

## Pollinator Syndrome Traits Table

[Plants](#) and [pollinators](#) have co-evolved physical characteristics that make them more likely to interact successfully. The plants benefit from attracting a particular type of pollinator to its flower, ensuring that its [pollen](#) will be carried to another flower of the same species and hopefully resulting in successful reproduction.

The pollinator benefits from its adaptation to a particular flower type by ensuring that it will be able to find and access important food resources - nectar and pollen. Such relationships are considered mutualistic.

[Animals](#), [wind](#), and [water](#) can all be vectors for pollen. The flower type, shape, color, odor, nectar, and structure vary by the type of pollinator that visits them. Such characteristics are considered pollination syndromes and can be used to predict the type of pollinator that will aid the flower in successful reproduction.

Use the pollinator syndrome table to help you identify the potential pollinators you may associate with different flower types.

| Trait                | <a href="#">Bats</a>                     | <a href="#">Bees</a>                       | <a href="#">Beetles</a>          | <a href="#">Birds</a>                         | <a href="#">Butterflies</a>             | <a href="#">Flies</a>   | <a href="#">Moths</a>                    | <a href="#">Wind</a>                                      |
|----------------------|--|--|----------------------------------|---|---|---|--|---|
| <b>Color</b>         | Dull white, green or purple              | Bright white, yellow, blue, or UV          | Dull white or green              | Scarlet, orange, red or white                 | Bright, including red and purple        | Pale and dull to dark brown or purple; flecked with translucent patches | Pale and dull red, purple, pink or white | Dull green, brown, or colorless; petals absent or reduced |
| <b>Nectar Guides</b> | Absent                                   | Present                                    | Absent                           | Absent  | Present                                 | Absent  | Absent                                   | Absent  |
| <b>Odor</b>          | Strong musty; emitted at night           | Fresh, mild, pleasant                      | None to strongly fruity or fetid | None  | Faint but fresh                         | Putrid  | Strong sweet; emitted at night           | None  |
| <b>Nectar</b>        | Abundant; somewhat hidden                | Usually present                            | Sometimes present; not hidden    | Ample; deeply hidden                          | Ample; deeply hidden                    | Usually absent  | Ample; deeply hidden                     | None  |
| <b>Pollen</b>        | Ample                                    | Limited; often sticky and scented          | Ample                            | Modest  | Limited                                 | Modest in amount  | Limited                                  | Abundant; small, smooth, and not sticky                   |
| <b>Flower Shape</b>  | Regular; bowl shaped – closed during day | Shallow; have landing platform; tubular, c | Large bowl-like, Magnolia        | Large funnel like; cups, strong perch support | Narrow tube with spur; wide landing pad | Shallow; funnel like or complex and trap-like                           | Regular; tubular without a lip           | Regular; small and stigmas exerted                        |

**Foods That Require Or Benefit From Aid of Animal Pollinators (Note: This is not exhaustive list.)**

**ALFALFA:** leafcutter bees and honey bees

**ALMOND:** honey bees, blue orchard bees

**ANISE:** honey bee

**APPLE:** honey bees, blue mason orchard bees

**APRICOT:** bees

**AVOCADO:** bees, flies, bats

**BANANA:** birds, fruit bats

**BEANS** (esp. scarlet & runner beans): bumble bees and carpenter bees

**BLUEBERRY:** Over 115 kinds of bees, including bumblebees, mason bees, mining bees and leafcutter bees

**CARDAMOM:** honey bees, solitary bees

**CASHEW:** bees, moths, fruit bats

**CHERRY:** honey bees, Bumblebees, Solitary bees, flies

**CHOCOLATE:** midges (flies), stingless bees

**COCONUT:** insects and fruit bats

**COFFEE:** stingless bees, other bees or flies

**CORIANDER:** honey bees, solitary bees

**CRANBERRY:** Over 40 native bees, including bumble

**DAIRY PRODUCTS:** Dairy cows eat ALFALFA pollinated by leafcutter and honey bees

**FIG:** 800 kinds of fig wasps

**GRAPE:** bees

**GRAPEFRUIT:** bees

**KIWIFRUIT:** honey bees, bumblebees, solitary bees

**MACADAMIA NUT:** bees, beetles, wasps

**MANGO:** bees, flies, wasps

**MELON:** bees

**NUTMEG:** honey bees, bird

**PAPAYA:** moths, birds, bees

**PEACH:** bees

**PEAR:** honey bees, flies, mason bees

**PEPPERMINT:** flies, bees

**PUMPKIN:** squash and gourd bees, bumblebees

**RASPBERRY and BLACKBERRY:** honey bees, bumblebees, solitary bees, hover flies

**SESAME:** bees, flies, wasps

**STRAWBERRY:** bees

**TEA PLANTS:** flies, bees and other insects

**TEQUILA (AGAVE):** bats

**TOMATO:** bumble bees

**VANILLA:** bees

**Largely drawn from Pollinator Partnership at [http://pollinator.org/list\\_of\\_pollinated\\_food.htm](http://pollinator.org/list_of_pollinated_food.htm)**