>Bombus griseocollis</i>	46	46	100.0
<i>Bombus huntii</i>	50	46	92.0
<i>Bombus insularis</i>	9	7	77.8
<i>Bombus kirbiellus</i>	1	0	0.0
<i>Bombus melanopygus</i>	42	20	47.6
<i>Bombus mixtus</i>	139	121	87.1
<i>Bombus morrisoni</i>	4	4	100.0
<i>Bombus nevadensis</i>	13	12	92.3
<i>Bombus occidentalis</i>	5	3	60.0
<i>Bombus rufocinctus</i>	6	4	66.7
<i>Bombus sitkensis</i>	29	15	51.7
<i>Bombus sylvicola</i>	45	14	31.1
<i>Bombus vagans</i>	4	2	50.0
<i>Bombus vancouverensis</i>	259	257	99.2
<i>Bombus vandykei</i>	31	24	77.4
<i>Bombus vosnesenskii</i>	269	252	93.7
<i>Brachymelecta californica</i>	3	3	100.0
<i>Ceratina pacifica</i>	1	0	0.0
<i>Halictus confusus</i>	35	28	80.0
<i>Halictus farinosus</i>	28	24	85.7
<i>Halictus ligatus</i>	208	207	99.5
<i>Halictus rubicundus</i>	16	15	93.8
<i>Halictus tripartitus</i>	108	107	99.1

Table 4: Determination accuracy for all volunteers in 2023. (*continued*)

Taxon	Specimens ID-ed	Correct ID	% Correct
<i>Halictus virgatellus</i>	7	6	85.7
<i>Holcopasites pulchellus</i>	1	1	100.0
<i>Lasioglossum anhypops</i>	3	3	100.0
<i>Lasioglossum aspilurum</i>	1	1	100.0
<i>Lasioglossum boreale</i>	2	2	100.0
<i>Lasioglossum cooleyi</i>	23	0	0.0
<i>Lasioglossum cressonii</i>	1	1	100.0
<i>Lasioglossum diatretum</i>	1	1	100.0
<i>Lasioglossum diversopunctatum</i>	4	4	100.0
<i>Lasioglossum glabriventre</i>	1	1	100.0
<i>Lasioglossum helianthi</i>	1	0	0.0
<i>Lasioglossum incompletum</i>	74	72	97.3
<i>Lasioglossum inconditum</i>	2	2	100.0
<i>Lasioglossum kincaidii</i>	2	2	100.0
<i>Lasioglossum nevadense</i>	1	1	100.0
<i>Lasioglossum olympiae</i>	1	1	100.0
<i>Lasioglossum ovaliceps</i>	5	5	100.0
<i>Lasioglossum pavonotum</i>	10	10	100.0
<i>Lasioglossum pruinosum</i>	4	4	100.0
<i>Lasioglossum pulveris</i>	6	6	100.0
<i>Lasioglossum quebecense</i>	1	0	0.0
<i>Lasioglossum ruidosense</i>	3	3	100.0
<i>Lasioglossum sisymbrii</i>	19	19	100.0
<i>Lasioglossum titusi</i>	24	20	83.3
<i>Lasioglossum zephyrus</i>	1	1	100.0
<i>Lasioglossum zonulum</i>	4	4	100.0
<i>Megachile perihirta</i>	1	0	0.0
<i>Micralictoides ruficaudus</i>	14	14	100.0
<i>Osmia atrocyanea</i>	1	0	0.0
<i>Osmia brevis</i>	2	0	0.0
<i>Osmia coloradensis</i>	1	0	0.0
<i>Osmia cyanella</i>	3	0	0.0
<i>Osmia densa</i>	5	0	0.0
<i>Osmia sculleni</i>	3	0	0.0
<i>Protosmia rubifloris</i>	15	15	100.0
<i>Trachusa timberlakei</i>	5	5	100.0
<i>TOTAL</i>	1887	1678	88.9

Table 5: Your determination accuracy.

Taxon
No specimens identified

## 8 Taxonomic Accuracy, All Years

Over your time in the Atlas you identified 0 of your 333 specimens to genus level and 0 to species level (see Table 5). In total, volunteers from the Oregon Bee Atlas project identified 45 % (53194) of the 118227 bee specimens to the level of genus, with an average accuracy of 94.2%. Volunteers also identified 11.3% (13375) of the specimens to species level, and had an average accuracy of 90% (see Table 6). Nicely done!

Table 6: Determination accuracy for all volunteers.

