

## Planning

Regardless of where you live, you can turn even the smallest yard into a wildlife haven with a little time and careful planning.

Planning your backyard habitat is key not only to ensuring the success of any vegetation that you may wish to plant, but also to providing habitat for a variety of species. It is generally helpful to begin by taking an inventory of what you already have. Moving or pruning some existing vegetation may make a big difference. Keep in mind that wildlife considerations can be included in the design without sacrificing aesthetics.

Begin your plan by:

- mapping your yard to scale
- mapping the location of your house and other structures, such as a pool or deck
- plotting existing plantings
- showing paths and patios
- locating power lines, pipes and underground cables

The following factors should be taken into account to determine the species that are the best choices for your area. Consider them throughout the planning process to ensure that your backyard habitat is healthy and pleasing to the eye.

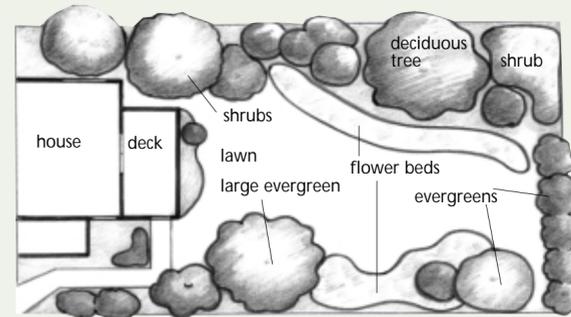
- Size — height and spread of trees/shrubs, now and at maturity
- Soil — drainage/workability/fertility
- Sun — What areas receive sun or shade?

View — Are there any views you want to maintain or hide?  
Seasons — What food/cover is available each season?  
Your time and budget — How much time and money are you willing to spend to get your backyard habitat started and maintain it?

How you arrange your plants is almost as important as what you plant. Wildlife tends to congregate where two different habitats meet. Therefore, design your yard to alternate plant masses with open areas. This will result in an edge effect, which encourages maximum species diversity. Shrubs and trees should be planted in clumps or hedgerows to provide a dense habitat and protection for a variety of wildlife.

Consider planting deciduous trees on the south side of your house to provide shade in summer and allow sunlight through in winter. Such strategic planting of trees can provide a number of benefits over and above wildlife habitat — it can help to conserve energy in your home by reducing heating needs in winter and air conditioning needs in the summer. Trees also help to slow global warming, not only by helping to reduce energy consumption of fossil fuels, but also by naturally absorbing carbon dioxide through the process of photosynthesis.

Consider where a shade tree would be appropriate or where large roots may damage existing structures. Plans for new plants should complement existing vegetation.



Preliminary Plan

## Plant Selection

It is best by far to choose plants that are native to your area as they tend to be better adapted to the climate, soil conditions and local pests and diseases.



bee balm

### Herbaceous plants (Flowering and Non-Flowering)

- VARIETY
  - Mix perennials and annuals (perennials grow back each year to save you working on new plantings).
  - Plant a variety of flowers that will bloom throughout the growing season.
  - For interest try some non-flowering plants, such as a fern and/or moss garden. Remember that these types of plants enjoy shady areas and damp conditions — in fact, moss requires water continuously to survive. If you are planning to put a pond in your yard, try planting ferns or moss around the edge.
  - You may choose to plant some edible species, such as ostrich fern (known as fiddleheads in the early spring) or wild leeks, or plants that can be used as herbs or condiments, such as a mint or wild ginger.

- WILDLIFE
  - Flowering plants should attract insects including butterflies and bees, as well as seed- and nectar-eating birds.
  - A variety of colours will help to attract a variety of birds and insects (e.g., hummingbirds are attracted to reds and oranges).
  - Some plants are important food sources for insect larvae, including caterpillars.

- GROWTH
  - With some exceptions (e.g., sunflower), herbaceous plants generally grow close to ground.
  - Leave seed heads on plants for winter wildlife food.
  - Ground covers can be used to replace lawns.

The plants with which you choose to landscape your yard should provide food and shelter for a variety of animals. Try to select a variety, with different heights and characteristics (such as textures and colours). Combining trees, shrubs, vines and herbaceous plants will increase the diversity of wildlife that is attracted to your yard. For instance, not all birds nest at the same level. Orioles and tanagers prefer tall trees, whereas thrashers and cardinals nest in shrubs, and sparrows like low-growing plants.

