

## FDs27 Southern Dry-Mesic Pine-Oak Woodland Pollinator Resources

*Dry-mesic (or dry) hardwood or pine-hardwood woodlands on sand deposits, primarily in the blufflands of southeastern Minnesota.*

**Examples of insect pollinators (and their associated host plants in parentheses) that use FDs27 include:**

**Bees:**

*Andrena wilkella* (Fabaceae)

*Andrena platyparia* (Cornus [Swida])

*Perdita octomaculata* (Solidago)

*Colletes brevicornis* (Campanula)

*Colletes mandibularis* (Amorpha)

**Butterflies:**

*Polygonia progne* (Ribes)

*Satyrium titus* (Prunus)

**Moths:**

*Pygarctia spraguei* (Euphorbia corollate)

*Phyllonorycter lucetiella* (Tilia americana)

*Phosphila turbulenta* (Smilax tamnoides)



*Perdita octomaculata* (eight-spotted fairy bee) uses *Solidago* (goldenrod) species as a host plant. Photo: Max McCarthy

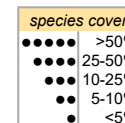


*Satyrium titus* (coral hairstreak) uses *Prunus* (plum, cherry) species as a host plant. Photo: Bob Dunlap

# FDs27 Southern Dry-Mesic Pine-Oak Woodland

## Pollinator Resources Table

FDs27 Class Factsheet. Based on 13 plots. November, 2024.



