## Supplement A.

A list of all identified bee specimens collected in Grand Staircase Escalante National Monument between 2000 and 2003. Bees are arranged by family, subfamily, genus, subgenus, and finally species. New species (n. sp.) are those that differ from all published keys and are unique after comparison with all specimens located at the U.S. National Pollinating Insects Laboratory (a collection of nearly 2 million specimens). They are listed with their closest affiliation. Species that do not match with specimen descriptions exactly, nor with known specimens, but are not entirely distinct may represent either variants or new species. We have conservatively listed these as 'sp.', rather than as new species, with the closest affiliation in parentheses.

Notes of biogeographical interest are in the last column, and are coded as follows: CP: Endemic to the Colorado Plateau; E: Easternmost occurrence of the bee; GB: Endemic to the Great Basin; GSENM: Found only in GSENM; MD: Previously recorded only in the Mojave Desert; NG: New genus for the state of Utah; N: Northernmost occurrence of the bee; NS: New species for the state of Utah; SD: Previously reported only in the Sonoran Desert; S: Southernmost occurrence of the bee; W: Westernmost occurrence of the bee.

<sup>\*</sup> Agapostemon angelicus and A. texanus females are impossible to distinguish. The number of specimens reported for each of these two species is for the males only, which can be identified.

## Bee Species in GSENM 660 species, 55 genera, 49 new species

## Andrenidae, 181 species, 7 genera, 22 new species

## Andreninae

| Ancylandrena, 1 species  |     |    |
|--|-----|----|
| Ancylandrena timberlakei Zavortink, 1974                       | 1   |    |
| Andrena, 71 species, 3 new species                             |     |    |
| Andrena (Andrena) frigida Smith, 1853                          | 7   |    |
| Andrena (Andrena) macoupinensis Robertson, 1900                | 26  |    |
| Andrena (Andrena) milwaukeensis Graenicher, 1903               | 339 |    |
| Andrena (Andrena) schuhi LaBerge, 1980                         | 289 |    |
| Andrena (Belandrena) sphaeralceae Linsley, 1939                | 14  |    |
| Andrena (Callandrena) accepta Viereck, 1916                    | 6   |    |
| Andrena (Callandrena) haynesi Viereck and Cockerell, 1914      | 3   | W  |
| Andrena (Callandrena) helianthi Robertson, 1891                | 5   |    |
| Andrena (Callandrena) neomexicana LaBerge, 1967                | 10  | CP |
| Andrena (Callandrena) pecosana Cockerell, 1913                 | 14  |    |
| Andrena (Callandrena) utahensis LaBerge, 1967                  | 112 |    |
| Andrena (Callandrena) vulpicolor Cockerell, 1897               | 25  |    |
| Andrena (Callandrena) n. sp. 1                                 | 25  |    |
| Andrena (Callandrena) sp. 2 (aff. simulata)                    | 1   |    |
| Andrena (Callandrena) sp. 1 (aff. pecosana)                    | 8   |    |
| Andrena (Cnemidandrena) ramaleyi Cockerell, 1931               | 107 |    |
| Andrena (Cnemidandrena) costillensis Viereck & Cockerell, 1914 | 66  |    |
| Andrena (Cnemidandrena) sp. 3 (aff. aurihirta)                 | 91  |    |
| Andrena (Cnemidandrena) sp. 4 (aff. colletina)                 | 63  |    |
| Andrena (Cnemidandrena) n. sp. 2 (aff. costillensis)           | 21  |    |
| Andrena (Conandrena) cheyennorum Viereck & Cockerell, 1914     | 84  |    |
| Andrena (Dactylandrena) porterae Cockerell, 1900               | 2   |    |
| Andrena (Dasyandrena) cristata Viereck, 1917                   | 5   |    |
| Andrena (Diandrena) evoluta Linsley & MacSwain, 1961           | 334 |    |
| Andrena (Euandrena) astragali Viereck & Cockerell, 1914        | 18  | S  |
| Andrena (Euandrena) chlorura Cockerell, 1916                   | 23  |    |
| Andrena (Euandrena) lawrencei Viereck & Cockerell, 1914        | 11  |    |
| Andrena (Euandrena) nigrihirta (Ashmead, 1890)                 | 13  |    |
| Andrena (Euandrena) sp. 5 (aff. auricoma)                      | 1   |    |
| Andrena (Euandrena) sp. 6 (aff. nigrihirta)                    | 3   |    |
| Andrena (Holandrena) cressonii infasciata Lanham, 1949         | 48  |    |
| Andrena (Leucandrena) barbilabris (Kirby, 1802)                | 17  |    |
| Andrena (Melandrena) cerasifolii Cockerell, 1896               | 44  |    |

| Andrena (Melandrena) lupinorum Cockerell, 1906             | 1082 |       |
|--|------|-------|
| Andrena (Melandrena) sola Viereck, 1917                    | 7    |       |
| Andrena (Melandrena) transnigra Viereck, 1904              | 28   |       |
| Andrena (Micrandrena) illinoiensis Robertson, 1891         | 7    |       |
| Andrena (Micrandrena) kristina Lanham, 1983                | 21   | NS, W |
| Andrena (Micrandrena) melanochroa Cockerell, 1898          | 2    | S     |
| Andrena (Micrandrena) piperi Viereck, 1904                 | 51   |       |
| Andrena (Onagrandrena) anograe knowltoni Linsley and       | 30   |       |
| MacSwain, 1961   | 26   | CP    |
| Andrena (Onagrandrena) linsleyana Thorp, 1987              |      | CP    |
| Andrena (Parandrena) andrenoides (Cresson, 1878)           | 84   |       |
| Andrena (Parandrena) papagorum Viereck & Cockerell, 1914   | 3    |       |
| Andrena (Parandrena) wellesleyana Robertson, 1897          | 32   |       |
| Andrena (Plastandrena) prunorum Cockerell, 1896            | 534  |       |
| Andrena (Rhaphandrena) prima Casad, 1896                   | 9    |       |
| Andrena (Scaphandrena) bruneri Viereck & Cockerell, 1914   | 82   |       |
| Andrena (Scaphandrena) chapmanae Viereck, 1904             | 31   |       |
| Andrena (Scaphandrena) cruciferarum Ribble, 1974           | 1    | NS    |
| Andrena (Scaphandrena) hicksi Cockerell, 1925              | 2    |       |
| Andrena (Scaphandrena) kaibabensis Ribble, 1974            | 47   | CP    |
| Andrena (Scaphandrena) merriami Cockerell, 1901            | 13   |       |
| Andrena (Scaphandrena) montrosensis Viereck and Cockerell, | 12   |       |
| 1914   |      |       |
| Andrena (Scaphandrena) nigricula LaBerge & Bouseman, 1977  | 80   |       |
| Andrena (Scaphandrena) scurra Viereck, 1904                | 40   |       |
| Andrena (Scaphandrena) sieverti Cockerell, 1906            | 6    |       |
| Andrena (Scaphandrena) n. sp. (aff. kaibabensis)           | 16   |       |
| Andrena (Scrapteropsis) imitatrix Cresson, 1872            | 1    |       |
| Andrena (Simandrena) angustitarsata Viereck, 1904          | 13   |       |
| Andrena (Thysandrena) medionitens Cockerell, 1902          | 413  |       |
| Andrena (Thysandrena) w-scripta Viereck, 1904              | 178  |       |
| Andrena (Thysandrena) sp. 7 (aff. medionitens)             | 15   |       |
| Andrena (Thysandrena) sp. 8 (aff. w-scripta)               | 10   |       |
| Andrena (Trachandrena) cupreotincta Cockerell, 1901        | 418  |       |
| Andrena (Trachandrena) forbesii Robertson, 1891            | 1    |       |
| Andrena (Trachandrena) salicifloris Cockerell, 1897        | 1    | S     |
| Andrena (Trachandrena) striatifrons Cockerell, 1897        | 32   |       |
| Andrena (Trachandrena) zionensis LaBerge, 1973             | 234  | W     |
| Andrena (Tylandrena) hallii Dunning, 1898                  | 32   |       |
| Andrena (Tylandrena) subaustralis Cockerell, 1898          | 52   |       |
| ( ) )  |      |       |