Taxon	Specimens ID-ed	Correct ID	% Correct
<b>Family</b>			
<i>Andrenidae</i>	6787	6065	89.4
<i>Apidae</i>	17623	17384	98.6
<i>Colletidae</i>	2846	2684	94.3
<i>Halictidae</i>	14520	14312	98.6
<i>Megachilidae</i>	11441	11282	98.6
<i>Melittidae</i>	4	1	25.0
<i>TOTAL</i>	53221	51728	97.2
<b>Genus</b>			
<i>Agapostemon</i>	965	961	99.6
<i>Andrena</i>	4750	4155	87.5
<i>Anthidiellum</i>	56	24	42.9
<i>Anthidium</i>	544	537	98.7
<i>Anthophora</i>	1223	1154	94.4
<i>Apis</i>	594	585	98.5
<i>Ashmeadiella</i>	352	294	83.5
<i>Atoposmia</i>	137	93	67.9
<i>Biastes</i>	8	6	75.0
<i>Bombus</i>	7780	7752	99.6
<i>Brachymelecta</i>	95	71	74.7
<i>Calliopsis</i>	99	58	58.6
<i>Ceratina</i>	2972	2924	98.4
<i>Chelostoma</i>	82	63	76.8
<i>Coelioxys</i>	152	143	94.1
<i>Colletes</i>	1344	1227	91.3
<i>Diadasia</i>	368	322	87.5
<i>Dianthidium</i>	314	280	89.2
<i>Dioxys</i>	6	3	50.0
<i>Dufourea</i>	260	217	83.5
<i>Epeolus</i>	61	43	70.5
<i>Eucera</i>	635	583	91.8
<i>Habropoda</i>	278	258	92.8
<i>Halictus</i>	5629	5400	95.9
<i>Heriades</i>	223	179	80.3
<i>Hesperapis</i>	4	1	25.0
<i>Holcopasites</i>	1	1	100.0
<i>Hoplitis</i>	748	605	80.9
<i>Hylaeus</i>	1501	1455	96.9
<i>Lasioglossum</i>	7192	6831	95.0

Table 6: Determination accuracy for all volunteers. (*continued*)

Taxon	Specimens ID-ed	Correct ID	% Correct
<i>Megachile</i>	2280	2224	97.5
<i>Melecta</i>	72	69	95.8
<i>Melissodes</i>	2066	1881	91.0
<i>Micralictoides</i>	16	14	87.5
<i>Neolarra</i>	3	3	100.0
<i>Nomada</i>	1220	1164	95.4
<i>Nomia</i>	2	2	100.0
<i>Oreopasites</i>	3	0	0.0
<i>Osmia</i>	6163	6053	98.2
<i>Panurginus</i>	750	567	75.6
<i>Perdita</i>	1147	1060	92.4
<i>Protandrena</i>	27	9	33.3
<i>Protosmia</i>	268	212	79.1
<i>Pseudoanthidium</i>	6	3	50.0
<i>Sphecodes</i>	454	354	78.0
<i>Stelis</i>	97	64	66.0
<i>Trachusa</i>	8	7	87.5
<i>Triepeolus</i>	176	147	83.5
<i>Xylocopa</i>	62	60	96.8
<i>Zacosmia</i>	1	1	100.0
<i>TOTAL</i>	53194	50119	94.2
<b>Species</b>			
<i>Agapostemon femoratus</i>	181	171	94.5
<i>Agapostemon melliventris</i>	14	14	100.0
<i>Agapostemon subtilior</i>	228	214	93.9
<i>Agapostemon virescens</i>	109	95	87.2
<i>Andrena angustitarsata</i>	18	18	100.0
<i>Andrena astragali</i>	1	1	100.0
<i>Andrena chlorogaster</i>	2	2	100.0
<i>Andrena crataegi</i>	1	1	100.0
<i>Andrena cupreotincta</i>	14	14	100.0
<i>Andrena fuscicauda</i>	2	2	100.0
<i>Andrena illinoiensis</i>	1	1	100.0
<i>Andrena nigroaerulea</i>	2	2	100.0
<i>Andrena pallidifovea</i>	1	1	100.0
<i>Andrena perplexa</i>	1	1	100.0
<i>Andrena piperi</i>	3	2	66.7
<i>Andrena prunorum</i>	34	34	100.0
<i>Andrena salicifloris</i>	2	2	100.0
<i>Andrena vicina</i>	4	3	75.0
<i>Anthidiellum robertsoni</i>	19	19	100.0
<i>Anthidium atrifrons</i>	3	3	100.0
<i>Anthidium banningense</i>	5	5	100.0
<i>Anthidium duomarginatum</i>	1	0	0.0
<i>Anthidium emarginatum</i>	5	0	0.0
<i>Anthidium manicatum</i>	53	44	83.0
<i>Anthidium mormonum</i>	12	12	100.0
<i>Anthidium oblongatum</i>	14	14	100.0
<i>Anthidium palliventre</i>	31	28	90.3
<i>Anthidium placitum</i>	1	1	100.0
<i>Anthidium tenuiflorae</i>	2	2	100.0
<i>Anthidium utahense</i>	3	3	100.0

