

neighborhood naturalist

Nature you can find in town and the nearby countryside

Corvallis, Oregon

Autumn 2006

Rabbits

by Lisa Millbank

Deep within the ubiquitous blackberry thickets of the Willamette Valley are hidden labyrinths of passages and runways. This secure world of thorns and brambles belongs to two species of cottontail rabbits, the Brush Rabbit and the Eastern Cottontail.

Our native Brush Rabbit (*Sylvilagus bachmani*) is a small and shy creature who rarely ventures far from the brush for which it is named. For these rabbits, home consists of a territory measuring approximately 2,000 square feet, centered around a thicket. They do not burrow, but they will occasionally use the burrows of other mammals during stormy weather. Each rabbit maintains its own trails and runs that take it to favorite foods and other areas of its small territory. And each trail lets the rabbit dash back to the safety of the brush in case danger threatens. These small bunnies typically sleep under cover for most of the day.



Photo by Gary Gibson

Brush Rabbit

A small, dark native rabbit with smaller, more uniformly colored ears and less visible "cottontail", it is less often observed than the Eastern Cottontail.

The Eastern Cottontail (*Sylvilagus floridanus*) is native east of the Rocky Mountains and in some areas of the Southwest, but was introduced to the Willamette Valley and southeast Washington for hunters. This rabbit is a little less timid than the Brush Rabbit, and I've seen some bask-



Photo by Lisa Millbank

Eastern Cottontail

An introduced species from eastern North America. This rabbit has a bright, white "cottontail" visible when the rabbit hops, and many show dark edges and tips of the ears. Tops of the feet are whitish. This is a youngster; the inset shows an adult.

ing contentedly in the sun, legs sprawling, while I was only a few yards away. It's more flexible in its choice of habitat and may be found in open areas, especially at night. Our two rabbit species are often very difficult to distinguish, but any rabbit you see venturing out far beyond cover, running away in a zig-zag pattern with a large, white "cottontail" flashing, is probably the abundant Eastern Cottontail. They seek safe thickets for most of the day like their Brush Rabbit cousins, but they will cautiously emerge and graze on park lawns, fields, and gardens.

Both of our rabbit species prefer to eat green herbaceous plants, and they supplement this diet with woody plants during winter. When you find a blackberry thicket with rabbit runways, check the thick branches framing the runway entrance for nibble marks, because these thorny strongholds provide both shelter and food for bunny tenants. As they munch grasses and herbs near cover, rabbits

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Rabbits *continued from front page*

often create a “lawn” along the edge of the brush they inhabit, which resembles a manicured golf green. There will also be small, round, dry droppings.

Because rabbits need to stay safely under cover most of the time, they quickly eat as much food as they can and retreat back into underbrush. To get the most nutrients from their food, rabbits produce two kinds of fecal pellets. The moist type, called cecal pellets, consist of lightly digested plants they consumed quickly while in the open. Rabbits eat their cecal pellets to thoroughly digest their food and absorb the maximum nutrition. They can eat and digest these pellets within the safety of the brush. Later, rabbits produce the second, dry type of pellet, which is deposited as waste.

I have heard what I am sure was the cry of a rabbit as a predator killed it. During a thunderstorm I walked through an overgrown field of tall grass and brush. As the grass quivered in the wind and the rain intensified, I heard a terrible, heartbreaking scream from the far end of the field. It was a chilling sound, and one of the only sounds



Photo by Lisa Milbank

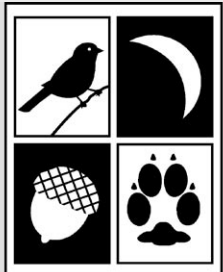
Brush Rabbit pellets. Generally 5-10mm in diameter and almost indistinguishable from Eastern Cottontail pellets. A penny is to the right for scale. (Pellets resemble Cocoa Puffs!)

characteristic of rabbits. I hoped the end came quickly. Most rabbits don't live long because they are valuable food for so many others. Among the Willamette Valley residents who eat adult rabbits are Great-horned Owls, Red-tailed Hawks, Coyotes, Red Foxes, Gray Foxes, Long-tailed Weasels, Minks, and their major predator, Bobcats. Young rabbits are particularly vulnerable and may also be eaten by Gopher Snakes, Raccoons, Short-tailed Weasels, Spotted Skunks and Striped Skunks. Domestic dogs and cats take rabbits, and human hunters and cars kill great numbers. When you see signs of rabbit activity, don't miss signs of predation. Clumps of thick, soft fur and parts of rabbit limbs are sometimes nearby, and the droppings and pellets of the carnivorous mammals and birds will show fur and pieces of bone. To make up for the losses, rabbits reproduce at an astonishingly fast pace.