| Calliopsis, 4 species  |      |     |
|--|------|-----|
| Calliopsis (Calliopsima) chlorops Cockerell, 1899            | 116  |     |
| Calliopsis (Calliopsima) philiphunteri Shinn and Engel, 2003 | 32   |     |
| Calliopsis (Nomadopsis) puellae (Cockerell, 1933)            | 35   |     |
| Calliopsis (Nomadopsis) timberlakei (Rozen, 1958)            | 19   |     |
| Macrotera, 4 species, 1 new species                          |      |     |
| Macrotera (Macroterella) opacella (Timberlake, 1956)         | 61   |     |
| Macrotera (Macroteropsis) arcuata (Fox, 1893)                | 1    |     |
| Macrotera (Macroteropsis) latior (Cockerell, 1896)           | 1    |     |
| Macrotera (Macroteropsis) n. sp. (aff. portalis)             | 3    |     |
| Panurginus, 2 species  |      |     |
| Panurginus sp. 1   | 1    |     |
| Panurginus sp. 2   | 6    |     |
| Perdita, 87 species, 16 new species                          |      |     |
| Perdita (Allomacrotera) moabensis Timberlake, 1971           | 36   | CP  |
| Perdita (Cockerellia) albipennis Cresson, 1868               | 81   |     |
| Perdita (Cockerellia) coreopsidis kansensis Timberlake, 1953 | 1    |     |
| Perdita (Cockerellia) imbellis Timberlake, 1968              | 74   | CP  |
| Perdita (Cockerellia) lingualis Cockerell, 1896              | 3    | S   |
| Perdita (Cockerellia) perpulchra Cockerell, 1896             | 121  |     |
| Perdita (Cockerellia) verbesinae Cockerell, 1896             | 12   |     |
| Perdita (Epimacrotera) crassula Timberlake, 1958             | 2    |     |
| Perdita (Glossoperdita) n. sp. 14 (aff. giliae)              | 164  |     |
| Perdita (Hexaperdita) asteris Cockerell, 1896                | 81   |     |
| Perdita (Hexaperdita) heterothecae Cockerell, 1900           | 18   | NS  |
| Perdita (Perdita) aridella Timberlake, 1960                  | 1095 |     |
| Perdita (Perdita) calloleuca Cockerell, 1922                 | 5859 |     |
| Perdita (Perdita) croceipes Timberlake, 1960                 | 11   | N   |
| Perdita (Perdita) crotonis juabensis Timberlake, 1962        | 1    |     |
| Perdita (Perdita) depressa Timberlake, 1968                  | 133  |     |
| Perdita (Perdita) dubia parilis Timberlake, 1958             | 120  |     |
| Perdita (Perdita) electa Timberlake, 1960                    | 67   |     |
| Perdita (Perdita) euzonata Timberlake, 1964                  | 6    |     |
| Perdita (Perdita) fallax Cockerell, 1896                     | 300  |     |
| Perdita (Perdita) festiva Timberlake, 1958                   | 898  | CP  |
| Perdita (Perdita) glabrescens Timberlake, 1962               | 1    | NS  |
| Perdita (Perdita) hirsuta Cockerell, 1896                    | 3    | NS, |
| ,                      |      | MD  |
| Perdita (Perdita) holoxantha Timberlake, 1962                | 11   | CP  |
| Perdita (Perdita) idonea Timberlake, 1968                    | 56   |     |
| Perdita (Perdita) knowltoni Timberlake, 1960                 | 268  | CP  |
|  |      |     |

| Perdita (Perdita) labergei Timberlake, 1960             | 54   |       |
|---|------|-------|
| Perdita (Perdita) lepidosparti Timberlake, 1958         | 7    |       |
| Perdita (Perdita) luteola Cockerell, 1894               | 383  |       |
| Perdita (Perdita) mesillensis Timberlake, 1968          | 23   | NS    |
| Perdita (Perdita) morula Timberlake, 1980               | 200  |       |
| Perdita (Perdita) munda Timberlake, 1958                | 61   | CP    |
| Perdita (Perdita) nasuta obscurescens Timberlake, 1962  | 55   |       |
| Perdita (Perdita) nuda Cockerell, 1896                  | 199  |       |
| Perdita (Perdita) phymatae Cockerell, 1895              | 706  |       |
| Perdita (Perdita) rectangulata Cockerell, 1896          | 115  | NS    |
| Perdita (Perdita) salicis imperialis Cockerell, 1925    | 67   |       |
| Perdita (Perdita) salicis salicis Cockerell, 1896       | 97   |       |
| Perdita (Perdita) salicis subtristis Cockerell, 1933    | 128  |       |
| Perdita (Perdita) similis Timberlake, 1958              | 1533 |       |
| Perdita (Perdita) subfasciata Cockerell, 1897           | 2617 |       |
| Perdita (Perdita) tortifoliae Cockerell, 1906           | 350  |       |
| Perdita (Perdita) vestita Timberlake, 1958              | 263  | CP    |
| Perdita (Perdita) wilmattae miriconis Cockerell, 1922   | 18   | GB    |
| Perdita (Perdita) xanthochroa Timberlake, 1960          | 198  | CP    |
| Perdita (Perdita) xerophila discrepans Timberlake, 1962 | 64   | E, MD |
| Perdita (Perdita) zebrata flavens Timberlake, 1958      | 2663 |       |
| Perdita (Perdita) zebrata zebrata Cresson, 1878         | 85   |       |
| Perdita (Perdita) sp. 2 (aff. xanthochroa)              | 7    |       |
| Perdita (Perdita) sp. 3 (aff. varley)                   | 1    |       |
| Perdita (Perdita) sp. 4 (aff. punctifera)               | 5    |       |
| Perdita (Perdita) sp. 5 (aff. munda)                    | 103  |       |
| Perdita (Perdita) sp. 6 (aff. luteiventris)             | 13   |       |
| Perdita (Perdita) sp. 7 (aff. lateralis)                | 33   |       |
| Perdita (Perdita) sp. 8 (aff. koebelei)                 | 3    |       |
| Perdita (Perdita) sp. 9 (aff. fuscipes)                 | 35   |       |
| Perdita (Perdita) sp. 10 (aff. aridella)                | 422  |       |
| Perdita (Perdita) sp. 11 (aff. apacheorum)              | 41   |       |
| Perdita (Perdita) sp. E1                                | 171  |       |
| Perdita (Perdita) sp. E4                                | 25   |       |
| Perdita (Perdita) sp. E8                                | 1    |       |
| Perdita (Perdita) n. sp. 1                              | 270  |       |
| Perdita (Perdita) n. sp. 2 (aff. zebrata)               | 166  |       |
| Perdita (Perdita) n. sp. 3 (aff. tortifoliae)           | 1    |       |
| Perdita (Perdita) n. sp. 4 (aff. subfasciata)           | 145  |       |
| Perdita (Perdita) n. sp. 5 (aff. sphaeralceae)          | 15   |       |
| Perdita (Perdita) n. sp. 6 (aff. luteola)               | 1    |       |
|   |      |       |

