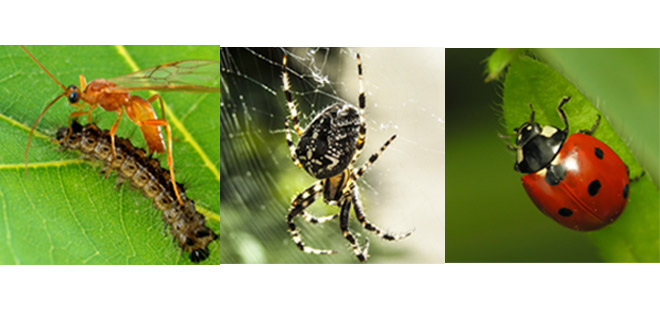
**Beneficial Insects**



Not all bugs are bad. Insects get labeled as "pests" when they start causing harm to people or the things we care about, like plants, animals, and buildings. Out of nearly one million known insect species, only about one to three percent are ever considered pests. What about the rest of them? Some insects actually help us by keeping the pests in check.

If we let them do their jobs, many [**types of insects**](http://npic.orst.edu/envir/beneficial/table.html) can actually help us out:

* **By preying on pest insects.**   
  Spiders are predators of insects. So are some types of beetles, flies, true bugs, and lacewings.
* **By parasitizing pest insects.**   
  Parasitic insects, like some small wasps, lay their eggs inside insects or their eggs. This can help drive the pest population down.
* **By pollinating plants.**   
  Insects like native bees, honeybees, butterflies, and moths can provide this service, helping plants bear fruit.
* **Don't forget about non-insect beneficial animals!**   
  Birds and bats are examples of animals that can feed on pest insects.

Think about it this way: your backyard ecosystem is a cafeteria for all sorts of insects. The balance of that system depends on whether you cater to the "pest" insects or to the "beneficial" ones.

**What can you do to cater to beneficial insects?**

1. Attract them to your [**yard**](http://npic.orst.edu/envir/beneficial/lawn.html), [**garden**](http://npic.orst.edu/envir/beneficial/garden.html), or other landscape.
   * Include a variety of native plants to provide a variety of food sources (like nectar).
   * Provide shelter for them. Include a mixture of features like ground cover plants, dead leaves or other plant material, and some areas of bare soil.
2. Protect them so that they can help you in return.
   * Practice [**Integrated Pest Management (IPM)**](http://npic.orst.edu/pest/ipm.html)
     + Identify the pest – make sure it’s not actually a beneficial insect!
     + Decide how many of the pest insects are tolerable. Remember, some pests are necessary to feed the beneficial insects and some plant damage is natural for any ecosystem.
     + Think about using alternative control methods while you wait for the beneficial insects to take over for you. Be patient, it can sometimes take several days for them to make a difference.
     + If you choose to use a pesticide, consider selecting one that will target your pest specifically, rather than a broad-spectrum product.
3. Keep your [**lawn**](http://npic.orst.edu/pest/lawnipm.html) and other plants healthy. Give them appropriate amounts of nutrients, water, sunlight, and do regular upkeep. A healthy ecosystem will have fewer pest outbreaks.

**Learn about attracting and protecting beneficial insects by digging deeper:**

|  |  |  |  |
| --- | --- | --- | --- |
| [**Beneficial Insects: Lawn**](http://npic.orst.edu/envir/beneficial/lawn.html) | [**Beneficial Insects: Garden**](http://npic.orst.edu/envir/beneficial/garden.html) | [**Beneficial Insects: Agriculture**](http://npic.orst.edu/envir/beneficial/agcrop.html) | [**Natural Enemies Quick List**](http://npic.orst.edu/envir/beneficial/table.html) |

If you have questions about this, or any pesticide-related topic, please call NPIC at **1-800-858-7378** (8:00am - 12:00pm PST), or email us at [**npic@ace.orst.edu**](mailto:npic@ace.orst.edu).

**Additional Resources:**

* [**Finding Pollinator Attractive Plants**](https://protectingbees.njaes.rutgers.edu/find-plants/) - Rutgers University
* [**Conservation of Beneficial Insects: Strengths and Gaps in Resources**](http://npic.orst.edu/envir/beneficial/NCUEBeneficials/index.html) - 2016 National Conference on Urban Entomology (NCUE) Presentation
* [**Attracting Pollinators to Your Garden Using Native Plants**](http://www.fs.fed.us/wildflowers/pollinators/documents/AttractingPollinatorsEasternUS_V1.pdf) - US Forest Service
* [**Beneficial Insects and Spiders**](http://www.umaine.edu/publications/7150e/) - University of Maine
* [**Beneficial Landscaping: Insects**](http://yosemite.epa.gov/r10/ECOCOMM.NSF/webpage/Beneficial+Landscaping+-+Insects) - US EPA Region 10
* [**Natural Enemy Releases for Biological Control of Crop Pests**](https://www2.ipm.ucanr.edu/agriculture/natural-enemy-releases-for-biological-control-of-crop-pests/) - University of California, Agriculture and Natural Resources
* [**Natural Pest Control: Using Beneficial Insects to Control Landscape Pests**](http://snyderfarm.rutgers.edu/pdfs/Natural-Pest-Control-fs930.pdf) - Rutgers Cooperative Extension
* [**Encouraging Beneficial Insects on Your Farm**](http://extension.psu.edu/business/start-farming/news/2012/encouraging-beneficial-insects-on-your-farm) - Penn State Extension

