Our Other Pollinators

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Plant Something for Pollinators

• Spring, summer, and fall bloomers
• All colors
• Native plants best for native pollinators
• Flowering trees produce 1000s of flowers
• Perennials and annuals offer a variety of nutrition

Plant Flowers this Year
What’s Pollination?

• The transfer of pollen from one flower to another to produce seeds for next year

• Seeds may be protected by good-tasting flesh that we know as fruits and vegetables
Apple Blossom Anatomy

Petals make up the corolla.

Stigmas on the end of stalks called styles lead to the ovary. Pistil = stigma, style and ovary.

Stamen with pollen producing anthers atop a filament (stalk).

Sepals make up the calyx

Hypanthium - Tissue connecting sepals, petals and stamens; enlarges to become the part we eat.

Ovary with ovules; ovary becomes the core and ovules the seeds.
Why Increase Pollinator Habitat?

• 75 percent of world‘s 240,000 plants need pollinators

• 30 percent of food and fiber crops grown in the world need pollination

• U.S. – 100s of crops pollinated by insects
Popular Crops Pollinated by Bees
Why Increase Pollinator Habitat?

• Awareness and concern over declines growing

• Science is ambiguous
  – Few studies of past populations
  – “Common Sense” -- loss of field edges, increasing needs for housing, roads, etc. lead to less pollinator habitat
Why Increase Pollinator Habitat?

• Lots of Interest
• Lots of $
• Easy Slogans
  – Save the Monarch!
  – Save the Bees!

No current loss of production for any US crop
Plantings for pollinators help honey bees and honey crops
Foods Pollinated by Wind

- Wheat
- Corn
- Rice
- Hay for livestock
- Soybeans – many varieties self-fertile
Why Not Just Honey Bees?

• Increased yield, size and sweetness with wild pollinators and honey bees
• Some native pollinators are better than honey bees
  – Leafcutter bees for alfalfa
  – Squash bees for squashes, pumpkin, watermelon

Bees Disappearing—CCD 2006
Honey Bees in Decline!

U.S. Honeybee Colonies

Source: USDA NASS Honey Production Report
Why Bees Most Important

• Bees are hairy—carry pollen easily
• Only species to collect pollen for brood food

• *Flower Constancy*
• One trip=hundreds of flowers visited
70% of Wild Pollinators are Bees

Social Bees
Bumble bees

Some sweat bees, sometimes
Bumble Bees

- Nest in ground
- Only queen overwinters
- Queen and daughters in nest together--spring to fall
- 10-80 bees per nest
- Eat pollen and nectar
- Forage up to 1 mile from nest
Sweat Bees

- Nest in ground, need barren areas
- Queen overwinters in the ground
- Queen and daughters in nest together late spring through fall
- About a dozen bees per nest
- Eat pollen and nectar
- Small bees (1/4-1/2 inch) -- forage a couple hundred yards from nest
Solitary Bees

• Each queen makes her own nest and does all the work
• About a dozen bees per nest
• Life span is 2-6 weeks
• Mason bees – nest in wood

• 70% nest in ground – miner bees
Wasps
Flies
Beetles
Butterflies
Pollinator Needs

• Food - Flowers in all Seasons
  – Nectar
  – Pollen

• Shelter - Nest Sites
  – Bare ground, mulch free
  – Dead trees
  – Brush piles
  – Hollow stems
Spring Bloomers
Late Spring Bloomers
Summer Bloomers
Fall Bloomers
Right Plant Right Place

• Natives require less maintenance after establishment
• Plant trees, perennials and annuals for variety
• Plant shade-tolerant species in shade, understory trees in partial shade, etc.
• Bee meadows require dedication
• Plant what you like to look at
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Honey bees and natives benefit
Questions?