|         | Perdita (Perdita) n. sp. 7 (aff. laticincta)              | 6   |
|---------|---|-----|
|         | Perdita (Perdita) n. sp. 8 (aff. laticincta)              | 2   |
|         | Perdita (Perdita) n. sp. 9 (aff. gerhardi)                | 2   |
|         | Perdita (Perdita) n. sp. 10 (aff. eremica)                | 192 |
|         | Perdita (Perdita) n. sp. 11 (aff. elongaticeps)           | 1   |
|         | Perdita (Perdita) n. sp. 12 (aff. cuspidata)              | 13  |
|         | Perdita (Perdita) n. sp. 13 (aff. confusa)                | 157 |
|         | Perdita (Perdita) n. sp. 14 (aff. zonalis)                | 12  |
|         | Perdita (Perdita) n. sp. 15                               | 103 |
|         | Perdita (Procockerellia) albonotata Timberlake, 1954      | 26  |
|         | Perdita (Pygoperdita) duplonotata Timberlake, 1956        | 527 |
|         | Perdita (Pygoperdita) fallugiae Timberlake, 1956          | 11  |
|         | Perdita (Pygoperdita) mormonica Timberlake, 1956          | 3   |
|         | Perdita (Pygoperdita) sp. 1 (aff. mohavensis)             | 7   |
|         | Perdita (Xeromacrotera) cephalotes (Cresson, 1878)        | 252 |
|         | Perdita sp. E2  | 8   |
|         | Perdita sp. E5  | 7   |
|         | Perdita sp. E3  | 1   |
|         | Perdita sp. E9  | 27  |
|         | Perdita sp. E10   | 5   |
|         | Perdita sp. E11   | 1   |
|         | Perdita sp. E12   | 2   |
|         | Perdita sp. E13   | 5   |
| $P_{s}$ | seudopanurgus, 12 species, 2 new species                  |     |
|         | Pseudopanurgus (Heterosarus) bakeri (Cockerell, 1896)     | 1   |
|         | Pseudopanurgus (Heterosarus) n. sp.                       | 64  |
|         | Pseudopanurgus (Heterosarus) sp. E1                       | 6   |
|         | Pseudopanurgus (Heterosarus) sp. E2                       | 11  |
|         | Pseudopanurgus (Heterosarus) sp. E3                       | 62  |
|         | Pseudopanurgus (Pterosarus) irregularis (Cockerell, 1922) | 158 |
|         | Pseudopanurgus (Pterosarus) sp. 1 (aff. porterae)         | 1   |
|         | Pseudopanurgus (Pterosarus) sp. E1                        | 36  |
|         | Pseudopanurgus (Pterosarus) sp. E2                        | 6   |
|         | Pseudopanurgus (Pterosarus) sp. E3                        | 36  |
|         | Pseudopanurgus (Pterosarus) sp. E4                        | 1   |
|         | Pseudopanurgus (Pterosarus) n. sp. (aff. irregularis)     | 377 |
|         | ecies, 22 genera, 4 new species                           |     |
| Apinae  | nthanhava 22 spacies 2 pavy species                       |     |
| Ai      | nthophora, 22 species, 3 new species                      | 7   |
|         | Anthophora (Anthophoroides) n. sp. 1                      | 114 |
|         | Anthophora (Anthophoroides) n. sp. 2                      | 114 |

| Anthonhova (Anthonhovoidas) muchlo Orr 2016  | 2    | CP  |
|--|------|-----|
| Anthophora (Anthophoroides) pueblo Orr, 2016   | 271  | Cr  |
| Anthophora (Heliophila) albata Cresson, 1876   | 39   |     |
| Anthophora (Lophanthophora) affabilis Cresson, 1878<br>Anthophora (Lophanthophora) dammersi Timberlake, 1937 | 26   |     |
|  | 130  |     |
| Anthophora (Lophanthophora) neglecta Timberlake and Cockerell, 1936  | 130  |     |
| Anthophora (Lophanthophora) pacifica Cresson, 1878   | 41   |     |
| Anthophora (Lophanthophora) porterae Cockerell, 1900   | 19   |     |
| Anthophora (Lophanthophora) ursina Cresson, 1869   | 26   |     |
| Anthophora (Melea) bomboides Kirby, 1838   | 57   |     |
| Anthophora (Melea) occidentalis Cresson, 1869  | 59   |     |
| Anthophora (Micranthophora) albata Cresson, 1876   | 2    |     |
| Anthophora (Micranthophora) curta Provancher, 1895   | 7    |     |
| Anthophora (Micranthophora) escalante Orr, 2017  | 4    | CP  |
| Anthophora (Micranthophora) peritomae Cockerell, 1905  | 390  | CI  |
| Anthophora (Micranthophora) petrophila Cockerell, 1905   | 747  |     |
| Anthophora (Mystacanthophora) montana Cresson, 1869  | 26   |     |
| Anthophora (Mystacanthophora) urbana Cresson, 1878   | 1326 |     |
| Anthophora (Pyganthophora) edwardsii Cresson, 1878   | 1    |     |
| Anthophora (Pyganthophora) lesquerellae (Cockerell, 1896)  | 81   |     |
| Anthophora (Pyganthophora) n. sp.  | 17   |     |
| Anthophorula, 2 species  | 1 /  |     |
| Anthophorula (Anthophorula) albata (Timberlake, 1947)  | 30   |     |
| Anthophorula (Anthophorula) crenulata (Timberlake, 1980)   | 38   |     |
| Apis, 1 species  | 30   |     |
| Apis mellifera Linnaeus, 1758  | 2474 |     |
| Bombus, 6 species  | 2.,. |     |
| Bombus (Bombias) nevadensis Cresson, 1874  | 11   |     |
| Bombus (Bombus) occidentalis Greene, 1858  | 6    |     |
| Bombus (Thoracobombus) fervidus (Fabricius, 1798)  | 27   |     |
| Bombus (Pyrobombus) huntii Greene, 1860  | 183  |     |
| Bombus (Pyrobombus) melanopygus Nylander, 1848   | 49   |     |
| Bombus (Cullumanobombus) morrisoni Cresson, 1878   | 492  |     |
| Diadasia, 8 species  | .,,_ |     |
| Diadasia australis (Cresson, 1878)   | 166  |     |
| Diadasia diminuta (Cresson, 1878)  | 599  |     |
| Diadasia enavata (Cresson, 1872)   | 52   |     |
| Diadasia lutzi Cockerell, 1924   | 135  |     |
| Diadasia martialis Timberlake, 1940  | 10   | NS  |
| Diadasia ochracea (Cockerell, 1903)  | 16   | 110 |
| Diadasia rinconis Cockerell, 1897  | 11   |     |
|  |      |     |

| Diadasia vallicola Timberlake, 1940                          | 1   | N     |
|--|-----|-------|
| Eucera, 11 species   |     |       |
| Eucera (Synhalonia) acerba (Cresson, 1879)                   | 8   |       |
| Eucera (Synhalonia) edwardsii (Cresson, 1878)                | 4   |       |
| Eucera (Synhalonia) frater (Cresson, 1878)                   | 128 | S     |
| Eucera (Synhalonia) fulvitarsis (Cresson, 1878)              | 160 |       |
| Eucera (Synhalonia) lunata (Timberlake, 1969)                | 6   | N, MD |
| Eucera (Synhalonia) mohavensis (Timberlake, 1969)            | 44  |       |
| Eucera (Synhalonia) phaceliae (Cockerell, 1911)              | 71  |       |
| Eucera (Synhalonia) primaveris (Timberlake, 1969)            | 34  |       |
| Eucera (Synhalonia) quadricincta (Timberlake, 1969)          | 6   |       |
| Eucera (Synhalonia) speciosa (Cresson, 1878)                 | 8   |       |
| Eucera (Synhalonia) territella (Cockerell, 1905)             | 87  |       |
| Exomalopsis, 1 species                                       |     |       |
| Exomalopsis (Phanomalopsis) solidaginis Cockerell, 1898      | 244 |       |
| Habropoda, 3 species   |     |       |
| Habropoda cineraria (Smith, 1879)                            | 77  |       |
| Habropoda excellens (Timberlake, 1962)                       | 73  |       |
| Habropoda morrisoni (Cresson, 1878)                          | 236 |       |
| Melissodes, 27 species                                       |     |       |
| Melissodes (Callimelissodes) coloradensis Cresson, 1878      | 2   |       |
| Melissodes (Callimelissodes) compositus Tucker, 1909         | 1   |       |
| Melissodes (Callimelissodes) glenwoodensis Cockerell, 1905   | 172 |       |
| Melissodes (Eumelissodes) agilis Cresson, 1878               | 93  |       |
| Melissodes (Eumelissodes) bicoloratus LaBerge, 1961          | 38  |       |
| Melissodes (Eumelissodes) bimatris LaBerge, 1961             | 378 |       |
| Melissodes (Eumelissodes) brevipyga LaBerge, 1961            | 2   |       |
| Melissodes (Eumelissodes) grindeliae Cockerell, 1898         | 171 |       |
| Melissodes (Eumelissodes) illatus Lovell and Cockerell, 1906 | 1   |       |
| Melissodes (Eumelissodes) lutulentus LaBerge, 1961           | 79  |       |
| Melissodes (Eumelissodes) menuachus Cresson, 1868            | 17  |       |
| Melissodes (Eumelissodes) montanus Cresson, 1878             | 9   |       |
| Melissodes (Eumelissodes) pallidisignatus Cockerell, 1905    | 105 |       |
| Melissodes (Eumelissodes) perlusus Cockerell, 1925           | 48  |       |
| Melissodes (Eumelissodes) perpolitus LaBerge, 1961           | 63  |       |
| Melissodes (Eumelissodes) rustica (Kirby, 1802)              | 357 |       |
| Melissodes (Eumelissodes) saponellus Cockerell, 1908         | 28  |       |
| Melissodes (Eumelissodes) semilupinus Cockerell, 1905        | 133 |       |
| Melissodes (Eumelissodes) snowii Cresson, 1878               | 9   |       |
| Melissodes (Eumelissodes) subagilis Cockerell, 1905          | 4   |       |
| Melissodes (Eumelissodes) submenuacha Cockerell 1897         | 4   |       |
|  |     |       |