Photo by Lisa Milbank

Rabbit skulls are easy to distinguish from the skulls of other small mammals because of the fine, lacy bone structure over the nasal cavities. Inset: Lagomorphs differ from rodents in several ways, notably the incisor teeth. There are two pairs of upper incisors, where rodents have only one pair.



**neighborhood
naturalist**

Neighborhood Naturalist promotes interest about nature in backyards, parks and neighborhoods.

Submissions:

This is a newsletter which caters to nature enthusiasts. Any article, story, poem or artwork which celebrates nature in the Willamette Valley is much welcome. The newsletter publishes 4 times a year around the Solstices

and Equinoxes. Send your submissions two weeks in advance. Contact info below:

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5008 SW Technology Loop #9

Corvallis, OR 97333

541-753-7689

information@neighborhood-naturalist.com

www.neighborhood-naturalist.com

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Brush Rabbits and Eastern Cottontails begin their breeding season as the days lengthen, generally in February. The gestation period for both species is approximately one month. A pregnant rabbit constructs a cuplike nest for her litter and lines it with grass. She plucks her own fur to make a soft inner lining. A Brush Rabbit's typical litter size is three babies, while Eastern Cottontails average four or five. A baby bunny is hairless and blind at birth. (Compare this to young hares and jackrabbits, who are fully furred at birth and soon hopping around.) The mother rabbit conceals her nest with a layer of grass. She returns to the nest a few times each day to nurse and clean her babies. The young rabbits develop quickly—in two weeks they can leave their nest, and at seven weeks they find a territory of their own. The mother is most likely preparing for her next litter by the time her young are independent, and she will produce, on average, five litters per season. Baby bunnies are surely some of nature's most irresistible creations, but by late August, when the breeding season ends, the mother rabbit has probably had enough of them.

Young rabbits are more likely to be active for part the day and some of them are strangely unwary, like the young Eastern Cottontail on page 1. Rabbits freeze before fleeing when they perceive a threat. Sometimes, by moving slowly and carefully, you can get surprisingly close to them.

Look for Brush Rabbits in the early morning or dusk. Although particularly numerous along the Oregon coast, they also thrive in the thickets at Willamette River Greenway at Truax Island, Herbert Open Space south of Corvallis, and any suitably brushy area. You will see Eastern Cottontails in both urban areas like Avery Park, and more natural settings such as E.E. Wilson Wildlife Area. William L. Finley National Wildlife Refuge is a good place to see both species, especially the Eastern Cottontails who stretch out lazily on the lawn at the headquarters.

Runways

Brush Rabbit runways in a thicket of Tall Oregon-grape, Poison Oak, Snowberry and Himalayan Blackberry. Willamette River Greenway at Truax Island. 🐰



Photo by Lisa Millbank

Acorn Woodpecker

Melanerpes formicivorus

Article, photography & illustrations by Don Boucher

Last autumn I was concerned. The Oregon White Oaks around Corvallis produced no acorns. This is natural in the long-term acorn cycles of oaks. Nevertheless, for one of my favorite bird species, the Acorn Woodpecker, acorns are a significant food source and last year's lack of acorns seemed to spell disaster. This year the Acorn Woodpeckers are doing fine and their survival is due to their remarkable habits which are uncommon in the bird world.



Acorn Woodpeckers spend all year in the Willamette Valley where they are particular to pure stands of Oregon White Oak. They may utilize acorns from cultivated oak species but their diet is almost exclusively native acorns. Some colonies in the southern Willamette Valley may enjoy the native California Black Oak.

The Acorn Woodpecker is mostly black with white wing patches, a white face, which has a yellow wash, and a lower belly that is white. The eyes have a white iris and the crown is capped with red. Males are distinguished from females with more red on the crown, touching the white area on the forehead. They are vociferous and playful, often cackling, squawking and chasing each other around.