Table 6: Determination accuracy for all volunteers. (*continued*)

Taxon	Specimens ID-ed	Correct ID	% Correct
<i>Anthophora bomboidea</i>	3	3	100.0
<i>Anthophora californica</i>	1	0	0.0
<i>Anthophora neglecta</i>	3	0	0.0
<i>Anthophora pacifica</i>	3	3	100.0
<i>Anthophora urbana</i>	251	249	99.2
<i>Anthophora ursina</i>	2	0	0.0
<i>Apis mellifera</i>	492	488	99.2
<i>Ashmeadiella aridula</i>	1	0	0.0
<i>Ashmeadiella californica</i>	1	1	100.0
<i>Ashmeadiella clypeodentata</i>	1	0	0.0
<i>Ashmeadiella cubiceps</i>	2	1	50.0
<i>Ashmeadiella difugita</i>	1	0	0.0
<i>Ashmeadiella eurygnorhyncha</i>	1	0	0.0
<i>Ashmeadiella timberlakei</i>	1	1	100.0
<i>Atoposmia abjecta</i>	3	3	100.0
<i>Atoposmia copelandica</i>	6	6	100.0
<i>Atoposmia oregona</i>	4	3	75.0
<i>Atoposmia triodonta</i>	1	0	0.0
<i>Bombus Griseocollis</i>	1	0	0.0
<i>Bombus Mixtus</i>	8	0	0.0
<i>Bombus Nevadensis</i>	1	0	0.0
<i>Bombus appositus</i>	48	36	75.0
<i>Bombus caliginosus</i>	340	271	79.7
<i>Bombus centralis</i>	201	187	93.0
<i>Bombus fervidus</i>	362	325	89.8
<i>Bombus flavidus</i>	145	134	92.4
<i>Bombus flavifrons</i>	540	454	84.1
<i>Bombus frigidus</i>	5	0	0.0
<i>Bombus griseocollis</i>	140	138	98.6
<i>Bombus huntii</i>	160	139	86.9
<i>Bombus insularis</i>	33	25	75.8
<i>Bombus kirbiellus</i>	1	0	0.0
<i>Bombus melanopygus</i>	324	270	83.3
<i>Bombus mixtus</i>	952	874	91.8
<i>Bombus morrisoni</i>	11	10	90.9
<i>Bombus nevadensis</i>	65	58	89.2
<i>Bombus occidentalis</i>	33	27	81.8
<i>Bombus rufocinctus</i>	58	36	62.1
<i>Bombus sitkensis</i>	195	147	75.4
<i>Bombus suckleyi</i>	2	0	0.0
<i>Bombus sylvicola</i>	69	31	44.9
<i>Bombus vagans</i>	24	8	33.3
<i>Bombus vancouverensis</i>	829	802	96.7
<i>Bombus vandykei</i>	85	62	72.9
<i>Bombus vosnesenskii</i>	1373	1279	93.2
<i>Brachymelecta californica</i>	45	43	95.6
<i>Calliopsis zonalis</i>	1	0	0.0
<i>Ceratina acantha</i>	679	665	97.9
<i>Ceratina micheneri</i>	44	43	97.7
<i>Ceratina nanula</i>	3	2	66.7
<i>Ceratina neomexicana</i>	1	1	100.0
<i>Ceratina pacifica</i>	8	6	75.0

Table 6: Determination accuracy for all volunteers. (*continued*)