|           | Melissodes (Eumelissodes) tristis Cockerell, 1894           | 495 |     |
|-----------|---|-----|-----|
|           | Melissodes (Eumelissodes) utahensis LaBerge, 1961           | 122 |     |
|           | Melissodes (Eumelissodes) verbesinarum Cockerell, 1905      | 45  |     |
|           | Melissodes (Tachymelissodes) dagosus Cockerell, 1909        | 5   |     |
|           | Melissodes sp. E1   | 6   |     |
|           | Melissodes sp. M1   | 43  |     |
|           | Svastra, 2 species  |     |     |
|           | Svastra (Epimelissodes) helianthelli (Cockerell, 1905)      | 6   |     |
|           | Svastra (Epimelissodes) obliqua expurgata (Cockerell, 1925) | 7   |     |
|           | Zacosmia, 1 species   |     |     |
|           | Zacosmia maculata (Cresson, 1879)                           | 27  |     |
|           | Melecta, 5 species  |     |     |
|           | Melecta (Melecta) alexanderi Griswold and Parker, 1999      | 1   |     |
|           | Melecta (Melecta) bohartorum Linsley, 1939                  | 2   |     |
|           | Melecta (Melecta) pacifica Cresson, 1878                    | 3   |     |
|           | Melecta (Melecta) separata separata Cresson, 1879           | 4   |     |
|           | Melecta (Melecta) thoracica Cresson, 1875                   | 73  |     |
|           | Xeromelecta, 1 species                                      |     |     |
|           | Xeromelecta (Melectomorpha) californica (Cresson, 1878)     | 29  |     |
| Nomadinae |   |     |     |
|           | Epeolus, 5 species  |     |     |
|           | Epeolus mesillae mesillae (Cockerell, 1895)                 | 6   |     |
|           | Epeolus minimus (Robertson, 1902)                           | 56  |     |
|           | Epeolus pusillus Cresson, 1864                              | 37  |     |
|           | Epeolus scutellaris Say, 1824                               | 4   |     |
|           | Epeolus sp. 3   | 1   |     |
|           | Hexepeolus, 1 species                                       |     | NG. |
|           |   |     | MD  |
|           | Hexepeolus rhodogyne Linsley and Michener, 1937             | 1   |     |
|           | Holcopasites, 1 species                                     | _   |     |
|           | Holcopasites pulchellus (Cresson, 1878)                     | 8   |     |
|           | Neolarra, 5 species   |     |     |
|           | Neolarra (Neolarra) penicula Shanks, 1978                   | 6   |     |
|           | Neolarra (Neolarra) sp. 1                                   | 22  |     |
|           | Neolarra (Neolarra) verbesinae (Cockerell, 1895)            | 7   |     |
|           | Neolarra (Phileremulus) cockerelli (Crawford, 1916)         | 11  |     |
|           | Neolarra (Phileremulus) vigilans (Cockerell, 1895)          | 8   |     |
|           | Nomada, 34 species, 1 new species                           |     |     |
|           | Nomada (Centrias) crotchii Cresson, 1878                    | 18  |     |
|           | Nomada (Centrias) munda Cresson, 1878                       | 2   |     |
|           | Nomada (Centrias) sp. E1                                    | 13  |     |

| Nomada (Centrias) sp. E2                    | 8   |        |
|---|-----|--------|
| Nomada (Holonomada) edwardsii Cresson, 1878 | 39  |        |
| Nomada (Holonomada) parkeri Evans, 1972     | 9   |        |
| Nomada (Laminomada) n. sp.                  | 3   |        |
| Nomada (Micronomada) sp. E1                 | 4   |        |
| Nomada (Micronomada) sp. E2                 | 4   |        |
| Nomada (Micronomada) sp. E3                 | 1   |        |
| Nomada (Micronomada) sp. E4                 | 5   |        |
| Nomada (Nomada) sp. E1                      | 161 |        |
| Nomada (Nomada) sp. E2                      | 17  |        |
| Nomada (Nomada) sp. E3                      | 118 |        |
| Nomada (Nomada) sp. E4                      | 153 |        |
| Nomada (Nomada) sp. E5                      | 13  |        |
| Nomada (Nomada) sp. E6                      | 4   |        |
| Nomada (Nomada) sp. E7                      | 23  |        |
| Nomada (Nomada) sp. E8                      | 40  |        |
| Nomada (Nomada) sp. E10                     | 2   |        |
| Nomada (Nomada) sp. E11                     | 28  |        |
| Nomada (Nomada) sp. E12                     | 8   |        |
| Nomada (Nomada) sp. E13                     | 1   |        |
| Nomada (Nomada) sp. E14                     | 7   |        |
| Nomada (Nomada) sp. E15                     | 18  |        |
| Nomada (Nomada) sp. E16                     | 14  |        |
| Nomada (Nomada) sp. E17                     | 4   |        |
| Nomada (Nomada) sp. E18                     | 26  |        |
| Nomada (Nomada) sp. E19                     | 3   |        |
| Nomada (Nomada) sp. E20                     | 1   |        |
| Nomada (Nomada) sp. E22                     | 11  |        |
| Nomada (Nomada) sp. E23                     | 4   |        |
| Nomada (Nomada) sp. E25                     | 1   |        |
| Nomada (Nomadita) mutans Cockerell, 1910    | 5   |        |
| Oreopasites, 1 species                      |     |        |
| Oreopasites sp.                             | 1   |        |
| Paranomada, 1 species                       |     |        |
| Paranomada sp. 1 (aff. nitida)              | 1   | NG, SD |
| Triepeolus, 14 species                      |     |        |
| Triepeolus balteatus Cockerell, 1921        | 26  | S      |
| Triepeolus dacotensis (Stevens, 1919)       | 3   |        |
| Triepeolus denverensis Cockerell, 1910      | 4   |        |
| Triepeolus diversipes Cockerell, 1924       | 3   |        |
| Triepeolus eldoradensis (Cockerell, 1910)   | 16  |        |

