

## BRUSH AND ROCK SHELTERS

If your yard lacks mature shrubs, thickets and tangles, or other forms of natural shelter, you can attract wildlife, particularly songbirds, almost immediately by building a shelter of brush or rocks. Even if your landscape has natural shelter, a brush or rock shelter in the right location can enhance your wildlife-viewing opportunities.

Even a single log or large stone will harbor some wildlife; logs or stones can be thoughtfully placed almost anywhere. But more elaborate brush and rock piles are fun to build, and the necessary materials are often found on site. A small pile can be located in any size yard. A large pile can be constructed in a secluded place on a larger property or a school ground, cemetery, or golf course.

Once your pile is established, you may never see some of the animals that use it. But tracks, well-worn paths, droppings, songs of birds, the interest of a hawk above, or sounds of scampering are all signs the pile is being used.

### Brush Piles

#### Importance to Wildlife

Wildlife will use parts of a typical brush pile in different ways (Table 1). The inside will attract insects and other wildlife that are food for other animals; it will also protect wildlife from sun, rain, and predators. During strong winds, birds that would ordinarily use an evergreen tree for evening shelter may instead use a brush pile located on the ground out of the wind. Far into a pile, mammals and some birds find nesting cover in the tight network of strong twigs. The outside, where sticks protrude from the pile, provides places for birds to perch and sing, preen, and catch insects. If the base of the pile contains large limbs or logs, salamanders, snakes, and lizards may hibernate there. Ants, worms, beetles, and other insects

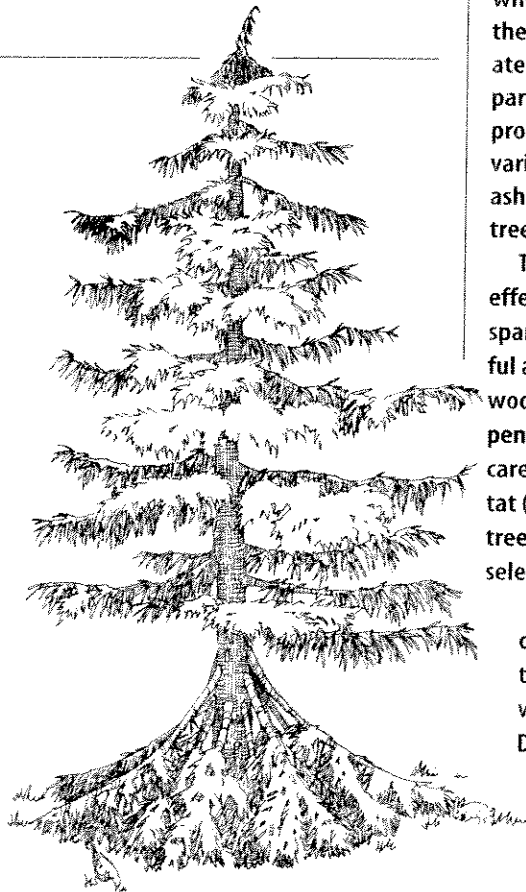


Figure 2. A living teepee-style brush pile.

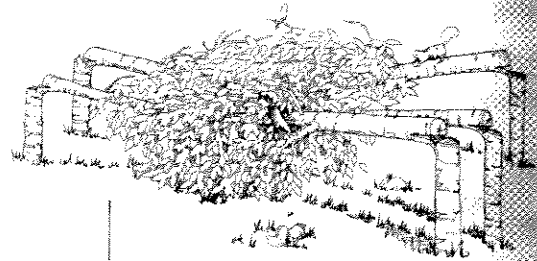


Figure 1. "Half-cuts" can create quick cover for wildlife.

### Making a Quick Shelter in the Woods

In an area with plenty of trees, quick shelter and a food source can be created several ways. One method is to cut down a tree, or a few small trees without completely cutting through the trunk. Good choices are trees in need of thinning or those destined for removal. To do this, make a single cut a little over halfway through the trunk wherever it's convenient, then push the tree over (see Figure 1). This creates a "hinge" that may keep the tree partially alive for a year or two. This provides food for deer, rabbits, and a variety of birds. Maple, aspen, Oregon ash, alder, willow, and chokecherry trees provide excellent shelter.

These "half-cuts" are especially effective where shrub-level cover is sparse or absent. They are also helpful along the edges of woods or in wooded areas where light can later penetrate after the tree fully dies. Be careful not to damage existing habitat (such as your house!) when felling trees, and check for nests before selecting trees to be cut.

Another way to create quick cover is to cut partway through the lower limbs of a tree. This works best on conifers, such as Douglas-fir, hemlock, pine, and red-cedar, with limbs low to the ground. Deciduous trees can also be used. Partially cut the first two or three whorls of branches to form a "teepee" around the trunk.