Taxon	Specimens ID-ed	Correct ID	% Correct
<i>Ceratina sequoiae</i>	5	0	0.0
<i>Ceratina tejonensis</i>	7	2	28.6
<i>Ceratina timberlakei</i>	5	0	0.0
<i>Chelostoma minutum</i>	1	1	100.0
<i>Coelioxys alternatus</i>	1	0	0.0
<i>Coelioxys rufitarsis</i>	4	0	0.0
<i>Coelioxys sayi</i>	2	2	100.0
<i>Coelioxys texanus</i>	4	0	0.0
<i>Diadasia angusticeps</i>	7	7	100.0
<i>Diadasia australis</i>	4	4	100.0
<i>Diadasia diminuta</i>	17	17	100.0
<i>Diadasia enavata</i>	100	99	99.0
<i>Diadasia lutzi</i>	28	6	21.4
<i>Diadasia nigrifrons</i>	9	9	100.0
<i>Diadasia opuntiae</i>	8	0	0.0
<i>Dianthidium curvatum</i>	22	22	100.0
<i>Dianthidium heterulkei</i>	9	0	0.0
<i>Dianthidium pudicum</i>	12	12	100.0
<i>Dianthidium subparvum</i>	3	3	100.0
<i>Dianthidium ulkei</i>	24	17	70.8
<i>Dioxys aurifuscus</i>	2	2	100.0
<i>Eucera actiosa</i>	11	10	90.9
<i>Eucera cordleyi</i>	18	4	22.2
<i>Eucera edwardsii</i>	48	20	41.7
<i>Eucera frater</i>	8	8	100.0
<i>Eucera speciosa</i>	19	0	0.0
<i>Habropoda depressa</i>	4	4	100.0
<i>Habropoda miserabilis</i>	7	6	85.7
<i>Habropoda tristissima</i>	3	2	66.7
<i>Halictus Ligatus</i>	4	0	0.0
<i>Halictus confusus</i>	149	122	81.9
<i>Halictus farinosus</i>	285	247	86.7
<i>Halictus ligatus</i>	1481	1470	99.3
<i>Halictus rubicundus</i>	361	333	92.2
<i>Halictus tripartitus</i>	723	684	94.6
<i>Halictus virgatellus</i>	114	109	95.6
<i>Heriades carinata</i>	2	0	0.0
<i>Holcopasites pulchellus</i>	1	1	100.0
<i>Hoplitis albifrons</i>	5	5	100.0
<i>Hoplitis boharti</i>	2	2	100.0
<i>Hoplitis colei</i>	1	0	0.0
<i>Hoplitis emarginata</i>	1	1	100.0
<i>Hoplitis fulgida</i>	7	7	100.0
<i>Hoplitis grinnelli</i>	8	5	62.5
<i>Hoplitis hypocrita</i>	1	1	100.0
<i>Hoplitis louisae</i>	2	2	100.0
<i>Hoplitis orthognatha</i>	7	7	100.0
<i>Hoplitis producta</i>	12	10	83.3
<i>Hoplitis uvulalis</i>	3	3	100.0
<i>Hoplitis viridimicans</i>	6	4	66.7
<i>Hylaeus basalis</i>	6	3	50.0
<i>Hylaeus mesillae</i>	1	0	0.0

Table 6: Determination accuracy for all volunteers. (*continued*)

Taxon	Specimens ID-ed	Correct ID	% Correct
<i>Hylaeus verticalis</i>	1	0	0.0
<i>Lasioglossum albipenne</i>	3	3	100.0
<i>Lasioglossum albohirtum</i>	7	7	100.0
<i>Lasioglossum allonotus</i>	1	1	100.0
<i>Lasioglossum anhypops</i>	6	5	83.3
<i>Lasioglossum aspilurum</i>	2	2	100.0
<i>Lasioglossum athabascense</i>	2	0	0.0
<i>Lasioglossum boreale</i>	2	2	100.0
<i>Lasioglossum brunneiventre</i>	4	4	100.0
<i>Lasioglossum buccale</i>	3	3	100.0
<i>Lasioglossum colatum</i>	1	1	100.0
<i>Lasioglossum cooleyi</i>	24	1	4.2
<i>Lasioglossum cordleyi</i>	5	5	100.0
<i>Lasioglossum cressonii</i>	30	30	100.0
<i>Lasioglossum diatretum</i>	5	3	60.0
<i>Lasioglossum diversopunctatum</i>	4	4	100.0
<i>Lasioglossum egregium</i>	4	1	25.0
<i>Lasioglossum glabriventre</i>	4	4	100.0
<i>Lasioglossum helianthi</i>	1	0	0.0
<i>Lasioglossum imbrex</i>	7	0	0.0
<i>Lasioglossum incompletum</i>	79	73	92.4
<i>Lasioglossum inconditum</i>	7	5	71.4
<i>Lasioglossum kincaidii</i>	10	10	100.0
<i>Lasioglossum macroprosopum</i>	2	2	100.0
<i>Lasioglossum mellipes</i>	3	0	0.0
<i>Lasioglossum nevadense</i>	9	9	100.0
<i>Lasioglossum novascotiae</i>	1	0	0.0
<i>Lasioglossum occultum</i>	3	2	66.7
<i>Lasioglossum olympiae</i>	138	127	92.0
<i>Lasioglossum ovaliceps</i>	12	12	100.0
<i>Lasioglossum pacificum</i>	64	55	85.9
<i>Lasioglossum pavonotum</i>	56	55	98.2
<i>Lasioglossum pruinosum</i>	12	12	100.0
<i>Lasioglossum pulveris</i>	27	27	100.0
<i>Lasioglossum quebecense</i>	1	0	0.0
<i>Lasioglossum rubicundus</i>	1	0	0.0
<i>Lasioglossum ruidosense</i>	5	5	100.0
<i>Lasioglossum sequoiae</i>	6	0	0.0
<i>Lasioglossum sisymbrii</i>	105	101	96.2
<i>Lasioglossum titusi</i>	260	214	82.3
<i>Lasioglossum villosulum</i>	11	8	72.7
<i>Lasioglossum zephyrus</i>	2	2	100.0
<i>Lasioglossum zonulum</i>	25	22	88.0
<i>Megachile angelarum</i>	25	22	88.0
<i>Megachile anograe</i>	6	0	0.0
<i>Megachile apicalis</i>	4	4	100.0
<i>Megachile brevis</i>	23	1	4.3
<i>Megachile fidelis</i>	6	5	83.3
<i>Megachile melanophaea</i>	2	1	50.0
<i>Megachile mellitarsis</i>	4	4	100.0
<i>Megachile montivaga</i>	1	0	0.0
<i>Megachile nevadensis</i>	8	0	0.0

