The Synergy of Pollinators:

People depend on pollinators

- Responsible for 1/3 of our food
- Half of our fats and oils
- Many drugs and supplements
- Fibers for our clothing
- Wood for construction

Plants depend on pollinators

- 80% of the world's food crops and 75% of flowering plants rely on pollinators.
- Survival of over 200,00 species of animals depend on pollinators
- Bees pollinate most plants
- Hummingbirds are exclusive pollinators of 160 flowers

Pollinators depend on plants

- Rely on flowers for food
- Pollen is protein
- Nectar is carbohydrates

How can we help?

- Avoid using pesticides, herbicides and fungicides
- Use native plants
- Provide continuous blooms
- Use old-fashioned varieties of plants

Go to www.pollinator.org for more information

TEXAS A&M AGRILIFE EXTENSION

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TEXAS MASTER GARDENER
TEXAS AGRILIFE EXTENSION SERVICE
Texas A&M System
DALLAS COUNTY

Horticulture • Education • Community

To ask a gardening question,
request a speaker,
or find out how to become a
Certified Master Gardener

CALL THE MG HELP DESK

214.904.3053

Monday-Friday: 8:00 am – 4:30 pm
Email: dallasmg@ag.tamu.edu

Dallas County Master Gardeners are trained volunteers supporting Texas A&M AgriLife Extension - Dallas County Horticulture programming.
www.dallascountymastergardeners.org

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TEXAS A&M AGRILIFE EXTENSION

Sex in the Garden

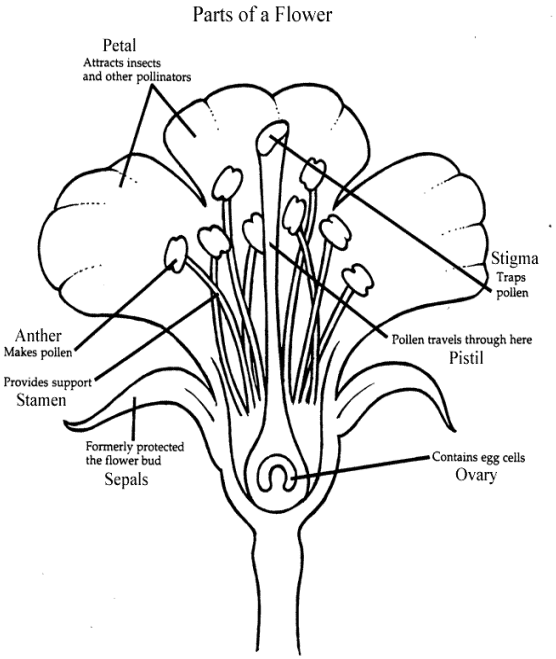
Dallas County Master Gardener

Flower Sex

The only purpose of a flower is to provide reproduction for the plant.

Male Parts: Stamen
Anther – pollen dispenser
Filament – stalk

Female Parts: Pistil
Stigma – pollen receptor
Style – tube
Ovary – where seeds develop (fruit)



Each type of flower has a uniquely shaped pollen grain and stigma. Only pollen from the same species of flower will fit in its stigma.

Pollen is produced in huge quantities. After pollinators have eaten it and the bees have stored it, there will still be enough for pollination. Flowers release pollen in many different ways. Usually it is in small quantities so a pollinator will have to go to another flower to keep eating, thus spreading the pollen on its body to the next plant. Each grain has a coating that protects it, sometimes for years. Chemicals in the appropriate stigma soften the coating.

Pollen contains 2 cells: one grows into the tube to the ovary and the other unites with the ovule (egg) which then develops into a seed.

Pollination occurs when a pollen grain has penetrated the stigma and starts growing a tube to the ovary.

When a plant has created seeds, it no longer needs to produce flowers. Dead-heading (removing the wilted flowers) will inspire the plant to make more blooms.

Sexual Orientation of Flowers

Perfect flowers: have male and female parts (bisexual). Some change sexes so they are one sex at a time, then the other:

Male first:
Mints Penstemons
Fireweed Evening Primrose
Hellebores Honeysuckle

Female first:
Magnolias Water Lilies
Dutchman's Pipe

Imperfect flowers: have parts of only one sex

Monoecious plants have both sexes on the same plant. Examples are begonia, lily, pecan tree, corn plant.

Dioecious plants are either male or female. Examples of these are primrose, holly, pistache tree, cottonwood tree, date palm.

Pollinator Buffets

Many plants have flowers in clusters that offer pollinators a lot of food in a small space, and this makes them very popular with insects and birds.

Columns: the flowers open at the bottom first so insects and birds start there and work their way up. Each flower may last only a day or two, but the whole column lasts for a long time because only a few flowers bloom at a time. Examples are hyacinth, gladiolus, larkspur.

Inflorescences: these have lots of small flowers that appear to live a long time, but it might really be different flowers blooming at different times. Examples are butterfly bush, lilacs, cleome, allium, penta, fennel, dill.

Composites: the tiny flowers grow so closely together they look like one flower, usually with sterile flowers doing the advertising and the plain ones providing the reproductions. This is one of the largest families of plants. They are long-lasting flowers and easy to grow. Examples are daisy, aster, sunflower, cornflower, cosmos, yarrow, zinnia, chrysanthemum, dahlia, black-eyed Susan, coreopsis, dandelion, and ageratum.