It is best by far to choose plants that are native to your area as they tend to be better adapted to the climate, soil conditions and local pests and diseases. As a result, they generally require less water and less tending, and do not depend on pesticides to thrive. This is not always the case, however. A few exotic species such as purple loosestrife have adapted so well to our conditions that they are invading and threatening our native ecosystems — another reason to choose native species.



trumpet honeysuckle

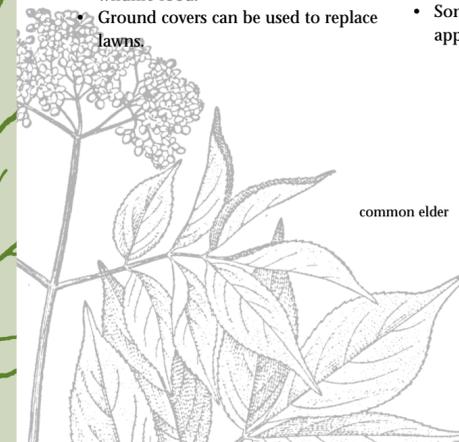
Consult your local nursery or garden centre, master gardener, horticultural society or naturalist club for advice on the best methods of soil preparation, the species that will thrive in your area and the spacing requirements of the plants you select. You may also be able to purchase seedlings, bedding plants and wildflower seeds from your nursery. But before you buy, ask about the source of any plants, as removing plants from the wild disrupts native plant communities. Reputable dealers should be able to tell you where and how the plants were propagated. Society for Ecological Restoration (address in resource list) provides information on outlets where native stock can be purchased. North American Native Plant Society (address in resource list) may also be helpful in your search for seeds and/or bedding plants. They hold an annual sale of native plants and run a wildflower seed exchange.

It is sometimes acceptable to remove plants from the wild in areas that are slated for development, such as subdivision, sewer and highway sites. However, proper permission must be obtained from the developers and/or property owners.

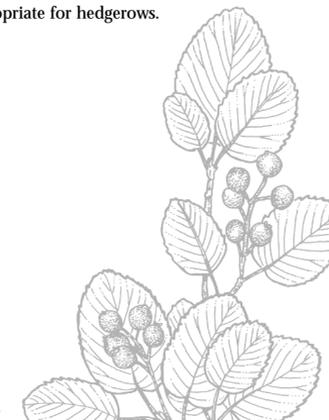
### Shrubs

- VARIETY
  - Select shrubs with overlapping flowering times to provide fruit in as many seasons as possible.
  - For greater visual interest, select a variety of shrubs with different colours of bark, variegated leaves, etc.
- WILDLIFE
  - Dense shrubs provide food, nesting and cover for songbirds and small mammals.
  - Some species of shrubs are appropriate for hedgerows.

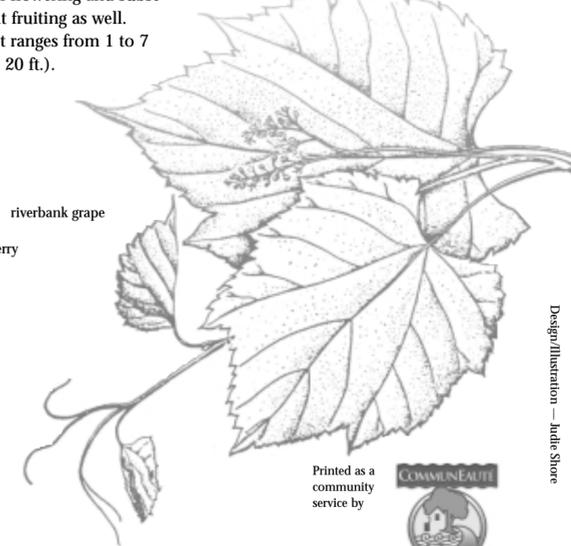
- GROWTH
  - Shrubs can sometimes grow in less than optimal growing conditions (sun or shade), but this may affect the degree of flowering and subsequently limit fruiting as well.
  - Shrub height ranges from 1 to 7 metres (3 to 20 ft.).



common elder



serviceberry



riverbank grape



While backyard habitats cannot take the place of large wilderness areas, they can foster the diversity of wildlife populations in urban areas.

