

Wild OHIO

Going native at the Ecohouse

Tucked in a hollow southwest of the Ridges on Dairy Lane lies an old brick home adorned with solar panels. It bears the name OHIO Ecohouse, and since 2005 has housed Ohio U. students, giving them the opportunity to practice living sustainably.

In addition to adopting daily habits, such as composting and monitoring energy use, each cadre of caretakers attempts to lower the ecological footprint of the house by spearheading projects of their choosing. Past projects have included fitting the Ecohouse with a 2.4 kilowatt solar photovoltaic array and solar thermal water heating system, improving the house's energy efficiency by adding insulation, installing new windows, and working to expand the residents' vegetable garden.

This year, residents Joe Brehm, Molly Shea, and Alana Dakin are throwing the spotlight on landscaping. Their focus, in particular, is on working native trees, shrubs, and herbaceous plants into the Ecohouse grounds. Collaborating with Ohio U. grounds supervisor Susan Calhoun and her crew, Ecohouse tenants have planted native tree species such as pawpaw (*Asimina triloba*) and magnolia (*Magnolia sp.*), blackberry and raspberry bushes, and herbaceous plants such as wild ginger (*Asarum canadense*) and black cohosh (*Cimicifuga racemosa*).

Each native plant fulfills an important ecological niche. Pawpaw trees produce large, edible fruits valued by a variety of mammals (including humans) and birds. The perfumed pink and white blossoms of magnolia attract a variety of beetles in search of protein-rich pollen. These insects in turn supply a portion of the diet of native songbirds, such as the scarlet tanager (*Piranga olivacea*), the chorus of which Ecohouse residents delight in during the summer.

In addition to their roles in preserving an ecological balance, native plants are more adapted to local climates and generally do not need to be watered as often as non-native plants. Furthermore, they require no assistance from pesticides, as natives have evolved their own chemical defenses against insect predators.

"Thinking about where to place each plant forces us to learn about the habitat requirements of each species. In this way, the project is educational to the residents and also to those who tour the Eco-

house," says Molly Shea.

Joe Brehm has also been working to augment the vegetable garden with prairie species that grow well in open areas. In addition to raspberry and blackberry shrubs, he has planted butterfly weed (*Asclepias tuberosa*) and prairie coneflower (*Echinacea sp.*). Butterfly weed, in particular, is a favorite nectar source for a great many butterflies, such as the tiger swallowtail (*Papilio glaucus*), monarch (*Danaus plexippus*), and great-spangled fritillary (*Speyeria cybele*).

"It is just fun to think about more butterflies visiting the garden because of the work we are doing now," says Shea. Dakin looks forward to seeing the fruits of her labor in the future. "When I come back in five or ten years to visit, I'll be able to look at the pawpaw trees in the yard that will be bearing fruit and know that I had something to do with that."

Not only is it important what species of plants are added to the Ecohouse landscape, but also what species are not. Many invasive species such as Japanese and bush honeysuckle (*Lonicera japonica* and *Lonicera maackii*), garlic mustard (*Alliaria petiolata*), English ivy (*Hedera helix*), and autumn olive (*Elcagnus umbellata*) escaped from cultivation or were purposely used in cosmetic landscaping. These plants invade natural areas in southeast Ohio, including swaths of land surrounding the Ecohouse, and have the potential to significantly reduce biodiversity by displacing native flora.

Calhoun has enjoyed collaborating with residents on this project, citing the Ecohouse as "the perfect place to experiment with sustainable landscaping." Calhoun and her crew have been testing plots elsewhere on campus, maintaining a "no mow" patch of prairie on Ohio U.'s golf course and another near Porter Hall. Such landscaping projects are not primarily about looks, Calhoun points out, but about the ecological function of each plant community.

When thinking about sustainability and reducing one's ecological footprint, native landscaping may not be the first thing to come to mind. But perhaps it should be. Cultivating native plants is a simple yet powerful way to reconnect local ecosystems.

By Joe Brehm

Pictured: Great-spangled fritillary on butterfly weed.
Visit ohio.edu/ecohouse for more information.

