

# Butterfly Gardening

Bob Allen • bugbob@mac.com

What is Butterfly Gardening?

- Garden or landscape designed to provide places & plants for butterflies & moths
- Partial - adults only
- Complete - all stages

Why Butterfly Garden?

- Beauty
- Contributes to a richer habitat garden
- Bioindicators
- Curiosity
- Help rebuild populations

What are Butterflies & Moths?

- Invertebrate animals
  - No backbone
- Skeleton outside
- 3 main body regions
- 6 legs as adults
- 4 wings as adults
- Wings clothed in scales
- Proboscis as adults

Adult Butterfly - Wing veins provide structure

Wing Scales - Vary by group

Monarch Butterfly, *Danaus plexippus*

Juvenile Butterfly (Caterpillar)

Food

- Adults
  - Suck nectar
  - Produced by plants
- Mostly flowers
- Proboscis

Insect Mouthparts

- All are derived from chewing mandibles

Adult: Proboscis: Galea (on the maxilla), elongate, folded lengthwise, long drinking straw-like, central food channel

Food

Larvae

- Chew plant parts
    - Buds, flowers, Fruits
    - Stems, leaves
  - Mandibles
- Larva: Mandibles, paired • opposable

#### How Do They Live?

- Life Cycle
  - Egg • Larva • Pupa • Adult
- Emerge from egg
- Molting
- Pupation
- Eclosion
- Adult

Complete Metamorphosis: Egg - Larva - Pupa - Adult

#### Butterfly or Moth?

Butterflies	Moths
Club-tipped antennae, <i>never with feathery side branches</i>	Slender tapered antennae, not clubbed, <i>sometimes with feathery side branches</i>
Thinner, less hairy body	Thicker, hairier body
Naked pupa ("chrysalis"), never completely inside of a silken "cocoon"	Naked pupa, sometimes inside of a silken "cocoon"
When at rest, wings usually folded closed over the body, sometimes held outward	When at rest, wings usually held outward, rarely folded closed over the body
Fly in daytime	Most fly at night, some in day
20,000 species known	120,000 species known

#### How can I attract them?

- Basic Needs (B4):
  - Food
  - Water
  - Shelter
  - Mates/Reproduction
- Flowers for adults
  - Rainbow: OYGBIV
  - No red - why?
- Plants for larvae

- Water
- Habitat
- Shade
- Mourning Cloak: water, citrus, watermelon, old bananas

Butterfly Feeder: <http://thenaturestore.com/zz161.htm>

#### Design Tips

- Take cues from nature
- Provide B4
- Favor plants that provide nectar and/or larval food

#### Trees & Larger Shrubs

- Foundation plantings
- Establish character, height, & structure
- Alders, Sycamore, Oaks, Ashes, Junipers, Cypressess, Manzanitas, Ceanothus, Mountain mahogany
- Desert willow, Baccharis, arrowweed (*Pluchea sericea*)

#### Medium Shrubs

- Secondary foundation
- offer a denser region of cover at lower heights
- Rhamnus, Ceanothus, Baccharis, Manzanitas

#### Smaller Shrubs & Perennials

- Flowers and vegetation to satiate hungry butterflies and moths
- Spots or drifts of color in the garden
- Brittlebush, Buckwheats, Salvia, Monardella, Verbena

#### Groundcovers

- Provide cover for larvae
- Some eaten by adults & larvae
- Low Salvia, Manzanita, Ceanothus
- Dana Point buckwheat

#### Seasonal Wildflowers

- Quick snack for transient adults
- Some eaten by adults & larvae
- Tidy tips, Gilia, Thistles
- Bulbs: Lilies (*Lilium*), Onion (*Allium*)
- School bells (*Dichelostemma capitata*)

#### Disturbance

- Butterflies & Moths dislike disturbance
- Keep incompatible items & activities away: sports, bbq, dogs, walkways

## Plant Care

- Planting
  - group each plant type
  - more likely to attract
- Watering
  - no high pressure
  - use low-flow or drip
- Pruning
  - Watch for eggs, larvae, & pupae

## Pest Control

- Competition: aphids
- Predators
  - Mantids
  - Assassin bugs
  - Ants & wasps
- Parasitoid wasps & flies

Paint Strainer: Home Depot, etc.

## Good Perennial Plant Choices

Onions  
Lilies  
Brodiaeas  
Milkweeds  
Asters  
Sunflowers  
Bignonia  
Yerba Santa  
Manzanitas  
Mints & Sages  
Evening-Primrose  
Monkeyflowers  
Beardtongues  
Buckwheats  
Columbines  
Coffeeberries  
Redberries  
Cal Lilacs  
Verbenas

## Good Annual Plant Choices

Pincushions  
Thistles  
Asters  
Sunflowers  
Goldfields  
Tidy tips  
Tar Plants  
Evening-Primroses  
Phlox  
Buckwheats