Consider the number and kinds of plants or animals living in or on a typical suburban lot. Basically you'll find lots of individuals — many blades of grass, several individuals of the same plant growing in a hedge, large populations of aphids or mites — but you won't find many different species. Now compare that with what you would find living in an abandoned lot or field, and you will get an idea of what diversity is all about.

**Why is diversity important?** The greater number of plant species you have in your yard, the greater the variety of animal life that will find it attractive. And the more species there are, the less likely it is that any of them, such as pest insects, will get out of hand. Not only that, but the greater the diversity in a given area, the greater the natural balance, and the less tending is needed. In other words, the less feeding, watering, cultivating and pest control.

**Any wildlife you wish to attract will require four basic elements: food, water, shelter, space.** Each plant and animal species has preferences, but with careful planning you can create a diverse habitat that will appeal to many species. By encouraging a variety of plant life in your yard, you encourage a variety of animal life.

Since 1931, the Federation of Ontario Naturalists (FON) has worked to protect and increase awareness of important natural habitats, wilderness areas and endangered wildlife.

FON programs include environmental and natural history education, advocacy, research and protection projects. The FON currently represents over 15,000 people and a network of over 100 member groups.

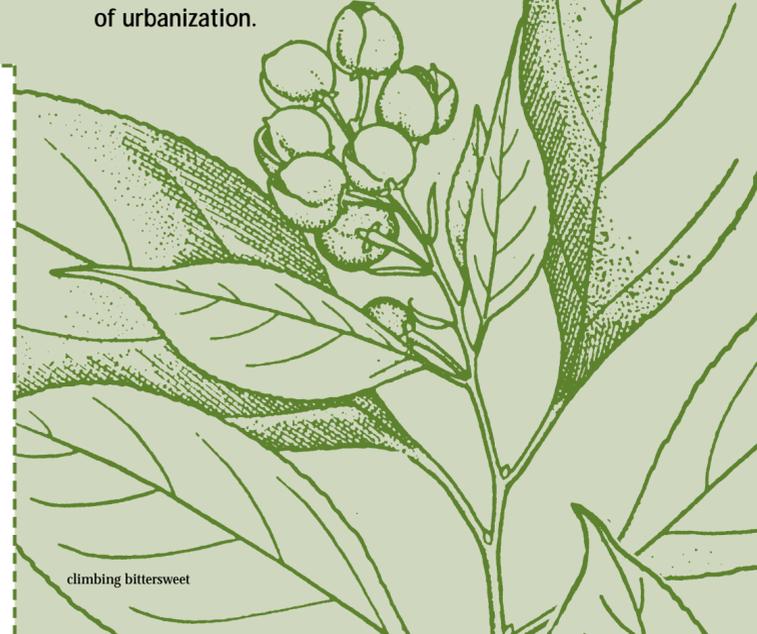
The FON publishes *Seasons*, the award-winning nature and environment magazine, produces a range of environmental education resources for schools and youth groups, and community conservation guides. Over the past 30 years, the FON has established the province's largest private nature reserve system.

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Web site: [www.ontarionature.org](http://www.ontarionature.org)



# BACKYARD HABITATS

Convert your backyard (or frontyard) into a wildlife refuge. By doing so you'll help to preserve valuable wildlife habitat and maintain plant and animal populations that are decreasing as a result of urbanization.



climbing bittersweet

### Sign me up as an FON member!

Mr  Mrs  Ms  Dr.  Other \_\_\_\_\_  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ Prov. \_\_\_\_\_ Code \_\_\_\_\_  
Tel \_\_\_\_\_ E-mail \_\_\_\_\_

#### Membership Categories

- \$40 Individual
- \$45 Family\*
- \$35 Sr/Sr Couple
- \$25 Student
- \$140 Supporting\*\*
- \$35 Library/School\*
- \$1000 Life \*\*

Outside Canada please add \$9.00

Please accept my donation of \$ \_\_\_\_\_  
 Cheque enclosed in amount of \$ \_\_\_\_\_ (payable to Federation of Ontario Naturalists)  
 Please bill my  Visa  Mastercard  
Account # \_\_\_\_\_ Exp. date \_\_\_\_\_  
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♦ includes a tax receipt for \$100.00 \* includes Family Nature Notes • full amount receipted  
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# PLANTING CHART