Table 6: Determination accuracy for all volunteers. (*continued*)

Taxon	Specimens ID-ed	Correct ID	% Correct
<i>Megachile perihirta</i>	61	55	90.2
<i>Megachile pugnata</i>	8	4	50.0
<i>Megachile rotundata</i>	23	22	95.7
<i>Megachile wheeleri</i>	4	4	100.0
<i>Melecta edwardsii</i>	8	8	100.0
<i>Melecta pacifica</i>	5	3	60.0
<i>Melecta separata</i>	4	4	100.0
<i>Melecta thoracica</i>	2	0	0.0
<i>Melissodes agilis</i>	1	1	100.0
<i>Melissodes bimatrix</i>	2	0	0.0
<i>Melissodes metenus</i>	3	3	100.0
<i>Melitta americana</i>	2	0	0.0
<i>Micralictoides ruficaudus</i>	14	14	100.0
<i>Nomia melanderi</i>	1	1	100.0
<i>Osmia aglaia</i>	10	0	0.0
<i>Osmia albolateralis</i>	1	0	0.0
<i>Osmia atrocyanea</i>	10	9	90.0
<i>Osmia brevis</i>	2	0	0.0
<i>Osmia bruneri</i>	8	7	87.5
<i>Osmia californica</i>	2	0	0.0
<i>Osmia calla</i>	6	0	0.0
<i>Osmia coloradensis</i>	1	0	0.0
<i>Osmia cornifrons</i>	10	10	100.0
<i>Osmia cyanella</i>	3	0	0.0
<i>Osmia densa</i>	6	1	16.7
<i>Osmia kincaidii</i>	3	3	100.0
<i>Osmia laeta</i>	2	0	0.0
<i>Osmia lignaria</i>	11	11	100.0
<i>Osmia montana</i>	3	3	100.0
<i>Osmia nemoris</i>	5	1	20.0
<i>Osmia sculleni</i>	3	0	0.0
<i>Perdita nevadensis</i>	1	1	100.0
<i>Protosmia rubifloris</i>	168	167	99.4
<i>Pseudoanthidium nanum</i>	2	2	100.0
<i>Stelis laticincta</i>	5	5	100.0
<i>Trachusa timberlakei</i>	5	5	100.0
<i>Triepeolus concavus</i>	4	4	100.0
<i>Triepeolus utahensis</i>	5	2	40.0
<i>Xylocopa californica</i>	1	1	100.0
<i>Xylocopa tabaniformis</i>	16	16	100.0
<i>Xylocopa virginica</i>	1	0	0.0
<i>Zacosmia maculata</i>	1	1	100.0
<i>bombus flavifrons</i>	1	0	0.0
<i>bombus melanopygus</i>	1	0	0.0
<i>bombus sitkensis</i>	1	0	0.0
<i>bombus vosnesenskii</i>	1	0	0.0
<i>TOTAL</i>	13375	12035	90.0