**Table 1. Wildlife that use an average-size brush pile**

<i>Birds that will use the inside of the brush pile:</i>	<i>Birds that will use the outside of the brush pile:</i>	<i>Mammals that will use the inside of the brush pile:</i>	<i>Reptiles and amphibians that will use the base of the brush pile:</i>
Bushtits	Grouse	Chipmunks	Alligator lizards
Chickadees	Hummingbirds	Cottontail rabbits	Salamanders
Dark-eyed juncos	Jays	Ground squirrels	Snakes
Flycatchers	Pheasants	Fox	Toads
Golden-crowned sparrows	Robins	Mice	Turtles
Grouse	Song sparrows	Rabbits	
Pheasants	Towhees	Shrews	
Quail	Warblers	Skunks	
Song sparrows	White-crowned sparrows	Voles	
Thrushes	Woodpeckers	Weasels	
Towhees		Woodrats	
White-crowned sparrows			
Wrens			

will live and feed in the rich soil beneath a pile.

When snow covers a brush pile, a complex array of snow-free spaces and runways provides important habitat for protection and foraging by small mammals.

### Where to Start the Brush Pile

If you're mostly interested in attracting a variety of songbirds, locate your pile where you can easily see it through a window or from an outdoor seating area. Other good locations include the following:

- In an unused corner of your backyard or any wild portion of the landscape, particularly near a hedgerow, thicket, or group of mature trees or shrubs.
- Near a wildlife food plot planted in your vegetable garden.
- Near a pond, irrigation canal, or birdbath.
- Near a constructed blind used for photography or wildlife

viewing. (See Chapter 20 for information on how to construct a viewing blind.)

- Next to another rock pile or brush pile, or next to a snag or large stump.
- In an area that was recently cleared of blackberries or other tangles.

If a lot of brush-pile material and places to put it is available, make several piles in areas with different sun exposures or vegetation types. In areas with little rain and hot summers, wildlife will benefit from a brush pile mostly in shade. In cooler regions, deep shade may be too cold and damp for most wildlife species. An ideal spot for a brush pile in cooler regions is at the edge of a clearing or anywhere the pile can be in some sun.

Brush piles need not be permanent. A knee-high brush pile you build in fall can be added to in winter, then moved in early spring if necessary. A pile can also be the

slow-compost type, containing limbs, leaves, and lawn clippings. It can serve as habitat for a few years and then be spread out in an area to be planted with new trees and shrubs.

Don't start a large brush pile too near a heavily traveled road, potentially putting both wildlife and vehicles in jeopardy. Also, unproductive low areas are not the best spots for habitat piles because they tend to hold and collect cold air and excess water, which may limit use by burrowing and overwintering species.

Do not place a brush pile where it might become a fire hazard. Natural resource agencies can provide information on adequate fire breaks and other ways to reduce fire hazards associated with brush piles on your property.

### Size of the Brush Pile

The larger the brush pile the larger the number of wildlife species that

will use it. However, a loose heap of limbs and branches 3 feet high and 5 feet wide is adequate for most songbirds, especially if it is near shrub and tree cover. Even a smaller pile constructed from an armful of twigs placed over a small pile of old firewood will interest small wrens and sparrows.

**Materials for the Brush Pile**

The ideal materials for building brush piles are handy, abundant, and asking to be reused or recycled: old fence posts, wood pallets, and prunings from trees and shrubs. Avoid using chemically treated lumber, including creosote logs.

Build brush piles when the materials are readily available—for instance, while pruning shrubs or trees in your yard. Recycled Christmas trees—tied to the trunk of a large tree or along a fence—make good temporary shelters when there is a shortage of other materials.

**How to Build a Brush Pile**

There are many ways to build a brush pile, and all work well as long as the pile isn't too tightly packed. One way is to create a base of one or more layers using old wooden fence posts, wood pallets, large limbs, or logs, each layer at right angles to the next. You can also start a pile over an old stump.

Place the logs or other sturdy material 6–12 inches apart horizontally within each layer. Then add small limbs and branches in a semi-random arrangement over the base.

Be sure to leave some openings at the bottom so animals can get inside. To create some permanent access points into the pile, use a few 6-inch-diameter (or smaller for smaller creatures) plastic, concrete, or ceramic pipes, about 18 inches long, in

the bottom layer (see Figure 3). To provide moist, safe shelter for insects and perhaps an overwintering salamander, pack some organic material like rotting twigs or leaves into some but not all of the lower portions of the pile.

Fallen leaves, straw, or black plastic placed over part of a brush shelter will change the quality of the shelter the pile provides. It may then serve as a hibernation site for wildlife that might not otherwise use it.