PLANT NAME	CONDITIONS	HEIGHT AT MATURITY	WILDLIFE ATTRACTED
<b>Trees</b>			
Eastern white cedar ( <i>Thuja occidentalis</i> )	shallow soils, dry or wet, not acidic	14 m (45')	birds, such as grackles, robins, house finches
White spruce ( <i>Picea glauca</i> )	variety of conditions	24 m (80')	black-capped chickadees, evening grosbeaks, red-breasted nuthatches, white-throated sparrows
Eastern white pine ( <i>Pinus strobus</i> )	sandy, loamy soils	30 m (100')	birds
Mountain ash ( <i>Sorbus spp.</i> )	variety of conditions	3 - 11 m (10 - 35')	provides winter food for birds, including cardinals, waxwings, robins, evening grosbeaks, northern orioles
Black cherry ( <i>Prunus serotina</i> )	rich soil	18 - 21 m (60 - 70')	deer; many birds, such as northern flickers, white-throated sparrows, rose-breasted grosbeaks
White birch ( <i>Betula papyrifera</i> )	well drained, sandy loams	24 m (80')	birds, such as finches, juncos, redpolls, chickadees, red-breasted nuthatches
Maples ( <i>Acer spp.</i> )	dependent upon species	24 - 27 m (80 - 90')	birds
Oaks ( <i>Quercus spp.</i> )	dependent upon species	24 - 30 m (80 - 100')	blue jays, woodpeckers, squirrels, chipmunks, food for caterpillars

<b>Shrubs</b>			
Dogwoods ( <i>Cornus spp.</i> )	dependent upon species (generally moist sites)	1 - 9 m (4 - 30')	songbirds, deer, rabbits
High bush cranberry ( <i>Viburnum trilobum</i> )	moist, open areas	3 - 4 m (8 - 12')	very useful in winter, especially for birds such as waxwings, common crows, robins
Common elder ( <i>Sambucus canadensis</i> )	moist, open areas	1 - 5 m (3 - 15')	songbirds, rabbits, deer, squirrels, chipmunks, mice
Staghorn sumac ( <i>Rhus typhina</i> )	open areas	to 10 m (to 33')	provides winter food for birds, rabbits
Raspberry ( <i>Rubus spp.</i> )	variety of conditions	to 2 m (5 - 6')	summer food for birds, raccoons, chipmunks, squirrels, rabbits
Serviceberry ( <i>Amelanchier spp.</i> )	dependent upon species	to 10 m (to 33')	birds
Nannyberry ( <i>Viburnum lentago</i> )	wet areas	6 - 9 m (20 - 30')	birds, rabbits, deer

<b>Vines</b>			
Virginia creeper ( <i>Parthenocissus quinquefolia</i> )	dry soil	high climbing	birds including thrushes, woodpeckers, warblers, vireos
Trumpet honeysuckle ( <i>Lonicera sempervirens</i> )	dry, sunny	high climbing	provides nectar for hummingbirds; flowers attract a variety of insects; berries provide food for birds
American bittersweet ( <i>Celastrus scandens</i> )	rich soil	high climbing	birds
Riverbank grape ( <i>Vitis riparia</i> )	moist areas	high climbing	fruit and nest sites for several bird species

<b>Herbaceous Plants</b>			
New England aster ( <i>Aster novae-angliae</i> )	wet soil	90 - 210 cm (3 - 7')	butterflies, moths, bees; provides nesting materials for birds
Spotted jewelweed (Touch-me-not) ( <i>Impatiens capensis</i> )	shaded, wet areas	60 - 150 cm (2 - 5')	hummingbirds
Bee balm ( <i>Monarda didyma</i> )	rich, moist soil	30 - 150 cm (1 - 5')	hummingbirds
Pearly everlasting ( <i>Anaphalis margaritacea</i> )	sunny, dry areas	30 - 90 cm (1 - 3')	host plant for American painted lady caterpillar; butterflies
Sunflowers ( <i>Helianthus spp.</i> )	usually dry	60 - 300 cm (2 - 10')	birds
Evening primrose ( <i>Oenothera spp.</i> )	dry, open places	30 - 180 cm (1 - 6')	hummingbirds
Butterfly weed ( <i>Asclepias tuberosa</i> )	sun, well-drained soil	30 - 60 cm (1 - 2')	monarch caterpillars, butterflies



New England aster

## Non-growing habitats

You can attract a wider variety of wildlife to your yard by providing diversity — not only in plant types and height, but also in non-growing habitats

Some species actually benefit from material you may consider waste, and the smallest yard can find room for a log pile. Indeed, brush, rocks, leaf litter, logs and even old Christmas trees may make your yard more attractive to a number of birds, small mammals, toads and salamanders.

