



USVI Heroes – Pollinators of the Land



What's the Buzz all About

Pollinators are essential in our environment and have key functions in the backyard, on the farm, and throughout the whole ecosystem. Honeybees, and other great pollinators including flies, carpenter and bumblebees, hummingbirds, fruit-eating bats, beetles, butterflies and moths, and wasps need our flowering plants and we need them. Without pollinators many of the wildflowers and medicinal plants, diversity of fruits, and abundance of produce will not occur. Pollination of flowers leads to the creation of new seeds that grow into new plants, new crops, new trees, fruit, nuts, and vegetables. Pollinators assist by moving pollen when entering a flower, and feed on rich nectar to support their offspring. We encourage you to support, protect, and take care of the many types of pollinators found on the Virgin Islands.



Pollinators Are In Trouble

Pollinators are declining, disappearing, dying. Numerous issues affect pollinators' health, including: 1) misuse of pesticides (spraying on windy days where the spray drifts and hits a non-target organism, or applying a pesticide when flowers are in bloom and bees are active), 2) climate change effects; 3) diseases (protozoans, fungus); 4) tracheal mites cutting off air inside honeybees' throats, and varroa mites feeding on the honeybees' bodies and weakening them by sucking on fat bodies and spreading a disease; 5) The loss of habitat and homes for pollinators, because of degradation of land due to development and tropical storms. All these issues contribute to pollinator reduction.

Support & Protect Pollinators in the VI Community

Contribute by providing food (pollen, nectar, honeydew), water, and shelter for pollinators.