If you are at all concerned about attracting unwanted wildlife by providing a brush shelter, keep the pile open and loose as shown in the top portion of Figure 3.

**Maintaining a Brush Pile**

A large, well-constructed brush pile will last as long as five years if maintained. As time passes, top branches will collapse, brush will settle, and the base will be exposed. When this happens, add branches to the top or sides, making sure small animals can still get to the center of the pile. When you add branches to the top, expand the base to keep the pile from toppling. If possible, avoid disturbing a large brush pile in spring as this is nesting time.

**Rock Shelters**

Depending on a rock shelter's location, size, and proximity to undisturbed wildlife areas, these mini-habitats attract a variety of interesting wildlife species (see Table 2).

If their other habitat requirements are in place, amphibians, reptiles, small mammals, and insects will seek out a rock pile, a heap of old concrete, or a rock wall to escape from predators and weather, and to raise their young.

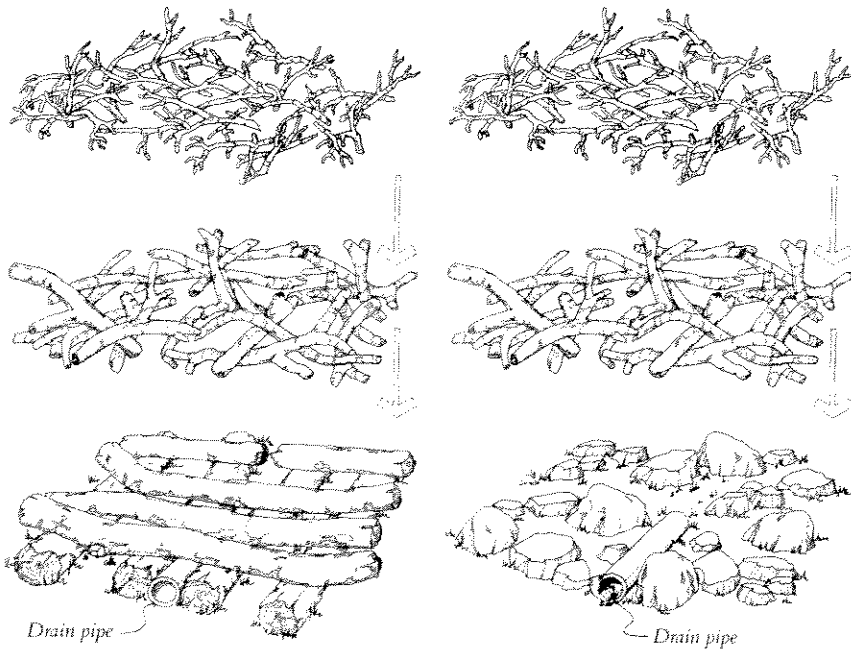
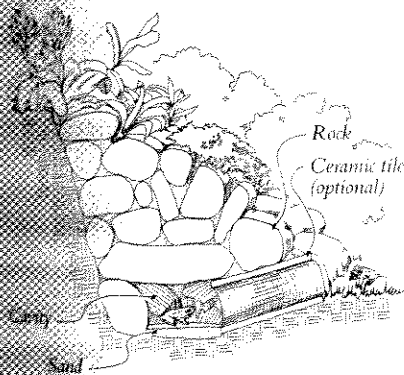


Figure 3. Examples of how to construct a brush pile. The top portion alone is large enough to attract songbirds to a small yard.

**Table 2. Wildlife that use rock piles and large rock walls**

Birds	Mammals	Reptiles/Amphibians	Other
Chukars	Chipmunks	Frogs	Butterflies
Sparrows	Ground squirrels	Lizards	Centipedes
Towhees	Mice	Salamanders	Ground beetles
Wrens	Rabbits	Snakes	Slugs
	Shrews	Toads	Snails
	Skunks		
	Voles		
	Weasels		
	Yellow-bellied marmots		



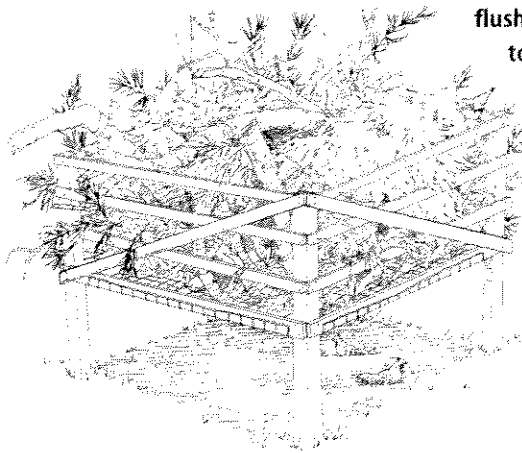
**Figure 5.** Rocks assembled in any form in the landscape offer crevices, crannies, and cavities that provide shelter to some wildlife. Rocks in a small garden wall or large retaining wall provide a variety of wildlife shelters. Here, toads find a home in a rock wall.