- For Example:*
- **Stonepiles** provide cover for chipmunks.
  - **Brushpiles** act as shelter for cottontail rabbits, squirrels, mice, voles and birds.
  - **Old logs or tree stumps** may provide a nesting site for cavity-nesting birds and small mammals (house wrens, chickadees, nuthatches, woodpeckers and chipmunks), and a food source for certain insects, as well as woodpeckers, nuthatches and creepers and other birds that feed on those insects.



- **Nesting boxes** (birdhouses) will attract many birds that would choose a hole in a tree as a nest site. But each species requires a house of certain dimensions and a specific location. So, if you are planning to install a nesting box, be sure to build and situate it in a way that is appropriate for the birds you particularly wish to attract. Plans are also available for squirrel, bat, mice and butterfly hibernation boxes. It is important to remember to clean and maintain the nesting boxes regularly.

- **Bird feeders** help to supplement natural food sources in the winter. Establish your feeding station in the fall and maintain it until April, when natural food sources are more plentiful. Locate feeders in an open space (so that predators, such as cats, can be detected) with cover or perching places available within a distance of approximately 3 metres (10 ft.). Squirrels, chipmunks, and other small mammals will also use feeders; in fact special feeders can be designed specifically for them.

## Maintenance

Once your yard is planted and growing, you are ready for enjoyment and maintenance. Maintenance of woody plants generally means removing dead, diseased or damaged branches and plants. Perennial herbaceous plants should have last year's flower stalks removed once new shoots appear. Annual plants may reseed themselves for several years, depending upon the species. Your backyard habitat will require a fair amount of maintenance and weeding through the first few years, until it is established, but in the long term it is likely to be much easier to maintain than a traditional yard of grass and exotic plant species.

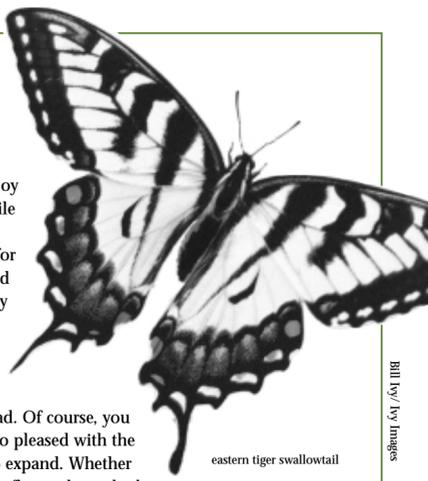
In terms of pest control, try to use natural methods such as companion planting, or homemade mixtures such as soapy water with strong smelling plants (onions, hot peppers) added to scare off pest insects. This will help to maintain a safe environment not only for your wildlife guests but for you as well. Remember, though, that you have planted this yard for wildlife and even guests that you have traditionally considered to be unwelcome may now be attracted to it. As your backyard habitat progresses, a natural balance that keeps these species in check should be restored.

Try composting (if you don't already) as an alternative to synthetic fertilizers. Composters can often be purchased for a reduced rate through municipalities. Check to see if this is the case in your area. Or you can build your own compost bin to suit your particular needs. For further information on composting and plans for composters, contact the Recycling Council of Ontario at [www.rco.on.ca](http://www.rco.on.ca) or (416) 960-1025.

**Remember to clean and maintain your bird feeders, bird baths and habitat boxes.**

## Enjoy

Your backyard habitat should offer you great joy and entertainment, while providing a safe and pleasant environment for wildlife. If you've started small, that's great! Every bit of natural habitat helps, and you will be less likely to get discouraged about the work you have ahead. Of course, you may find that you are so pleased with the results that you wish to expand. Whether you want to add a butterfly garden, a herb garden or a small pond, there are a number of excellent reference books and materials to help you. A sample of resource materials are listed below, and your local library should be able to provide others.



eastern tiger swallowtail

Bill Levy/Art Images

As your backyard habitat progresses, don't forget to record your wildlife sightings (contact the FON for bird checklists) and the growth of the vegetation in journals and photographs.