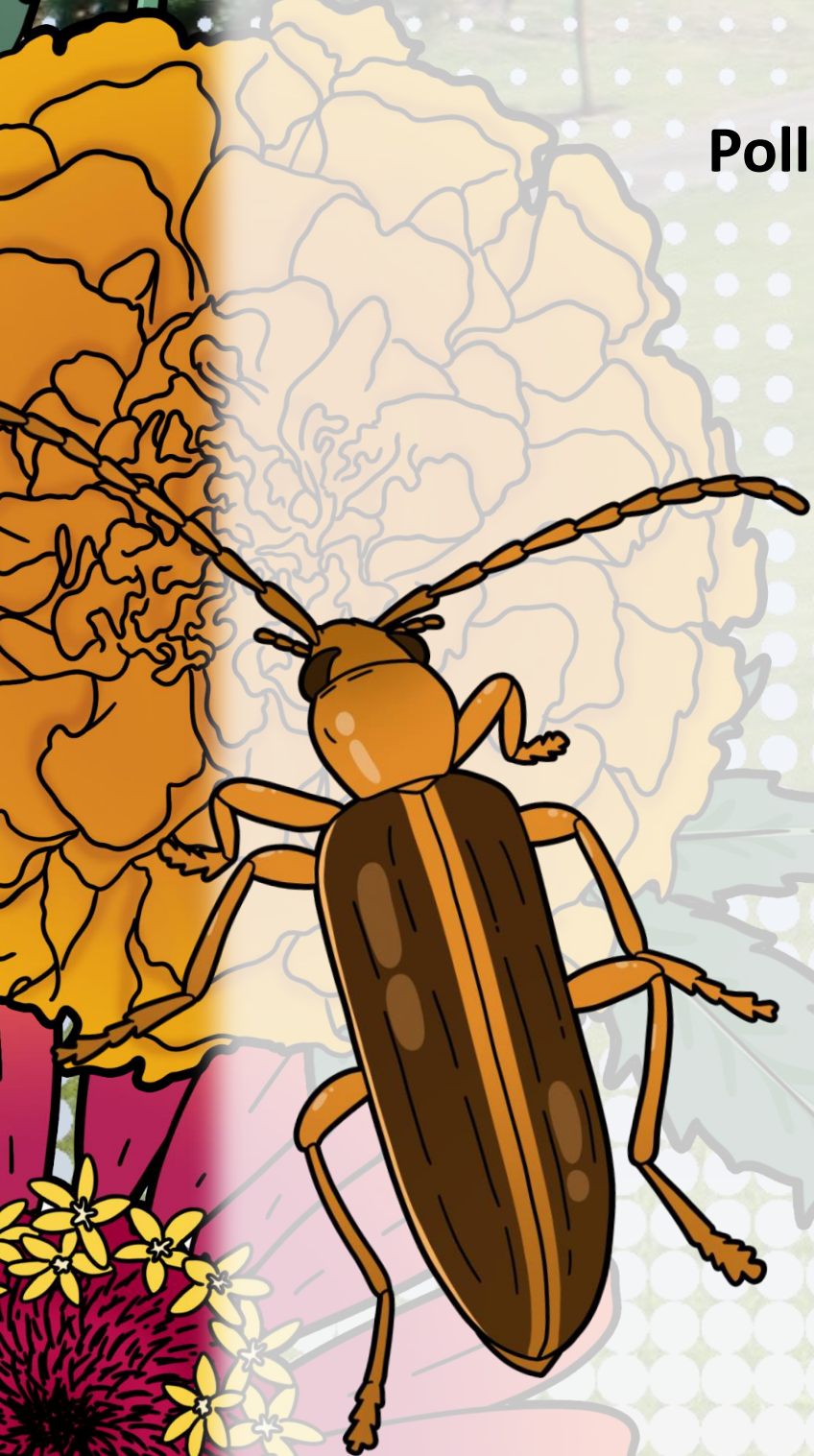
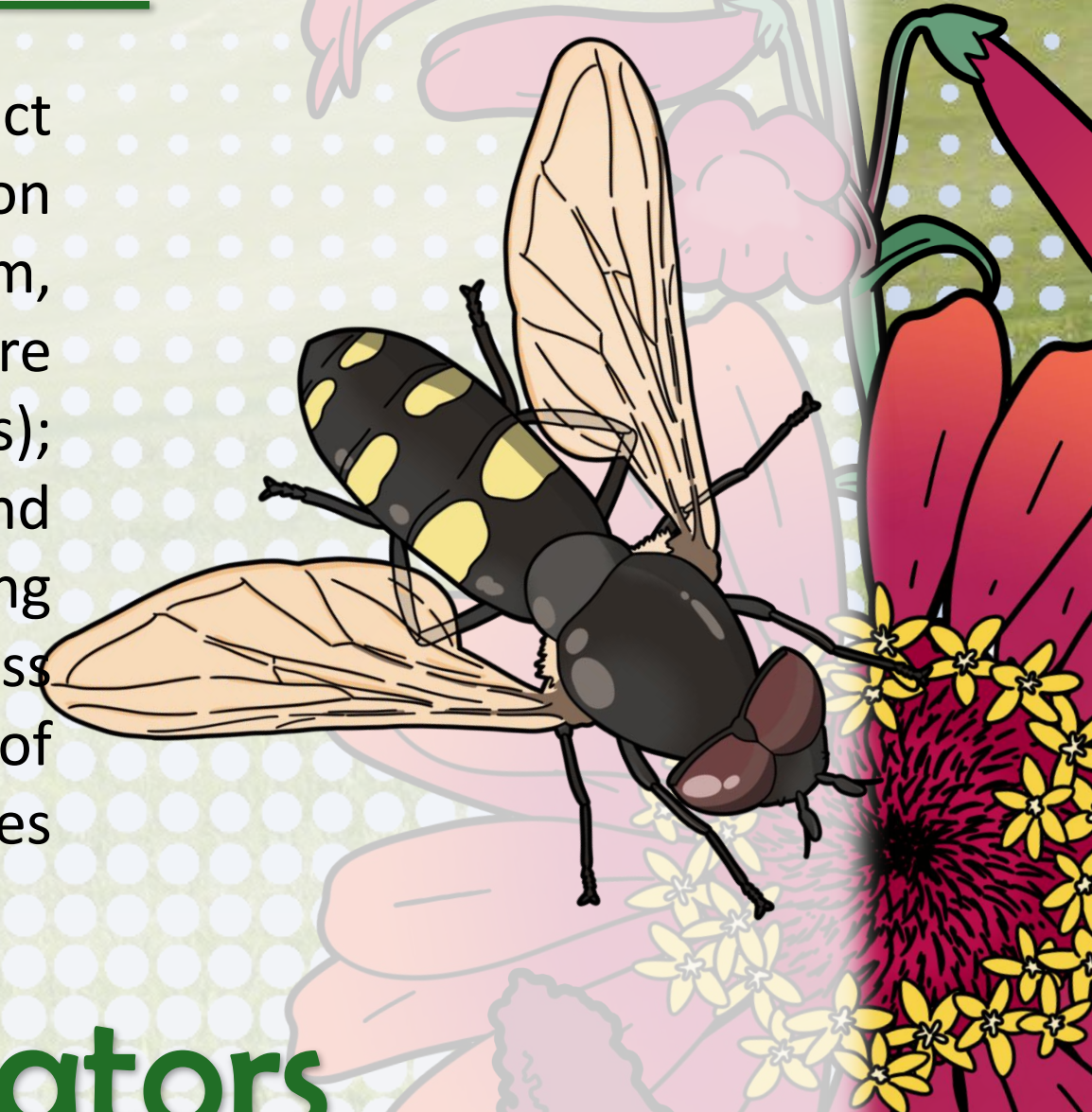
Plant seasonal flowers and nectar-producing trees with a continuous source of food. Arrange flowering plants at crop borders (e.g., hedgerows) roadsides, houses and gardens.