Long-toed and other salamanders make homes under moist rocks and decayed vegetation. Toads hide in cool nooks and crannies in garden walls during the day, waiting until dark to come out and eat flying insects, spiders, and other invertebrates living in and around the wall (Figure 5).

Reptiles and amphibians regulate their body temperature by absorbing the heat that rocks give off at night. On cold days, many will use stored and reflected

heat to raise their body temperature. During a hot day, snakes will find a cool refuge in rocky crevices. To escape from the cold, some amphibians and reptiles spend winter hibernating in or below a rock pile. For examples of hibernation mounds you can construct for reptiles and amphibians, see Chapter 7.

Shrews are often found around moist, rocky areas where slugs and bugs are common. Shrews, in turn, are eaten by snakes, hawks, and larger mammals like fox and coyote. The Townsend chipmunk nests under stumps, logs, and rock piles and hibernates in these places for short periods of time.



## Raised Brush Piles for Quail and Other Birds

You can create permanent night roost habitat for California quail in a variety of ways. The best habitat is established by planting thickly foliated trees and shrubs such as native juniper and other conifers. If there aren't any evergreen trees around, you can collect clumps of brush and pile them in the crotches of any large trees. In the absence of large trees, or if they are too difficult to establish, you can create artificial cover with an elevated brush pile. This kind of brush pile gives quail a nighttime roost area and protection from predators, including domestic cats. The roost will also be used by other birds during the day and may be a valuable source of shade for mammals, especially in hot, dry regions.

A roost for quail can be any type of open frame and support structure elevated 6 feet above the ground and 6–16 feet long and wide (see Figure 4). Brush is piled on top of the structure to provide elevated night roosting.

Artificial roosts should be located within 50 feet of some other cover source, out of high winds, and not in a deep, narrow gully. Providing two roosts approximately 150 feet apart is helpful, so that if the birds are flushed they can fly from one roost to another.

**Figure 4.** The quail roost design consists of a rectangular wooden frame elevated approximately 6 feet above the ground on four posts. A series of 2-by-4-inch boards span the width of the interior of the roost, and wire mesh serves as the roost floor. Brush piled into the roost is supported by the boards and the wire floor.

### Where to Start a Rock Shelter

In areas where the summers are hot and dry, a collection of rocks that receives some sun and some shade during the day is an ideal location for a rock shelter of any kind. Where the summers are cool the wildlife will benefit from a rock shelter in full sun most of the day.

Small mammals favor a rocky area near plants. This provides some additional cover from predators like hawks and owls and a place to find food. A rock pile built next to a pond or creek of any size will attract creatures associated with water. A loosely built rock wall, a small rock pile, or even a flat boulder at ground level in a sunny vegetable garden may attract a garter snake looking for a basking site and a supply of slugs.

A rock pile built next to a brick chimney or other masonry in the sun can hold stored heat into the evening. Additional rock-shelter locations that benefit wildlife include the areas listed under "Where to Start the Brush Pile."

Remember to locate rock piles away from driveways or heavily traveled roads to avoid vehicle/wildlife unpleasanties.

### Size and Materials for a Rock Shelter

As with a brush pile, any size of rock shelter will attract some wildlife species. A good rule of thumb for choosing rocks is that the base-layer rocks, and the space between them, should be as large as the largest animal for which you are creating the shelter. Rock piles created for rabbit-sized animals need openings at least 5 inches in diameter.

A small rock pile for reptiles, amphibians, and small mammals can include stones dug up in the garden, broken brick, and used concrete. As with a brush pile, pieces of plastic, ceramic, or concrete pipe can be laid at the base of the pile or wall to create access into an interior cavity.

Rocks for a pile or a wall can be collected or purchased. When buying rock you have the option of picking it up from the quarry or having it delivered. If you collect rocks, pay attention to

habitat you may alter and possibly harm in the process. Preserving existing habitat is far more crucial to the survival of local wildlife species than creating new habitat.

### Constructing a Rock Pile

Small rock piles are easily assembled with hand tools. The largest rocks should form the bottom layer, and be spaced far enough apart to leave openings and a central cavity.

To stabilize the interior temperature and humidity of a rock pile, use large rocks throughout as much of the pile as possible. In interior areas of the Pacific Northwest where the winter temperatures are colder, sections of the pile can be placed underground (below freezing level).

Like a brush pile, a rock pile may be enhanced by addition of a partial cover of fallen leaves, straw, or black plastic.