|                  | Triepeolus helianthi (Robertson, 1897)   | 4    |   |
|------------------|--|------|---|
|                  | Triepeolus micropygius Robertson, 1903   | 2    |   |
|                  | Triepeolus norae Cockerell, 1907   | 1    |   |
|                  | Triepeolus subalpinus Cockerell, 1910  | 21   |   |
|                  | Triepeolus timberlakei Cockerell, 1929   | 34   |   |
|                  | Triepeolus sp. 42  | 6    |   |
|                  | Triepeolus sp. 51  | 1    |   |
|                  | Triepeolus sp. 69  | 5    |   |
|                  | Triepeolus sp. 76  | 1    |   |
| Xylocopinae      |  |      |   |
| Ce               | eratina, 4 species   |      |   |
|                  | Ceratina (Zadontomerus) apacheorum Daly, 1973                                  | 265  |   |
|                  | Ceratina (Zadontomerus) nanula Cockerell, 1897                                 | 5188 |   |
|                  | Ceratina (Zadontomerus) neomexicana Cockerell, 1901                            | 608  |   |
|                  | Ceratina (Zadontomerus) pacifica H. S. Smith, 1907                             | 678  |   |
| Xy               | clocopa, 2 species   |      |   |
|                  | Xylocopa (Xylocopoides) californica Cresson, 1864                              | 199  |   |
|                  | <i>Xylocopa</i> ( <i>Notoxylocopa</i> ) tabaniformis androleuca Michener, 1940 | 27   |   |
| Colletidae, 34 s | pecies, 2 genera, 6 new species  |      |   |
| Colletinae       |  |      |   |
| Ca               | olletes, 22 species, 3 new species   |      |   |
|                  | Colletes compactus Cresson, 1868   | 43   |   |
|                  | Colletes daleae Cockerell, 1897  | 687  |   |
|                  | Colletes eulophi Robertson, 1891   | 70   |   |
|                  | Colletes fulgidus fulgidus Swenk, 1904   | 1    |   |
|                  | Colletes gypsicolens Cockerell, 1897   | 416  |   |
|                  | Colletes intermixtus Swenk, 1905   | 2    |   |
|                  | Colletes kincaidii Cockerell, 1898   | 1    |   |
|                  | Colletes larreae Timberlake, 1951  | 73   |   |
|                  | Colletes laticinctus Timberlake, 1951  | 33   |   |
|                  | Colletes louisae Cockerell, 1897   | 265  |   |
|                  | Colletes lutzi lutzi Timberlake, 1943  | 6    |   |
|                  | Colletes mandibularis Smith, 1853  | 9    |   |
|                  | Colletes petalostemonis Swenk, 1906  | 178  | W |
|                  | Colletes phaceliae Cockerell, 1906   | 1359 |   |
|                  | Colletes simulans nevadensis Swenk, 1908                                       | 96   |   |
|                  | Colletes slevini Cockerell, 1925   | 503  |   |
|                  | Colletes sphaeralceae Timberlake, 1951   | 316  |   |
|                  | Colletes sp. 1   | 57   |   |
|                  | Colletes sp. 2 (aff. petalostemonis)   | 32   |   |
|                  | ·  |      |   |

|            | Colletes n. sp. 1 (aff. algarobiae)                                 | 2        |
|------------|---|----------|
|            | Colletes n. sp. 2 (aff. aberrans)                                   | 6        |
|            | Colletes n. sp. 3   | 4        |
| Hylaeinae  |   |          |
|            | Hylaeus, 12 species, 3 new species                                  |          |
|            | Hylaeus (Hylaeus) leptocephalus (Morawitz, 1871)                    | 16       |
|            | Hylaeus (Hylaeus) granulatus (Metz, 1911)                           | 6        |
|            | Hylaeus (Hylaeus) mesillae cressoni (Cockerell, 1907)               | 605      |
|            | Hylaeus (Hylaeus) rudbeckiae (Cockerell and Casad, 1895)            | 2        |
|            | Hylaeus (Hylaeus) verticalis (Cresson, 1869)                        | 1        |
|            | Hylaeus (Hylaeus) sp. 1 (aff. mesillae)                             | 195      |
|            | Hylaeus (Paraprosopis) coloradensis (Cockerell, 1896)               | 2        |
|            | <i>Hylaeus (Paraprosopis) megalotis</i> (Swenk and Cockerell, 1910) | 929      |
|            | Hylaeus (Paraprosopis) wootoni (Cockerell, 1896)                    | 494      |
|            | Hylaeus (Paraprosopis) n. sp. 1 (aff. cookii)                       | 1228     |
|            | Hylaeus (Paraprosopis) n. sp. 2                                     | 129      |
|            | Hylaeus (Prosopis) n. sp. 3   | 1010     |
|            | 114 species, 7 genera, 2 new species                                |          |
| Halictinae |   |          |
|            | Agapostemon, 5 species, 1 new species                               | *        |
|            | Agapostemon (Agapostemon) angelicus Cockerell, 1924                 | 231*     |
|            | Agapostemon (Agapostemon) texanus Cresson, 1872                     | 185*     |
|            | Agapostemon (Agapostemon) femoratus Crawford, 1901                  | 2        |
|            | Agapostemon (Agapostemon) melliventris Cresson, 1874                | 15       |
|            | Agapostemon (Agapostemon) n. sp. (aff. splendens)                   | 7        |
|            | Halictus, 5 species   |          |
|            | Halictus (Nealictus) farinosus Smith, 1853                          | 170      |
|            | Halictus (Odontalictus) ligatus Say, 1837                           | 33       |
|            | Halictus (Protohalictus) rubicundus (Christ, 1791)                  | 12       |
|            | Halictus (Seladonia) confusus Smith, 1853                           | 8        |
|            | Halictus (Seladonia) tripartitus Cockerell, 1895                    | 3676     |
|            | Lasioglossum, 76 species  | 200      |
|            | Lasioglossum (Dialictus) abundipunctum Gibbs, 2010                  | 208      |
|            | Lasioglossum (Dialictus) albohirtum (Crawford, 1907)                | 581      |
|            | Lasinglossum (Dialictus) aliud (Sandhouse, 1924)                    | 28       |
|            | Lasioglossum (Dialictus) brunneiventre (Crawford, 1907)             | 7        |
|            | Lasioglossum (Dialictus) clarissimum (Ellis, 1914)                  | 9<br>557 |
|            | Lasioglossum (Dialictus) clematisellum (Cockerell, 1904)            | 557      |
|            | Lasioglossum (Dialictus) griswoldi Gibbs, 2009                      | 1        |
|            | Lasioglossum (Dialictus) hudsoniellum (Cockerell, 1919)             | 86       |