Minimize pesticide use and avoid spray drifting on windy days, and BEE aware of bloom stage and timing of pesticide application.

Provide nesting habitats for solitary bees, social bumblebees, and bats. These habitats help pollinators survive.

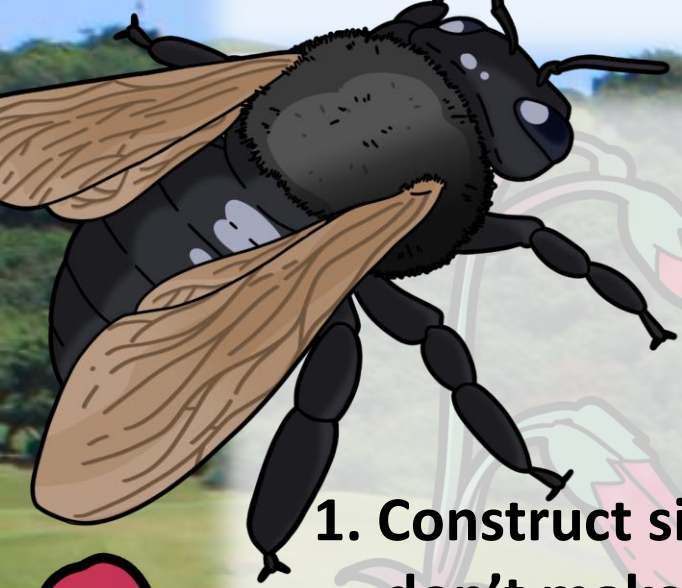
Avoid excessive cultivation and deep tilling, which may disrupt ground-nesting bee habitat.

Protect plants with butterfly eggs that often need specific host plants for caterpillars feeding.