Finally, share your ideas, information and enthusiasm with a neighbour — adjoining yards can provide a larger and more diverse environment in which to attract wildlife. In fact, some areas have started "green-up" projects that encourage entire neighbourhoods to participate in naturalization projects to create wildlife corridors.

**In the long term your backyard habitat is likely to be much easier to maintain than a traditional yard of grass and exotic plant species.**

# WATER



**Bird baths**  
Bird baths are often favoured as a source of water since the height usually allows birds to have a view of predators. Even so, the bird bath should be located in an open space with cover available within approximately 3 metres (10 ft.).

Choose a bird bath with a rough surface that will enable birds to perch securely on the sloping sides. You may wish to consider arranging for dripping or running water, as this will attract an even wider variety of birds. You may also want to provide water for birds during the winter. Electric immersion style heaters and bird bath top replacements with built-in heaters are available to prevent the bath from freezing. If you do keep your bird bath going throughout the winter, don't forget that you have to clean it, just as you do during the summer.

**Water dishes**  
A simple pan on the ground can be an effective and affordable way to provide water for birds, and it may serve other forms of wildlife unable to reach an elevated bath. Like the bird bath it should be located in an open space for easy detection of predators and have a rough edge for footing. The maximum depth should be 8 cm (3 in.). The water dish has the same freezing and cleaning drawbacks as the bird bath does in winter.

**Ponds**  
You may wish to create a pond that will attract its own unique range of wildlife, such as raccoons, bats, frogs, toads and insects. Contrary to what you might think, the tiniest of lots can accommodate a pond, or even a wetland. Some research is necessary in planning your pond or wetland, however, as it must be designed and built specifically for the wildlife that you wish to attract. There are a number of cost-effective ways to install a pond in your yard — old waterbed mattresses, for example, make great pond liners! Books such as *Landscaping With Nature* by Jeff Cox can help to get you started and your local library may have other gardening and landscaping books with tips on building ponds.



### For more information on backyard habitats

FON Brochures  
*Field Checklist of Birds*. FON and Ontario Field Ornithologists, 1999. \$0.35 ea or 3 for \$1.00.

*Habitat Creation with Native Plants, 1999 Wetland Restoration and Rehabilitation, 1999*

Kits  
*Wildlife and Habitats Activity Kit*. Federation of Ontario Naturalists, 56 pages, \$9.00.

Books  
*Attracting Backyard Wildlife: A Guide for Nature Lovers* by Bill Merilees. Vancouver/Toronto: Whitecap Books, 1993.  
*Backyard Habitat for Canadian Wildlife*, Canadian Wildlife Federation, 1996  
*Bird Houses, Feeders You Can Make* by Hi Sibley. Chicago: The Goodheart-Wilcox Co. Inc., 1991.  
*Butterfly Gardening, Creating Summer Magic in Your Garden*, by Xeres Society, Whitecap Books, Whitecap Books, 1990.  
*Landscaping With Nature: Using Nature's Designs to Plan Your Yard* by Jeff Cox. Emmaus Pennsylvania: Rodale Press, 1991  
*The Butterfly Book: An Easy Guide to Butterfly Gardening, Identification and Behavior* by Donald and Lilian Stokes and E. Williams, Boston, Little, Brown, 1991.  
*The Ontario Naturalized Garden*, L. Johnson, Whitecap Books, 1995  
*The Natural History of Wild Shrubs and Vines* by Donald W. Stokes (illustrated by Deborah Price Smith). The Globe Pequot Press, 1989.

*The Naturalists Garden* by Ruth Shaw Ernst, N. Simpson and C. Clark, Globe Pequot Press, 1996.

Magazine Articles  
"A Garden of Flying Delights", by Helen Gault, *Seasons*, Summer 1997.  
"Bringing Life to Artificial Ponds" by Brad Cundiff. *Seasons*, Summer 1993.  
"Pool Resources" by Millis Lees. *Harrowsmith*, No. 105 XVIII:1.  
"Propagating Wildflowers" by James L. Hodgins. *Seasons*, Spring 1987.  
"Vernacular Landscaping. No mow lawns: damn the conventions" *Harrowsmith*, No. 55 IX:1.

Organizations  
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