Appendix S6. List of species identified from negative controls with ITS2, and the number of reads and frequency compared to pollen samples.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Taxon | Total no. of reads in negative controls | Frequency of occurrence in negative controls | Total no. of reads in bee samples | Frequency of occurrence above threshold in bee samples |
| Phylum Streptophyta | 4343 | 35 | 1,189,249 | 177 |
| Family Cleomaceae | 1592 | 34 | 1,146,045 | 52 |
| Kingdom Viridiplantae | 965 | 35 | 416,519 | 83 |
| Genus *Fagopyrum*\* | 805 | 2 | 9 | 0 |
| Genus *Musa*\* | 432 | 1 | 48 | 0 |
| Genus *Ilex* | 427 | 34 | 218,348 | 14 |
| Genus *Hypericum* | 330 | 28 | 226,928 | 20 |
| Family Asteraceae | 302 | 34 | 125,411 | 13 |
| Species *Hypericum fasciculatum* | 272 | 31 | 102,447 | 11 |
| Genus *Amaranthus*\* | 187 | 1 | 59 | 0 |
| Family Fabaceae | 168 | 35 | 391,271 | 53 |
| Species *Broussonetia papyrifera*\* | 131 | 1 | 1 | 0 |
| Species *Rudbeckia hirta* | 127 | 30 | 84,879 | 13 |
| Genus *Allium*\* | 123 | 3 | 21 | 0 |
| Genus *Callicarpa* | 108 | 30 | 140,519 | 20 |
| Genus *Silphium* | 103 | 21 | 57,065 | 5 |
| Genus *Cirsium* | 89 | 24 | 105,924 | 7 |
| Species *Alnus incana*\* | 87 | 1 | 12 | 0 |
| Species *Amorpha fruticosa* | 74 | 21 | 41,850 | 3 |
| Family Lamiaceae | 49 | 21 | 37,240 | 14 |
| Clade/subclass asterids | 40 | 22 | 20,790 | 5 |
| Species *Ambrosia artemisiifolia* | 37 | 2 | 44 | 0 |
| Species *Poa trivialis*\* | 37 | 1 | 0 | 0 |
| Genus *Vaccinium* | 34 | 12 | 21,431 | 1 |
| Genus *Passiflora* | 33 | 17 | 53,370 | 4 |
| Family Polygonaceae\* | 27 | 1 | 1 | 0 |
| Species *Cephalanthus salicifolius* | 26 | 13 | 28,012 | 3 |
| Clade/subclass rosids | 26 | 16 | 7982 | 0 |
| Genus *Encephalartos* | 22 | 5 | 11,981 | 1 |
| Order Brassicales | 21 | 13 | 5983 | 0 |
| Genus *Triticum* | 21 | 1 | 150 | 0 |
| Family Ericaceae | 20 | 8 | 3101 | 1 |
| Genus *Crotalaria* | 19 | 12 | 17,386 | 1 |
| Species *Stillingia sylvatica* | 18 | 13 | 8944 | 2 |
| Species *Ipomoea pandurata* | 16 | 10 | 20,003 | 1 |
| Genus *Hibiscus* | 14 | 10 | 22,845 | 1 |
| Family Convolvulaceae | 14 | 8 | 20,883 | 1 |
| Order Lamiales | 14 | 12 | 10,114 | 5 |
| Genus *Phlox* | 14 | 9 | 6043 | 1 |
| Genus *Berlandiera* | 13 | 9 | 5470 | 2 |
| Family Malvaceae | 12 | 9 | 2397 | 1 |
| Genus *Lithospermum* | 10 | 7 | 8553 | 1 |
| Species *Morus alba*\* | 10 | 1 | 1 | 0 |
| Species *Allium ramosum*\* | 10 | 1 | 0 | 0 |
| Species *Polanisia uniglandulosa* | 9 | 6 | 26,484 | 4 |
| Genus *Polanisia* | 8 | 6 | 13,064 | 0 |
| Species *Clethra alnifolia* | 8 | 7 | 7722 | 2 |
| Genus *Alnus*\* | 8 | 1 | 3 | 0 |
| Species *Fagopyrum esculentum*\* | 8 | 1 | 0 | 0 |
| Species *Kalmia ericoides* | 7 | 7 | 9233 | 2 |
| Family Melastomataceae | 7 | 7 | 6693 | 1 |
| Genus *Amorpha* | 7 | 5 | 660 | 0 |
| Genus *Cephalanthus* | 6 | 5 | 7006 | 1 |