Support Solitary Bees with Homes and Flowers in the VI



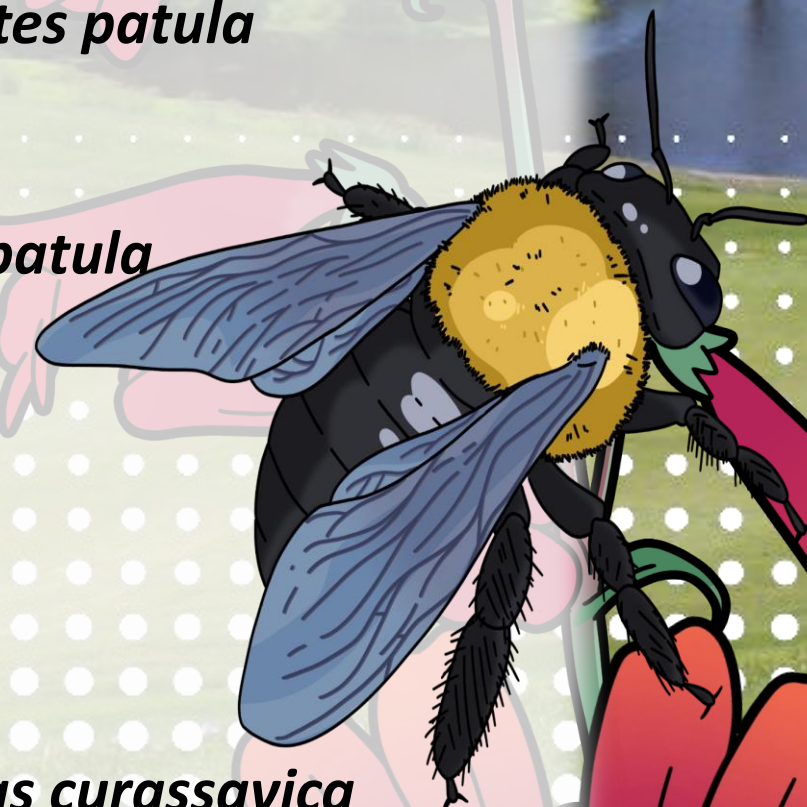
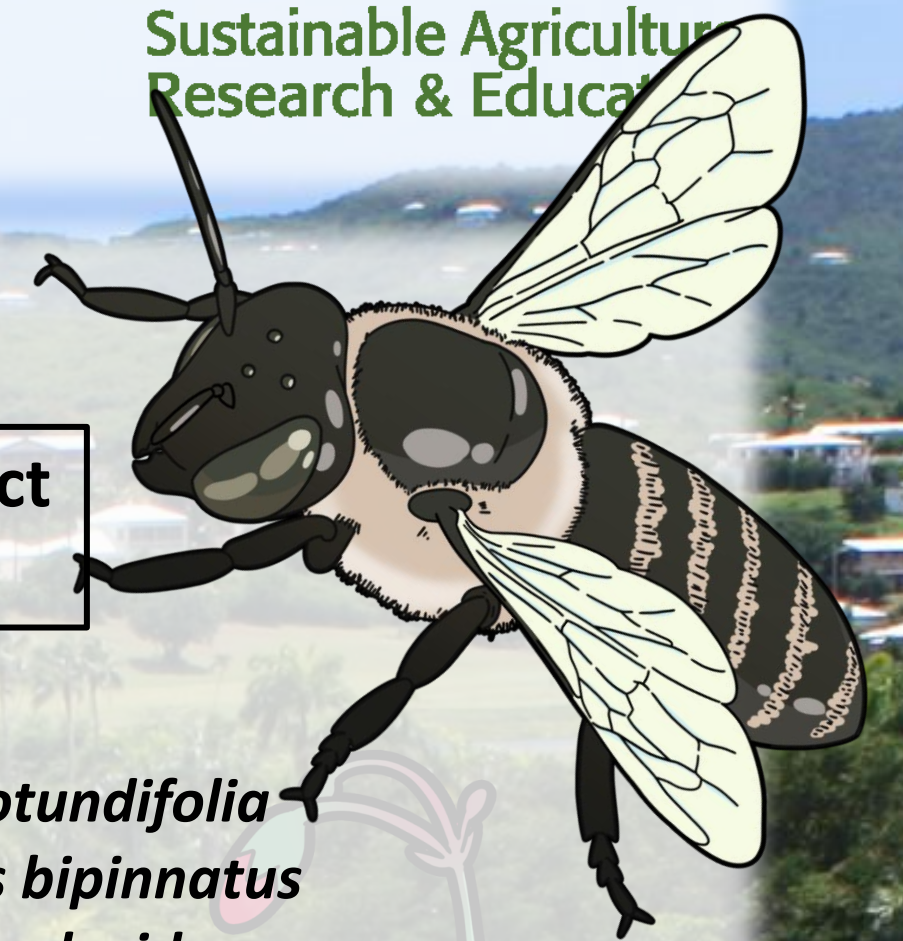
Steps to construct a BEE condo, apartment, or BEE bungalow