| Forbs   | species frequency in NPC (%) | species cover (when present) | Compatibility     | Longevity | Clonality | Principal Pollen Vector | Pollinator requirements                       | Pollination Index |
|---|------------------------------|------------------------------|-------------------|-----------|-----------|-------------------------|---|-------------------|
| Clayton's sweet cicely ( <i>Osmorhiza claytonii</i> )       | 85                           | ●                            | D                 | Perennial | Absent    | insects                 | Generalist                                    | 5                 |
| Northern bedstraw ( <i>Galium boreale</i> )                 | 85                           | ●                            | SI                | Perennial | Present   | insects                 | Generalist                                    | 4                 |
| Columbine ( <i>Aquilegia canadensis</i> )                   | 77                           | ●                            | SC                | Perennial | Present   | insects                 | Early spring insect, Somewhat specific insect | 3                 |
| Hog peanut ( <i>Amphicarpaea bracteata</i> )                | 77                           | ●                            | CH and CL flowers | Annual    | Present   | insects                 | Somewhat specific insect                      | 6                 |
| Lopseed ( <i>Phryma leptostachya</i> )                      | 69                           | ●                            | UNK               | Perennial | Present   | insects                 | Somewhat specific insect                      | 4                 |
| Bracken ( <i>Pteridium aquilinum</i> )                      | 69                           | ●●                           | SC                | Perennial | Present   | wind, water             | Generalist                                    | 0                 |
| White snakeroot ( <i>Eupatorium rugosum</i> )               | 69                           | ●                            | UNK               | Perennial | Present   | insects                 | Generalist                                    | 3                 |
| Flowering spurge ( <i>Euphorbia corollata</i> )             | 62                           | ●                            | SI                | Perennial | Present   | insects                 | Generalist                                    | 4                 |
| Common false Solomon's seal ( <i>Smilacina racemosa</i> )   | 62                           | ●                            | UNK               | Perennial | Present   | insects                 | Early spring insect                           | 4                 |
| Pointed-leaved tick trefoil ( <i>Desmodium glutinosum</i> ) | 54                           | ●                            | UNK               | Perennial | Absent    | insects                 | Somewhat specific insect                      | 5                 |
| White rattlesnakeroot ( <i>Prenanthes alba</i> )            | 46                           | ●                            | UNK               | Perennial | Absent    | insects                 | Somewhat specific insect                      | 5                 |
| Heart-leaved aster ( <i>Aster cordifolius</i> )             | 46                           | ●                            | SI                | Perennial | Present   | insects                 | Generalist                                    | 4                 |
| Elliptic shinleaf ( <i>Pyrola elliptica</i> )               | 46                           | ●                            | UNK               | Perennial | Present   | insects                 | Buzz pollination                              | 5                 |
| Common enchanter's nightshade ( <i>Circaea lutetiana</i> )  | 46                           | ●                            | SC                | Perennial | Present   | insects                 | Generalist                                    | 2                 |
| Canada mayflower ( <i>Maianthemum canadense</i> )           | 46                           | ●                            | SI                | Perennial | Present   | insects                 | Early spring insect                           | 5                 |
| Wild sarsaparilla ( <i>Aralia nudicaulis</i> )              | 46                           | ●                            | D                 | Perennial | Present   | insects                 | Generalist                                    | 4                 |
| Elm-leaved goldenrod ( <i>Solidago ulmifolia</i> )          | 38                           | ●                            | SI                | Perennial | Present   | insects                 | Generalist                                    | 4                 |
| Common strawberry ( <i>Fragaria virginiana</i> )            | 38                           | ●                            | SC                | Perennial | Present   | insects                 | Early spring insect                           | 3                 |
| Harebell ( <i>Campanula rotundifolia</i> )                  | 38                           | ●                            | ± SI              | Perennial | Present   | insects                 | Generalist                                    | 4                 |
| Gregarious black snakeroot ( <i>Sanicula gregaria</i> )     | 38                           | ●                            | UNK               | Perennial | Absent    | insects                 | Generalist                                    | 4                 |
| Pussytoes ( <i>Antennaria</i> spp.)                         | 38                           | ●                            | A                 | Perennial | Present   | wind                    | Generalist                                    | 0                 |
| Downy rattlesnake plantain ( <i>Goodyera pubescens</i> )    | 38                           | ●                            | SC                | Perennial | Present   | insects                 | Generalist                                    | 2                 |
| Sweet-scented bedstraw ( <i>Galium triflorum</i> )          | 38                           | ●                            | UNK               | Perennial | Present   | insects                 | Generalist                                    | 3                 |
| White avens ( <i>Geum canadense</i> )                       | 38                           | ●                            | UNK               | Perennial | Present   | insects                 | Generalist                                    | 3                 |
| Spreading dogbane ( <i>Apocynum androsaemifolium</i> )      | 31                           | ●                            | SI                | Perennial | Present   | insects                 | Generalist                                    | 4                 |
| Round-lobed hepatica ( <i>Anemone americana</i> )           | 31                           | ●                            | SC                | Perennial | Present   | insects                 | Early spring insect                           | 3                 |
| Wood anemone ( <i>Anemone quinquefolia</i> )                | 31                           | ●                            | UNK               | Perennial | Present   | insects                 | Early spring insect                           | 4                 |
| Wild geranium ( <i>Geranium maculatum</i> )                 | 31                           | ●                            | SC                | Perennial | Present   | insects                 | Early spring insect                           | 3                 |
| Shining bedstraw ( <i>Galium concinnum</i> )                | 31                           | ●                            | UNK               | Perennial | Present   | insects                 | Generalist                                    | 3                 |
| Yarrow ( <i>Achillea millefolium</i> )                      | 31                           | ●                            | SI                | Perennial | Present   | insects                 | Generalist                                    | 4                 |
| Rattlesnake fern ( <i>Botrychium virginianum</i> )          | 31                           | ●                            | SC                | Perennial | Present   | wind, water             | Generalist                                    | 0                 |
| Lady fern ( <i>Athyrium filix-femina</i> )                  | 31                           | ●                            | SC                | Perennial | Present   | wind, water             | Generalist                                    | 0                 |
| <b>Grasses and Sedges</b>                                   |                              |                              |                   |           |           |                         |   |                   |
| Pennsylvania sedge ( <i>Carex pensylvanica</i> )            | 100                          | ●●●●                         | SC                | Perennial | Present   | wind                    | Generalist                                    | 0                 |
| <b>Climbing Plants</b>                                      |                              |                              |                   |           |           |                         |   |                   |
| Virginia creeper ( <i>Parthenocissus</i> spp.)              | 92                           | ●●                           | SC                | Perennial | Present   | insects                 | Generalist                                    | 2                 |
| Wild grape ( <i>Vitis riparia</i> )                         | 77                           | ●                            | D                 | Perennial | Present   | insects                 | Generalist                                    | 4                 |
| Greenbrier ( <i>Smilax tamnoides</i> )                      | 31                           | ●                            | D                 | Perennial | Present   | insects                 | Somewhat specific insect                      | 5                 |