| Genus *Ampelocissus* | 6 | 6 | 6137 | 2 |
| Genus *Nymphaea* | 6 | 4 | 5375 | 1 |
| Genus *Broussonetia*\* | 6 | 1 | 0 | 0 |
| Species *Erechtites hieraciifolius* | 5 | 4 | 10,014 | 2 |
| Species *Cyrilla racemiflora* | 5 | 5 | 7223 | 3 |
| Genus *Ipomoea* | 5 | 4 | 841 | 1 |
| Genus *Acalypha* | 5 | 2 | 524 | 0 |
| Genus *Artemisia* | 5 | 1 | 11 | 0 |
| Species *Ilex cassine* | 4 | 4 | 4737 | 1 |
| Species *Anethum graveolens* | 4 | 4 | 3041 | 1 |
| Species *Lathyrus tuberosus* | 4 | 2 | 2325 | 1 |
| Genus *Cleome* | 4 | 4 | 549 | 0 |
| Species *Orbexilum pedunculatum* | 3 | 3 | 39,429 | 3 |
| Species *Polygala smallii* | 3 | 3 | 2511 | 1 |
| Genus *Eryngium* | 3 | 3 | 1883 | 0 |
| Genus *Sambucus* | 3 | 3 | 119 | 0 |
| Order Caryophyllales | 3 | 1 | 88 | 0 |
| Species *Zea mays*\* | 3 | 1 | 0 | 0 |
| Species *Cirsium palustre* | 2 | 2 | 5763 | 3 |
| Species *Sonchus oleraceus* | 2 | 2 | 2125 | 1 |
| Genus *Eupatorium* | 2 | 2 | 1977 | 1 |
| Species *Paspalum notatum* | 2 | 2 | 1200 | 0 |
| Family Rubiaceae | 2 | 2 | 764 | 0 |
| Order Ericales | 2 | 2 | 682 | 0 |
| Genus *Lathyrus* | 2 | 2 | 526 | 0 |
| Genus *Ludwigia* | 2 | 2 | 470 | 0 |
| Genus *Clematis* | 2 | 2 | 464 | 0 |
| Genus *Vernonia* | 2 | 1 | 337 | 0 |
| Order Solanales | 2 | 2 | 171 | 0 |
| Species *Lagerstroemia villosa* | 2 | 1 | 61 | 0 |
| Species *Amaranthus hybridus*\* | 2 | 1 | 0 | 0 |
| Family Amaranthaceae\* | 2 | 1 | 0 | 0 |
| Species *Eryngium yuccifolium* | 1 | 1 | 5319 | 2 |
| Genus *Phytolacca* | 1 | 1 | 2320 | 1 |
| Species *Eupatorium album* | 1 | 1 | 1587 | 0 |
| Genus *Rubus* | 1 | 1 | 1431 | 1 |
| Family Vitaceae | 1 | 1 | 1309 | 0 |
| Species *Gordonia lasianthus* | 1 | 1 | 1064 | 0 |
| Order Malpighiales | 1 | 1 | 896 | 1 |
| Species *Alternanthera philoxeroides* | 1 | 1 | 823 | 0 |
| Genus *Rhexia* | 1 | 1 | 802 | 0 |
| Species *Glycine max* | 1 | 1 | 726 | 0 |
| Genus *Lagerstroemia* | 1 | 1 | 588 | 0 |
| Species *Polygala polygama* | 1 | 1 | 500 | 0 |
| Species *Tilia americana* × *Tilia* × *moltkei* | 1 | 1 | 387 | 0 |
| Species *Oxydendrum arboreum* | 1 | 1 | 351 | 0 |
| Species *Ambrosia trifida* | 1 | 1 | 241 | 0 |
| Family Apiaceae | 1 | 1 | 228 | 0 |
| Genus *Pyrrhopappus* | 1 | 1 | 220 | 0 |
| Genus *Rudbeckia* | 1 | 1 | 197 | 0 |
| Genus *Solanum* | 1 | 1 | 161 | 0 |
| Order Asterales | 1 | 1 | 102 | 0 |
| Species *Lithospermum virginianum* | 1 | 1 | 94 | 0 |
| Species *Eupatorium godfreyanum* | 1 | 1 | 83 | 0 |
| Species *Rhexia aristosa* | 1 | 1 | 69 | 0 |
| Species *Sagittaria latifolia* | 1 | 1 | 24 | 0 |
| Species *Solanum carolinense* | 1 | 1 | 15 | 0 |
| Genus *Citrus* | 1 | 1 | 7 | 0 |
| Species *Allium spirale* | 1 | 1 | 1 | 0 |
| Genus *Morus* | 1 | 1 | 1 | 0 |
| Species *Populus alba*\* | 1 | 1 | 0 | 0 |

\* Denotes taxa that were identified from a greater number of sequencing reads in negative controls than in samples.