| Lasioglossum (Dialictus) hyalinum (Crawford, 1907)       | 124 |
|--|-----|
| Lasioglossum (Dialictus) impavidum (Sandhouse, 1924)     | 161 |
| Lasioglossum (Dialictus) incompletum (Crawford, 1907)    | 1   |
| Lasioglossum (Dialictus) microlepoides (Ellis, 1914)     | 8   |
| Lasioglossum (Dialictus) nevadense (Crawford, 1907)      | 892 |
| Lasioglossum (Dialictus) pallidellum (Ellis, 1914)       | 22  |
| Lasioglossum (Dialictus) perdifficile (Cockerell, 1895)  | 111 |
| Lasioglossum (Dialictus) perparvum (Ellis, 1914)         | 5   |
| Lasioglossum (Dialictus) petrellum (Cockerell, 1903)     | 45  |
| Lasioglossum (Dialictus) prasinogaster Gibbs, 2010       | 9   |
| Lasioglossum (Dialictus) pruinosum (Robertson, 1892)     | 143 |
| Lasioglossum (Dialictus) ruidosense (Cockerell, 1897)    | 275 |
| Lasioglossum (Dialictus) sedi (Sandhouse, 1924)          | 1   |
| Lasioglossum (Dialictus) semibrunneum (Cockerell, 1895)  | 10  |
| Lasioglossum (Dialictus) semicaeruleum (Cockerell, 1895) | 146 |
| Lasioglossum (Dialictus) tegulare (Robertson, 1890)      | 88  |
| Lasioglossum (Dialictus) tegulariforme (Crawford, 1907)  | 41  |
| Lasioglossum (Dialictus) sp. 1 (aff. albuquerquense)     | 164 |
| Lasioglossum (Dialictus) sp. 2 (aff. aliud)              | 29  |
| Lasioglossum (Dialictus) sp. 3 (aff. hudsoniellum)       | 14  |
| Lasioglossum (Dialictus) sp. 4 (aff. hyalinum)           | 21  |
| Lasioglossum (Dialictus) sp. 5 (aff. impavidum)          | 86  |
| Lasioglossum (Dialictus) sp. 6 (aff. pacatum)            | 3   |
| Lasioglossum (Dialictus) sp. 7 (aff. hunteri)            | 13  |
| Lasioglossum (Dialictus) sp. 8 (aff. nevadense)          | 27  |
| Lasioglossum (Dialictus) sp. 9 (aff. pruinosum)          | 2   |
| Lasioglossum (Dialictus) sp. A                           | 57  |
| Lasioglossum (Dialictus) sp. E1                          | 57  |
| Lasioglossum (Dialictus) sp. E2                          | 34  |
| Lasioglossum (Dialictus) sp. E3                          | 3   |
| Lasioglossum (Dialictus) sp. E5                          | 7   |
| Lasioglossum (Dialictus) sp. E6                          | 52  |
| Lasioglossum (Dialictus) sp. E7                          | 11  |
| Lasioglossum (Dialictus) sp. E8                          | 7   |
| Lasioglossum (Dialictus) sp. E9                          | 59  |
| Lasioglossum (Dialictus) sp. E10                         | 4   |
| Lasioglossum (Dialictus) sp. E11                         | 38  |
| Lasioglossum (Dialictus) sp. E12                         | 1   |
| Lasioglossum (Dialictus) sp. E14                         | 1   |
| Lasioglossum (Dialictus) sp. E16                         | 5   |
| Lasioglossum (Dialictus) sp. E18                         | 4   |
|  |     |

| Lasioglossum (Dialictus) sp. E19                               | 14     |
|--|--------|
| Lasioglossum (Dialictus) sp. E22                               | 158    |
| Lasioglossum (Dialictus) sp. E23                               | 51     |
| Lasioglossum (Dialictus) sp. E24                               | 52     |
| Lasioglossum (Dialictus) sp. M2                                | 5      |
| Lasioglossum (Dialictus) sp. M3                                | 5      |
| Lasioglossum (Dialictus) sp. M11                               | 4      |
| Lasioglossum (Dialictus) sp. M15                               | 16     |
| Lasioglossum (Dialictus) sp. M17                               | 52     |
| Lasioglossum (Evylaeus) sp. E1                                 | 52     |
| Lasioglossum (Evylaeus) sp. E2                                 | 180    |
| Lasioglossum (Evylaeus) sp. E3 (aff. nigrescens)               | 1      |
| Lasioglossum (Evylaeus) sp. E5                                 | 10     |
| Lasioglossum (Evylaeus) sp. E7                                 | 14     |
| Lasioglossum (Hemihalictus s.l.) inconditum (Cockerell, 1916   | 5) 285 |
| Lasioglossum (Hemihalictus s.l.) ovaliceps (Cockerell, 1898)   | 112    |
| Lasioglossum (Hemihalictus s.l.) pectoraloides (Cockerell,     | 4      |
| 1895)  |        |
| Lasioglossum (Hemihalictus s.l.) pulveris (Cockerell, 1930)    | 395    |
| Lasioglossum (Hemihalictus s.l.) swenki (Crawford, 1906)       | 21     |
| Lasioglossum (Lasioglossum) egregium (Vachal, 1904)            | 179    |
| Lasioglossum (Lasioglossum) heterorhinum (Cockerell, 1930)     |        |
| Lasioglossum (Lasioglossum) lampronotum (Cameron, 1905)        |        |
| Lasioglossum (Lasioglossum) sisymbrii (Cockerell, 1895)        | 368    |
| Lasioglossum (Sphecodogastra s.l.) cooleyi (Crawford, 1906)    |        |
| Lasioglossum (Sphecodogastra) lusorium (Cresson, 1872)         | 49     |
| Lasioglossum (Sphecodogastra s.l.) nigrescens (Crawford, 1907) | 14     |
| Lasioglossum (Sphecodogastra) noctivaga Linsley and            | 11     |
| MacSwain, 1962   |        |
| Sphecodes, 18 species  |        |
| Sphecodes sp. E1   | 11     |
| Sphecodes sp. E2   | 323    |
| Sphecodes sp. E3   | 54     |
| Sphecodes sp. E4   | 2      |
| Sphecodes sp. E5   | 5      |
| Sphecodes sp. E6   | 5      |
| Sphecodes sp. E7   | 52     |
| Sphecodes sp. E8   | 178    |
| Sphecodes sp. E9   | 2      |
| Sphecodes sp. E10  | 1      |
| Sphecodes sp. E11  | 1      |

|             | Sphecodes sp. E12   | 6   |   |
|-------------|---|-----|---|
|             | Sphecodes sp. E13   | 4   |   |
|             | Sphecodes sp. E14   | 29  |   |
|             | Sphecodes sp. E15   | 5   |   |
|             | Sphecodes sp. E16   | 2   |   |
|             | Sphecodes sp. E17   | 3   |   |
|             | Sphecodes sp. E18   | 16  |   |
| Nomiinae    |   |     |   |
|             | Dieunomia, 2 species  |     |   |
|             | Dieunomia (Dieunomia) heteropoda (Say, 1824)                    | 11  |   |
|             | Dieunomia (Epinomia) nevadensis (Cresson, 1874)                 | 300 |   |
|             | Nomia, 1 species  |     |   |
|             | Nomia (Acunomia) tetrazonata tetrazonata Cockerell, 1910        | 2   | N |
| Rophitinae  |   |     |   |
|             | Dufourea, 7 species, 1 new species                              |     |   |
|             | Dufourea contarovici Bohart, 1980                               | 3   |   |
|             | Dufourea harveyi (Cockerell, 1906)                              | 1   |   |
|             | Dufourea malacothricis Timberlake, 1939                         | 138 |   |
|             | Dufourea sandhouseae (Michener, 1937)                           | 34  |   |
|             | Dufourea tinsleyi (Cockerell, 1898)                             | 5   |   |
|             | Dufourea n. sp. 1   | 8   |   |
|             | Dufourea sp. (aff. saundersi)                                   | 2   |   |
| Megachilida | ie, 173 species, 15 genera, 12 new species                      |     |   |
| <u> </u>    |   |     |   |
| Megachilina | 2   |     |   |
|             | Anthidiellum, 1 species   |     |   |
|             | Anthidiellum (Loyalanthidium) notatum (Latreille, 1809)         | 89  |   |
|             | Anthidium, 12 species   |     |   |
|             | Anthidium (Anthidium) atripes Cresson, 1879                     | 95  |   |
|             | Anthidium (Anthidium) atripoides Gonzalez and Griswold,         | 55  |   |
|             | 2013  |     |   |
|             | Anthidium (Anthidium) cockerelli Schwarz, 1928                  | 34  |   |
|             | Anthidium (Anthidium) dammersi Cockerell, 1937                  | 27  |   |
|             | Anthidium (Anthidium) duomarginatum Gonzalez and Griswold, 2013 | 1   |   |
|             | Anthidium (Anthidium) emarginatum (Say, 1824)                   | 1   |   |
|             | Anthidium (Anthidium) maculosum Cresson, 1878                   | 21  |   |
|             | Anthidium (Anthidium) mormonum Cresson, 1878                    | 149 |   |
|             | Anthidium (Anthidium) palmarum Cockerell, 1904                  | 6   |   |
|             | Anthidium (Anthidium) placitum Cresson, 1879                    | 111 |   |
|             | Anthidium (Anthidium) porterae Cockerell, 1900                  | 2   |   |
|             | Anthidium (Anthidium) schwarzi Gonzalez and Griswold,           | 2   |   |
|             |   |     |   |