| Low Shrubs   |    |       |      |           |         |         |  |   |
|--|----|-------|------|-----------|---------|---------|--|---|
| Black raspberry ( <i>Rubus occidentalis</i> )        | 54 | ••    | SC   | Perennial | Present | insects | Generalist   | 2 |
| Red raspberry ( <i>Rubus idaeus</i> )                | 38 | ••    | SC   | Perennial | Present | insects | Generalist   | 2 |
| Pipsissewa ( <i>Chimaphila umbellata</i> )           | 31 | ••    | SC   | Perennial | Present | insects | Somewhat specific insect                               | 3 |
| Leadplant ( <i>Amorpha canescens</i> )               | 31 | •     | SC   | Perennial | Present | insects | Generalist   | 2 |
| Lowbush blueberry ( <i>Vaccinium angustifolium</i> ) | 15 | •     | ± SC | Perennial | Present | insects | Somewhat specific insect, Facultative buzz pollination | 3 |
| Shrubs   |    |       |      |           |         |         |  |   |
| American hazelnut ( <i>Corylus americana</i> )       | 92 | •••   | Di   | Perennial | Present | wind    | Generalist   | 0 |
| Missouri gooseberry ( <i>Ribes missouriense</i> )    | 85 | ••    | SI   | Perennial | Present | insects | Generalist   | 4 |
| Prickly ash ( <i>Zanthoxylum americanum</i> )        | 85 | ••    | D    | Perennial | Present | insects | Generalist   | 4 |
| Poison ivy ( <i>Toxicodendron rydbergii</i> )        | 77 | •     | D    | Perennial | Present | insects | Generalist   | 4 |
| Gray dogwood ( <i>Cornus racemosa</i> )              | 62 | ••    | UNK  | Perennial | Present | insects | Generalist   | 3 |
| Chokecherry ( <i>Prunus virginiana</i> )             | 62 | ••    | SI   | Perennial | Present | insects | Early spring insect                                    | 5 |
| Pagoda dogwood ( <i>Cornus alternifolia</i> )        | 46 | •     | UNK  | Perennial | Present | insects | Generalist   | 3 |
| Pin cherry ( <i>Prunus pensylvanica</i> )            | 23 | •••   | SI   | Perennial | Present | insects | Early spring insect                                    | 5 |
| Tree Canopy  |    |       |      |           |         |         |  |   |
| White pine   | 46 | ••••  | SI   | Perennial | Absent  | wind    | Generalist   | 0 |
| Paper birch  | 46 | ••    | Di   | Perennial | Present | wind    | Generalist   | 0 |
| Bur oak  | 46 | ••    | SI   | Perennial | Present | wind    | Generalist   | 0 |
| Northern pin oak                                     | 46 | ••••• | SI   | Perennial | Present | wind    | Generalist   | 0 |
| White oak  | 38 | •••   | SI   | Perennial | Present | wind    | Generalist   | 0 |
| Black oak  | 31 | ••••  | SI   | Perennial | Present | wind    | Generalist   | 0 |
| Northern red oak                                     | 31 | •••   | SI   | Perennial | Present | wind    | Generalist   | 0 |
| Bitternut hickory                                    | 23 | •     | UNK  | Perennial | Present | wind    | Generalist   | 0 |
| Black cherry   | 23 | •     | SI   | Perennial | Present | insects | Early spring insect                                    | 5 |
| Basswood   | 23 | •     | SI   | Perennial | Absent  | insects | Generalist   | 5 |
| Ironwood   | 15 | •••   | UNK  | Perennial | Present | wind    | Generalist   | 0 |
| Jack pine  | 15 | •••   | UNK  | Perennial | Absent  | wind    | Generalist   | 0 |
| Eastern red cedar                                    | 15 | •     | D    | Perennial | Absent  | wind    | Generalist   | 0 |
| Tree Subcanopy                                       |    |       |      |           |         |         |  |   |
| White pine   | 46 | •••   | SI   | Perennial | Absent  | wind    | Generalist   | 0 |
| Paper birch  | 23 | •     | Di   | Perennial | Present | wind    | Generalist   | 0 |
| Bur oak  | 15 | ••    | SI   | Perennial | Present | wind    | Generalist   | 0 |
| Northern pin oak                                     | 31 | •••   | SI   | Perennial | Present | wind    | Generalist   | 0 |
| White oak  | 46 | ••    | SI   | Perennial | Present | wind    | Generalist   | 0 |
| Black oak  | 31 | ••••  | SI   | Perennial | Present | wind    | Generalist   | 0 |
| Northern red oak                                     | 23 | •••   | SI   | Perennial | Present | wind    | Generalist   | 0 |
| Bitternut hickory                                    | 23 | •     | UNK  | Perennial | Present | wind    | Generalist   | 0 |
| Black cherry   | 62 | ••    | SI   | Perennial | Present | insects | Early spring insect                                    | 5 |
| Basswood   | 46 | •     | SI   | Perennial | Absent  | insects | Generalist   | 5 |