**Pictures of Beneficial Insects:**

* [**Beneficial Insects in the Yard & Garden**](http://lancaster.unl.edu/pest/resources/339_beneficialbugs.pdf) - University of Nebraska
* [**Recognizing Beneficial Insects in the Yard**](http://louisvillewater.com/sites/louisvillewater.com/files/user_uploads/Water%20Quality/Wellhead%20Protection/SRAG%20900%20Recognizing%20Beneficial%20Insects.pdf) - Louisville Water Company
* [**Natural Enemies Gallery**](http://www.ipm.ucdavis.edu/PMG/NE/index.html) - University of California-Davis

**Beneficial Insects in the Garden**



When you’re growing a garden, it can sometimes feel like you’re just working to feed the neighborhood bugs. The reality is that your garden is a cafeteria for all kinds of insects. But, not all of them are there to feed on your veggies! Many insects actually see those pesky plant-eaters as dinner. Consider taking some steps to make sure that you are catering to the natural enemies rather than the pest insects:

* With any ecosystem, diversity is key. The more complex and diverse your garden landscape is, the more likely beneficial insects will call it 'home.'
* Include a variety of native flowering plants in and around your garden. Try to make sure that there are blooms available throughout most of the year. Many beneficial insects need pollen and nectar to survive.
* Consider adding small, shallow mud or water features around your garden. Many beneficial insects need fresh water sources to survive and will appreciate having one close by.
* Some damaged plants can actually send out distress signals that attract pest insects. Make sure that your plants will get the right type and amount of nutrients. Healthy plants are often less susceptible to damage from insects and disease.
* Consider the amount of sunlight, water, and air circulation that your plants will get as they grow. Select plants that are known to grow well in the conditions that you have in your garden space.
* Consider planting so that weeds will be shaded out, but not so close that there is low air circulation. Low air circulation can lead to the spread of disease.
* Practice [**Integrated Pest Management (IPM)**](http://npic.orst.edu/pest/ipm.html) by identifying your pests, determining how many can be tolerated, and making changes in the garden to discourage those pests. For example, you might create a physical barrier, or set traps to reduce the population of pests.
* If you choose to use a pesticide, consider selecting one that will target your pest specifically, rather than using a broad-spectrum product. [**Biological pesticides**](http://npic.orst.edu/ingred/ptype/biopest.html), for example, are made to target a specific insect or group of insects.
* Avoid treating plants that are in bloom. Beneficial insects may be visiting the flowers.
* Get to know your beneficial insects. We can help you get started with this [**quick list**](http://npic.orst.edu/envir/beneficial/table.html) and the picture guides linked below.

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**Additional Resources:**

* [**Gardening and Landscaping Practices for Nesting Native Bees**](http://extension.usu.edu/files/publications/factsheet/ENT-175-15.pdf) - Utah State University Extension
* [**Biological Control and Natural Enemies of Invertebrates**](http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn74140.html) - University of California-Davis
* [**Natural Enemy Releases for Biological Control of Crop Pests**](https://www2.ipm.ucanr.edu/agriculture/natural-enemy-releases-for-biological-control-of-crop-pests/) - University of California, Agriculture and Natural Resources
* [**Beneficial Insects and Spiders**](http://www.umaine.edu/publications/7150e/) - University of Maine
* [**Attracting Pollinators to Your Garden**](http://www.fs.fed.us/wildflowers/pollinators/documents/AttractingPollinatorsEasternUS_V1.pdf) - US Forest Service

**Pictures of Beneficial Insects:**

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* [**Natural Enemies Gallery**](http://www.ipm.ucdavis.edu/PMG/NE/index.html) - University of California-Davis
* [**Beneficial Predators**](http://www.ipm.ucdavis.edu/QT/beneficialpredatorscard.html) - University of California-Davis
* [**Beneficial Parasitoids**](http://www.ipm.ucdavis.edu/QT/parasitesinsectcard.html) - University of California-Davis
* [**Biological Control and Natural Enemies of Invertebrates**](http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn74140.html) - University of California-Davis
* [**Biological Control: A Guide to Natural Enemies in North America**](http://www.biocontrol.entomology.cornell.edu/index.php) - Cornell University
* [**Beneficial Insects: Nature's Pest Control**](http://idl.entomology.cornell.edu/wp-content/uploads/Beneficial-Insects.pdf) - Cornell Insect Diagnostic Laboratory
* [**Common Natural Enemies of Crop and Garden Pests**](http://extension.entm.purdue.edu/radicalbugs/pdf/Insects402.pdf) - Purdue University

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