| Ashmeadiella, 22 species, 3 new species                      |     |    |
|--|-----|----|
| Ashmeadiella (Arogochila) australis (Cockerell, 1902)        | 107 |    |
| Ashmeadiella (Arogochila) cazieri Michener, 1939             | 12  |    |
| Ashmeadiella (Arogochila) erema Michener, 1939               | 12  |    |
| Ashmeadiella (Arogochila) lutzi (Cockerell, 1930)            | 10  |    |
| Ashmeadiella (Arogochila) n. sp. 1 (aff. leachi)             | 2   |    |
| Ashmeadiella (Arogochila) n. sp. 2 (aff. micheneri)          | 76  |    |
| Ashmeadiella (Arogochila) n. sp. 3 (aff. salviae)            | 1   |    |
| Ashmeadiella (Ashmeadiella) aridula Cockerell, 1910          | 703 |    |
| Ashmeadiella (Ashmeadiella) bucconis (Say, 1837)             | 547 |    |
| Ashmeadiella (Ashmeadiella) cactorum (Cockerell, 1897)       | 678 |    |
| Ashmeadiella (Ashmeadiella) californica (Ashmead, 1897)      | 17  |    |
| Ashmeadiella (Ashmeadiella) cubiceps clypeata Michener, 1936 | 10  | NS |
| Ashmeadiella (Ashmeadiella) difugita Michener, 1939          | 1   |    |
| Ashmeadiella (Ashmeadiella) foveata Michener, 1939           | 19  |    |
| Ashmeadiella (Ashmeadiella) gillettei Titus, 1904            | 244 |    |
| Ashmeadiella (Ashmeadiella) meliloti (Cockerell, 1897)       | 192 |    |
| Ashmeadiella (Ashmeadiella) opuntiae (Cockerell, 1897)       | 464 |    |
| Ashmeadiella (Ashmeadiella) sonora Michener, 1939            | 103 |    |
| Ashmeadiella (Ashmeadiella) vandykiella Michener, 1949       | 40  | NS |
| Ashmeadiella (Ashmeadiella) sp. 1 (aff. rufipes)             | 4   |    |
| Ashmeadiella (Ashmeadiella) sp. 2 (aff. titusi)              | 11  |    |
| Ashmeadiella (Cubitognatha) xenomastax Michener, 1939        | 48  |    |
| Atoposmia, 4 species, 3 new species                          |     |    |
| Atoposmia (Atoposmia) sp. 1 (aff. triodonta)                 | 4   |    |
| Atoposmia (Atoposmia) n. sp. 1                               | 48  |    |
| Atoposmia (Atoposmia) n. sp. 2 (aff. anthodyta)              | 11  |    |
| Atoposmia (Eremosmia) n. sp. 3 (aff. daleae)                 | 47  |    |
| Coelioxys, 9 species   |     |    |
| Coelioxys (Boreocoelioxys) rufitarsis Smith, 1854            | 3   |    |
| Coelioxys (Boreocoelioxys) sayi Robertson, 1897              | 1   |    |
| Coelioxys (Coelioxys) hirsutissimus Cockerell, 1912          | 2   |    |
| Coelioxys (Coelioxys) mitchelli J. R. Baker, 1975            | 1   | NS |
| Coelioxys (Cyrtocoelioxys) gilensis Cockerell, 1898          | 5   |    |
| Coelioxys (Synocoelioxys) apacheorum Cockerell, 1900         | 1   |    |
| Coelioxys (Synocoelioxys) hunteri Crawford, 1914             | 11  | NS |
| Coelioxys (Xerocoelioxys) grindeliae Cockerell, 1900         | 13  |    |
| Coelioxys (Xerocoelioxys) mesae Cockerell, 1921              | 2   |    |
| Diathidium, 9 species  |     |    |

| Dianthidium (Adanthidium) arizonicum Rohwer, 1916<br>Dianthidium (Dianthidium) cressonii (Dalla Torre, 1896)<br>Dianthidium (Dianthidium) dubium dubium Schwarz, 1928 | 17<br>55<br>1 | NS               |
|---|---------------|------------------|
| Dianthidium (Dianthidium) heterulkei heterulkei Schwarz,<br>1940  | 1             |                  |
| Dianthidium (Dianthidium) implicatum Timberlake, 1948   | 16            |                  |
| Dianthidium (Dianthidium) parvum (Cresson, 1878)  | 349           |                  |
| Dianthidium (Dianthidium) platyurum platyurum Cockerell, 1923   | 35            |                  |
| Dianthidium (Dianthidium) pudicum pudicum (Cresson, 1879)   | 117           |                  |
| Dianthidium (Dianthidium) ulkei (Cresson, 1878)   | 302           |                  |
| Dioxys, 1 species   |               |                  |
| Dioxys pomonae pomonae Cockerell, 1910  | 20            |                  |
| Dioxys pomonae timberlakei Hurd, 1958   | 5             |                  |
| Heriades, 4 species   |               |                  |
| Heriades (Neotrypetes) cressoni Michener, 1938  | 357           |                  |
| Heriades (Neotrypetes) micropthalma Michener, 1954  | 730           |                  |
| Heriades (Neotrypetes) timberlakei Michener, 1938   | 732           |                  |
| Heriades (Neotrypetes) variolosa (Cresson, 1872)  | 1             |                  |
| Hoplitis, 9 species, 2 new species  |               |                  |
| Hoplitis (Alcidamea) n. sp. 2   | 15            |                  |
| Hoplitis (Alcidamea) grinnelli (Cockerell, 1910)  | 28            |                  |
| Hoplitis (Alcidamea) producta panamintana Michener, 1947  | 15            |                  |
| Hoplitis (Cyrtosmia) hypocrita (Cockerell, 1906)  | 12            |                  |
| Hoplitis (Dasyosmia) paroselae Michener, 1947   | 13            |                  |
| Hoplitis (Monumetha) albifrons argentifrons (Cresson, 1864)   | 28            |                  |
| Hoplitis (Penteriades) incanescens (Cockerell, 1922)  | 82            | CP,<br>GSEN<br>M |
| Hoplitis (Proteriades) n. sp. 1 (aff. shoshone)   | 26            | 1 <b>V1</b>      |
| Hoplitis (Proteriades) zuni (Parker, 1977)  | 229           |                  |
| Lithurgopsis, 1 species   | 22)           |                  |
| Lithurgopsis apicalis (Cresson, 1875)   | 372           |                  |
| Megachile, 33 species, 1 new species  |               |                  |
| Megachile (Argyropile) parallela Smith, 1853  | 88            |                  |
| Megachile (Argyropile) rossi Mitchell, 1943   | 9             |                  |
| Megachile (Argyropile) townsendiana Cockerell, 1898   | 3             |                  |
| Megachile (Chelostomoides) prosopidis Cockerell, 1900   | 136           |                  |
| Megachile (Chelostomoides) subexilis Cockerell, 1908  | 78            |                  |
| Megachile (Eutricharea) rotundata (Fabricius, 1787)   | 1             |                  |
| Megachile (Litomegachile) coquilletti Cockerell, 1915   | 3             |                  |
| Megachile (Litomegachile) lippiae Cockerell, 1900   | 84            |                  |
| -Garante (-management) upprint controlli, 1700  |               |                  |