|                                |    |     |     |           |         |         |                     |   |
|--------------------------------|----|-----|-----|-----------|---------|---------|---------------------|---|
| Ironwood                       | 38 | ●●● | UNK | Perennial | Present | wind    | Generalist          | 0 |
| Jack pine                      | 8  | ●   | UNK | Perennial | Absent  | wind    | Generalist          | 0 |
| Eastern red cedar              | 46 | ●   | D   | Perennial | Absent  | wind    | Generalist          | 0 |
| <b><i>Tree Shrub Layer</i></b> |    |     |     |           |         |         |                     |   |
| White pine                     | 54 | ●   | SI  | Perennial | Absent  | wind    | Generalist          | 0 |
| Paper birch                    | 15 | ●   | Di  | Perennial | Present | wind    | Generalist          | 0 |
| Bur oak                        | 23 | ●   | SI  | Perennial | Present | wind    | Generalist          | 0 |
| Northern pin oak               | 23 | ●●  | SI  | Perennial | Present | wind    | Generalist          | 0 |
| White oak                      | 46 | ●   | SI  | Perennial | Present | wind    | Generalist          | 0 |
| Black oak                      | 31 | ●●● | SI  | Perennial | Present | wind    | Generalist          | 0 |
| Northern red oak               | 31 | ●   | SI  | Perennial | Present | wind    | Generalist          | 0 |
| Bitternut hickory              | 62 | ●   | UNK | Perennial | Present | wind    | Generalist          | 0 |
| Black cherry                   | 77 | ●   | SI  | Perennial | Present | insects | Early spring insect | 5 |
| Basswood                       | 46 | ●   | SI  | Perennial | Absent  | insects | Generalist          | 5 |
| Ironwood                       | 38 | ●   | UNK | Perennial | Present | wind    | Generalist          | 0 |
| Jack pine                      | 8  | ●   | UNK | Perennial | Absent  | wind    | Generalist          | 0 |
| Eastern red cedar              | 38 | ●   | D   | Perennial | Absent  | wind    | Generalist          | 0 |