

USDA Forest Service Celebrating Wildflowers

Pollinator Syndromes

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.



Photo by T. Barnes, University of Kentucky.

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

Pollinator Syndrome Traits Table

Trait	Pollinator							
	Bats	Bees	Beetles	Birds	Butterflies	Flies	Moths	Wind
Color	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
Nectar guides	Absent	Present	Absent	Absent	Present	Absent	Absent	Absent
Odor	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
Nectar	Abundant; somewhat hidden	Usually present	Sometimes present; not hidden	Ample; deeply hidden	Ample; deeply hidden	Usually absent	Ample; deeply hidden	None
Pollen	Ample	Limited; often sticky and scented	Ample	Modest	Limited	Modest in amount	Limited	Abundant; small, smooth, and not sticky
Flower Shape	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

Location: <http://www.fs.fed.us/wildflowers/pollinators/syndromes.shtml>
 Last modified: Wednesday, 10-Jun-2009 11:33:12 EDT