| Megachile (Litomegachile) mendica Cresson, 1878  | 15  |              |
|--|-----|--------------|
| Megachile (Litomegachile) onobrychidis Cockerell, 1908   | 5   |              |
| Megachile (Litomegachile) texana Cresson, 1878   | 132 |              |
| Megachile (Litomegachile) sp. 2 (aff. brevis)  | 93  |              |
| Megachile (Megachile) montivaga Cresson, 1878  | 10  |              |
| Megachile (Megachiloides) anograe Cockerell, 1908  | 14  | $\mathbf{S}$ |
| Megachile (Megachiloides) casadae Cockerell, 1898  | 30  |              |
| Megachile (Megachiloides) legalis Cresson, 1879  | 61  |              |
| Megachile (Megachiloides) manifesta Cresson, 1878  | 12  | CP           |
| Megachile (Megachiloides) micheneri Mitchell, 1936   | 1   |              |
| Megachile (Megachiloides) mucorosa Cockerell, 1908   | 2   | CP           |
| Megachile (Megachiloides) nevadensis Cresson, 1879   | 341 |              |
| Megachile (Megachiloides) subanograe Mitchell, 1934  | 59  |              |
| Megachile (Megachiloides) sublaurita Mitchell, 1927  | 79  |              |
| Megachile (Megachiloides) subnigra Cresson, 1879   | 35  |              |
| Megachile (Megachiloides) sp. 1  | 1   |              |
| Megachile (Megachiloides) n. sp. (aff. umatillensis)   | 17  |              |
| Megachile (Sayapis) fidelis Cresson, 1878  | 9   |              |
| Megachile (Sayapis) inimica sayi (Cresson, 1878)   | 150 |              |
| Megachile (Sayapis) mellitarsis Cresson, 1878  | 1   |              |
| Megachile (Sayapis) pugnata Say, 1837  | 1   |              |
| Megachile (Xanthosarus) agustini Cockerell, 1905   | 28  | CP           |
| Megachile (Xanthosarus) cochisiana Mitchell, 1934  | 117 |              |
| Megachile (Xanthosarus) perihirta Cockerell, 1898  | 6   |              |
| Megachile (Xeromegachile) sp. 2  | 1   |              |
| Osmia, 44 species, 2 new species   |     |              |
| Osmia (Acanthosmioides) alpestris Rust and Bohart, 1986  | 4   |              |
| Osmia (Acanthosmioides) austromaritima Michener, 1936  | 7   | S            |
| Osmia (Acanthosmioides) integra Cresson, 1878  | 199 |              |
| Osmia (Acanthosmioides) longula Cresson, 1864  | 2   |              |
| Osmia (Acanthosmioides) nigrifrons Cresson, 1878   | 59  |              |
| Osmia (Acanthosmioides) unca Michener, 1937  | 30  |              |
| Osmia (Cephalosmia) californica Cresson, 1864  | 115 |              |
| Osmia (Cephalosmia) grinnelli Cockerell, 1910  | 38  |              |
| Osmia (Cephalosmia) montana montana Cresson, 1864  | 4   |              |
| Osmia (Cephalosmia) subaustralis Cockerell, 1900   | 1   |              |
| Osmia (Helicosmia) coloradensis Cresson, 1878  | 167 |              |
| Osmia (Helicosmia) texana Cresson, 1872  | 6   |              |
|  |     |              |
|  | 23  |              |
| Osmia (Melanosmia) albolateralis Cockerell, 1906<br>Osmia (Melanosmia) austromaritima Michener, 1936 | 3   |              |

| Osmia (Melanosmia) bruneri Cockerell, 1897              | 193 |             |
|---|-----|-------------|
| Osmia (Melanosmia) cerasi Cockerell, 1897               | 16  |             |
| Osmia (Melanosmia) clarescens Cockerell, 1911           | 4   |             |
| Osmia (Melanosmia) cobaltina Cresson, 1878              | 152 |             |
| Osmia (Melanosmia) crassa Rust and Bohart, 1986         | 20  |             |
| Osmia (Melanosmia) dakotensis Michener, 1937            | 35  |             |
| Osmia (Melanosmia) ednae Cockerell, 1907                | 16  | S           |
| Osmia (Melanosmia) gaudiosa Cockerell, 1907             | 96  |             |
| Osmia (Melanosmia) iridis Cockerell and Titus, 1902     | 21  | S           |
| Osmia (Melanosmia) kincaidii Cockerell, 1897            | 175 | S           |
| Osmia (Melanosmia) liogastra Cockerell, 1933            | 6   |             |
| Osmia (Melanosmia) marginata Michener, 1936             | 6   |             |
| Osmia (Melanosmia) phenax Cockerell, 1897               | 45  |             |
| Osmia (Melanosmia) prunorum Cockerell, 1897             | 3   |             |
| Osmia (Melanosmia) pusilla Cresson, 1864                | 2   |             |
| Osmia (Melanosmia) rawlinsi Sandhouse, 1939             | 110 |             |
| Osmia (Melanosmia) sanrafaelae Parker, 1985             | 161 |             |
| Osmia (Melanosmia) trevoris Cockerell, 1897             | 193 |             |
| Osmia (Melanosmia) sp. 1 (aff. cyanella)                | 1   |             |
| Osmia (Melanosmia) sp. E1                               | 1   |             |
| Osmia (Melanosmia) sp. E2                               | 1   |             |
| Osmia (Melanosmia) sp. E3                               | 1   |             |
| Osmia (Melanosmia) sp. E4                               | 1   |             |
| Osmia (Melanosmia) sp. E5                               | 3   |             |
| Osmia (Melanosmia) n. sp. 1                             | 34  | CP,<br>GSEN |
| Osmia (Melanosmia) n. sp. 2 (aff. enixa)                | 19  | M           |
| Osmia (Osmia) lignaria propinqua Cresson, 1864          | 342 |             |
| Osmia (Osmia) ribifloris ribifloris Cockerell, 1900     | 172 |             |
| Osmia (Trichinosmia) latisulcata Michener, 1936         | 172 |             |
| Protosmia, 1 species                                    | 1 / |             |
| Protosmia (Chelostomopsis) rubifloris (Cockerell, 1898) | 110 | N, MD       |
| Stelis, 16 species, 2 new species                       | 110 | 11, 1111    |
| Stelis (Dolichostelis) rudbeckiarum Cockerell, 1904     | 12  |             |
| Stelis (Stelis) anasazi Parker and Griswold, 2013       | 5   |             |
| Stelis (Stelis) carnifex Cockerell, 1911                | 46  |             |
| Stelis (Stelis) imperialis Parker and Griswold, 2013    | 1   |             |
| Stelis (Stelis) interrupta Cresson, 1897                | 2   |             |
| Stelis (Stelis) lamelliterga Parker and Griswold, 2013  | 9   |             |
| Stelis (Stelis) lateralis Cresson, 1864                 | 4   |             |
| (2,2,1,2,1,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2                | -   |             |

| Stelis (Stelis) montana Cresson, 1864                  | 3   |
|--|-----|
| Stelis (Stelis) n. sp. 1                               | 2   |
| Stelis (Stelis) n. sp. 2                               | 1   |
| Stelis (Stelis) occidentalis Parker and Griswold, 2013 | 3   |
| Stelis (Stelis) paiute Parker and Griswold, 2013       | 1   |
| Stelis (Stelis) palmarum Timberlake, 1941              | 12  |
| Stelis (Stelis) pavonina (Cockerell, 1908)             | 1   |
| Stelis (Stelis) robertsoni Timberlake, 1941            | 2   |
| Stelis (Stelis) subemarginata Cresson, 1878            | 1   |
| Trachusa, 2 species                                    |     |
| Trachusa (Heteranthidium) cordaticeps (Michener, 1949) | 4   |
| Trachusa (Heteranthidium) zebrata (Cresson, 1872)      | 1   |
| Melittidae, 5 species, 1 genus, 2 new species          |     |
| Hesperapis, 5 species, 2 new species                   |     |
| Hesperapis (Carinapis) carinata Stevens, 1919          | 1   |
| Hesperapis (Carinapis) oliviae (Cockerell, 1897)       | 26  |
| Hesperapis (Disparapis) sp. 1 (aff. cockerelli)        | 33  |
| Hesperapis (Disparapis) n. sp. 1 (aff. disparapis)     | 5   |
| Hesperapis (Panurgomia) n. sp. 2                       | 211 |
|  |     |