Supporting Wildlife in Your Backyard

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Mass Audubon’s Broad Meadow Brook
Conservation Center & Wildlife Sanctuary
• Founded 1990
• Largest urban wildlife sanctuary in New England
• 430 acres, 5 miles of marked trails
• Located just 3 miles from downtown Worcester
Broad Meadow Brook Visitor Center
Goals for today

• Setting the Stage: Who’s out there?
  • local birds and insects
  • ecosystem concept

• Sustainable landscaping and gardening practices
  • wildlife-friendly elements
  • food for babies
  • native plants
  • chemical-free
  • be water-wise
Who is out there?
All-Seasons Birds

Blue Jay

Eastern Bluebird

White-breasted Nuthatch

Northern Cardinal

Black-capped Chickadee

Tufted Titmouse
Spring & Summer Birds

- Gray Catbird
- Indigo Bunting
- Yellow Warbler
- Wood Thrush
- Scarlet Tanager
Ruby-throated Hummingbird
Archilochus colubris

Weighs about 3 paper clips (3 g)
Can fly nonstop across Gulf of Mexico
Flaps wings 53 times / sec
Yellow Warbler Family
Local Insect Pollinators

Bees & Butterflies

Flies & Beetles
Butterflies: 125 species in MA

Cabbage White

female

males
Great Spangled Fritillary

- Large
- June – September
- Larva on violets, overwinter before eating
Mourning Cloak

- Med-Large
- Mar-Apr & Aug-Oct
- Larva on willow, poplar, birch, elm, hackberry
Black Swallowtail

*Massachusetts State Butterfly*

Larval hosts: **dill, parsley, carrot, Queen Anne’s lace**
Bees

• **Social** – Honey Bees, Bumble Bees
  • Build nest colonies (hives)

• **Solitary** – most Native Bees
  • No queens/hives
  • Stingless
  • Gentle
Bumblebees
Solitary Bees

- 4000 in US, 350+ in NE
- Native to US
- Rarely sting
Miner Bees & Sweat Bees
(\textit{Andrenidae} & \textit{Halictidae})

Andrenidae

Halictidae

Andrena

Augochloropsis

Sandy soil

nativebeesofnewengland.com
Underground features of the nest of a mining bee (e.g. Diadasia or Melissodes). Cells show larvae feeding upon bright orange pollen masses. Inset shows an early instar feeding on pollen and nectar provision masses.
Mason, Leafcutter, Cellophane Bees

Hollow stems, wood
Mason, Leafcutter, Cellophane Bees
(Megachilidae & Colletidae)

http://www.nativebeesofnewengland.com
Bee Pollination

Pollen sticks to the body of the insect

Nectar (sugar water)
Principles of Sustainable Landscaping for Wildlife

Meet Basic Needs

• Food / Water / Shelter
• Safe spaces – no chemicals
• Physical structure

• Responsible water use
Meeting Basic Needs

- Food
- Water
- Safe Spaces &
- Nurseries
Food

Plant Seasonally
• *time blooms for spring-fall
• *varied flower structure

Plant Native
• *support native wildlife
• *regional, non-invasive plants
Plant Native

• Native plants support more insect life.
  • 500+ kinds of butterfly & moth caterpillars feed on oak trees
  • 1 pair Black-capped Chickadees feed 6,000-9,000 caterpillars to nestlings
  • No bugs, no baby birds
Native Plants for Sun:

Swamp Milkweed (Asclepias incarnata)
New England Aster* (Aster novae-angliae)
Marsh Marigold (Caltha palustris)
Little Bluestem (Schizachyrium scoparium)
Penstamon (Penstamon digitalis)
Joe Pye Weed (Eupatorium maculatum)
Boneset (Eupatorium perfoliatum)
Butterfly Weed (Asclepias tuberosa)
Bee Balm (Monarda didyma & M. fistulosa)
Native Plants for Shade:

Cardinal flower* 
Foam flower 
Wild geranium 
Pennsylvania sedge 
Bleeding heart 
Solomon’s seal 
Columbine 
Royal Fern 
Maidenhair Fern 
Ostrich Fern 
Sensitive Fern

(Lobelia cardinalis) 
(Tiarella cordifolia) 
(Geranium maculatum) 
(Carex pensylvanica) 
(Dicentra eximia) 
(Polygonatum falcatum) 
(Aquilegia canadensis) 
(Osmunda regalis) 
(Adiantum pedatum) 
(Matteuccia struthiopteris) 
(Onoclea sensibilis)
Native Shrubs:

Sweet Gale (*Myrica gale*)
Buttonbush (*Cephalanthus occidentalis*)
Red Twig Dogwood* (*Cornus sericea*)
High Bush Blueberry (*Vaccinium corymbosum*)
High Bush Cranberry (*Viburnum trilobum*)
Black Elderberry (*Sambucus canadensis*)
Inkberry (*Ilex glabra compacta*)
Winterberry (*Ilex verticillata*)
Pussy Willow (*Salix caprea*)
Safe Spaces:
Avoid Chemicals
Alternative to Chemicals: IPM* - Gentle Pest Control

*Integrated Pest Management
Safe Spaces: Homes for Native Bees
Physical Structure

Layers
Lawn Care

• Recycle grass clippings
  • Avoid $$$ fertilizers
  • Avoid smelly compost piles

• Mow high
  • Encourage long roots
  • Grass stays greener
  • Reduces water use
  • Shades out weeds

• Embrace diversity
  • Clover = natural fertilizer
  • food for bees
Yards & Water

Storm drains send rain water (and contaminants) to the nearest water body.
Creating a Hydrologically Functional Lot

- Conservation
- Porous Pavement
- Open Drainage
- Rain Barrel
- Reduced Imperviousness
- Amended Soils
- Rain Gardens

Conservation

Reduced Imperviousness

Amended Soils

Rain Gardens

Open Drainage

Rain Barrel

Porous Pavement
Rain Barrels
Stormwater Management
Rain / Pollinator Gardens
Plants/Pollinators/Water
Take-aways: Supporting Wildlife at Home

• Yards = Ecosystems

• Everything is a resource
  • Lawn clippings
  • Brush / dead stems
  • Water

• Our choices matter at every level
Thank you!
For more info:

• Mass Audubon
  • massaudubon.org

• Massachusetts Butterfly Club
  • naba.org/chapters/nabambc/

• Pollinator Partnership
  • pollinator.org

• Xerces Society
  • xerces.org/pollinators-northeast-region/

• Grow Native Massachusetts
  • grownativemass.org

• National Wildlife Federation – native plant finder
  • nwf.org/nativeplantfinder/about