1. Construct single hole nesting sites for solitary bees that don't make honey but are brilliant pollinators to our flowering plants and crops. They will find the hole with little effort, especially if you place the home near flowers. The female bee lays a single egg inside the tunnel, adds pollen/nectar for her eggs, and seals the hole with mud or a leaf.
2. Houses can be long and skinny in size, such as 3 x 12, 4 x 8, 6 x 10, 4 x 8, or 24 x 36-inches (upright apartment), whatever pleases you. Unused birdhouses can make a good size condo for bees.
3. Collect untreated, weathered wood, unfinished 4 x 4-inch lumber scraps, old logs of varying diameters (2-5 inches in diameter), from 2 to 7 inches long. Solid chunks of wood are good for bee homes. Also, locate all sizes of hollow bamboo canes, grass and cattail reeds. Old concrete blocks, recycled cans, and PVC pipes can also make good bee tunnels.
4. Build a frame around the bee box containing materials inside or use a solid piece of wood (4x4-inch or any size log or fat branch) without a frame. The bee box depth can be any size from 4 to 7 inches. Enclose frame on back side with a piece of solid wood.
5. Drill smooth holes in wood, approximately 3/32-inch up to 5/16-inch, or 1/2-inch for big black carpenter bees. Space the holes 1/2 to 1-inch apart, 3-5 inches deep. Paper straws can be inserted inside holes, as bees like clean entries.
6. Add a slanted roof for protection from rain that is sloped and extends 2-inches over house. You can make a roof out of a piece of corrugated metal, shingle, or other flat woods. A good size hole for many bees is 1/4-inch.
7. Place the pollinator home with entrance holes facing the east or southeast, so they get the morning sun. Don't cook them! Secure on side of barn, fence post, and near flowering plants. The bee houses can be placed at any height from the ground and secured using L-braces, wire ties, or eye hooks so they do not shake around in the wind.



Flowering plants that attract POLLINATORS

Zinnia, *Zinnia elegans*
 Mexican Sunflower, *Tithonia rotundifolia*
 Cosmos Versailles Mix, *Cosmos bipinnatus*
 Mexican Mint Marigold, *Tagetes lucida*
 Anise, *Pimpinella anisum*
 Yellow Hybrid Marigold, *Tagetes erecta*
 Orange Hybrid Marigold, *Tagetes erecta*
 Verbena, *Verbena bonariensis*
 Chinese Forget Me Not, *Cynoglossum amabile*
 Sonja Sunflower, *Helianthus annuus*
 Autumn Beauty Sunflower, *Helianthus annuus*
 Asian Basil Cinnamon, *Ocimum basilicum*
 Lemon Basil Mrs. Burns, *Ocimum basilicum v. citriodora*
 Queen Sophia French Marigold, *Tagetes patula*
 Tangerine Gem, *Tagetes tenuifolia*
 Savory, *Satureija hortensis*
 Marigold Durango Outback, *Tagetes patula*
 Buckwheat, *Fagopyrum esculentum*
 Zinnia Exquisite, *Zinnia spp.*
 Basil Superbo, *Ocimum basilicum*
 Comfrey, *Symphytum caucasicum*
 Borage, *Borago officinalis*
 Dill, *Anethum graveolens*
 Butterfly weed or Milkweed, *Asclepias curassavica*
 Sun Hemp, *Crotalaria juncia*
 Echinacea, *Echinacea purpurea*



Wildflowers observed with pollinators:

Spurred Butterfly Pea, *Centrosema virginianum*
 Mexican Fireplant, *Euphorbia heterophylla*
 Blue Weed, *Euphorbia prostrata*
 Common Sunflower, *Helianthus annuus* -Girasol
 Spiderwisp, *Gynandropsis gynandra*
 Big Caltrop, *Kallstroemia maxima*
 Lantana Camara, *Lantana spp.*
 Mexican Primrose-Willow, *Ludwigia octovalvis*
 Wild Bushbean, *Macroptilium lathyroides*
 Threelobe False Mallow, *Malvastrum coromandelianum*
 Pyramid Flower, *Melochia pyramidata*
 Rock Rosemary, *Merremia quinquefolia*
 Mesquite, *Bayahonda blanca*, *Prosopis juliflora*
 Other Legumes

Trees important for pollinators:

Autograph tree, *Clusia rosea*
 Lignum vitae, *Guaicum officinale*
 Seagrape, *Coccoloba uvifera*
 Genip, *Melicoccus bijugatus*
 Logwood, *Haematoxylum campechianum*
 Dog Almond, *Andira inermis*
 Christmas Palm, *Adonidia merrillii*