The Acorn Woodpecker's distinctive face; described by many as 'clown-like.' The male on the left has a red crown, shown here as grey, extending from his white forehead to back of the head. The female on the right has black meeting the white on the face and a smaller red area on the back of the head.

Range

Extreme southwest Washington State (inland), Willamette Valley, Oregon, south through California, northern Baja California and the mountains of Arizona, New Mexico, western Texas and south through Mexico to northern South America.

Continued on next page



It's common for them to catch insects caught by 'flycatching'

Willamette Valley Habitat

Oak stands with a canopy in lowlands and foothills.

There are three strategies birds use to deal with the lack of food during seasons of scarcity. Migration is one. During our winter, many birds fly to tropic areas where food is more reliable. Another strategy is to eke out a living by diligent foraging and occasional food caching that may last only a few days. This second strategy means life on the edge of starvation and many succumb during times of severe weather. Acorn Woodpeckers have mastered a third strategy—they store food from abundant seasons in granaries.

Just like the grain silos farmers use, Acorn Woodpeckers keep thousands of acorns in granary trees. They guard them against thieves and maintain the acorns to prevent them from spoilage. Last winter, our Acorn Woodpeckers ate the remaining acorns stored from the previous year. This year, with granaries almost empty, they have their work cut out for them. I'm happy to report that the local oaks are growing many, fat acorns. Some birds, like jays, hide food to be retrieved weeks or a few months later, but the Acorn Woodpecker's granaries are unrivaled in scale and in the length of time stored food may be utilized. In the case of last winter, that is nearly one and a half years.

How does a woodpecker protect thousands of acorns from squirrels, jays and other would-be thieves? The answer to that has to do with another remarkable habit. Acorn Woodpeckers live, breed and maintain granaries in family groups of up to 16 individuals. They do everything together, forage, raise young and protect their granaries and nests from raiders. European Starlings, who are numerous in Acorn Woodpecker habitat, are notorious for aggressively taking nest cavities from native birds. Bird populations, like

that of the Western Bluebird, are under continual threat due to human removal of dead trees and starlings taking any scarce cavity left. Acorn Woodpeckers are bigger, meaner and more communally coordinated than starlings. Starlings don't stand a chance of stealing a nest cavity from an Acorn Woodpecker colony. As for the acorn granaries, starlings have neither tools nor a liking to eat acorns. Other acorn eaters are kept at bay by the vigilance of the colony. Acorn Woodpeckers haven't made as much of an effective use of human structures for nesting like starlings have. They need healthy stands of native oaks which are under threat of development in the Willamette Valley.



This typical Willamette Valley acorn granary is a dead oak limb with a few hundred acorn holes.

An acorn granary is most often a dead tree or dead tree limb. Sometimes giant, live pine trees with thick bark are suitable granaries but such trees are rare in the Willamette Valley. Occasionally, wooden utility poles and buildings are used. The woodpeckers bore acorn-sized holes on the outside of the tree and jam acorns into the holes. This keeps them secure and dry, protecting them from rot. Only a woodpecker can get them out effectively. By the time a jay, squirrel or other woodpecker could loosen one, they would be noticed and chased away by members of the colony. In the Willamette Valley, colonies have numerous granaries on dead limbs yielding a total of few thousand holes. Some colonies elsewhere in its range have large granaries which can have tens of thousands of acorn holes. Fresh acorns dry and shrink so members of the colony regularly adjust and reposition the acorns. You might think insect infestation would be a problem but just the opposite is true! Like other woodpeckers, Acorn Woodpeckers relish insects and a fat larva inside an acorn shell is more nutritious and tasty than the acorn itself.

More than acorns, Acorn Woodpeckers eat insects, which may be obtained in the classic woodpecker fashion of extracting wood-boring insects (often beetle larvae) from dead wood. When flying insects are plentiful in spring and summer, they may catch them from exposed perches by flycatching (which is pursuing them in flight and returning

Hear the sounds of Acorn Woodpeckers online

www.neighborhood-naturalist.com

go to the bird sound link



to the same perch to repeat the process when another juicy bug flies by). They will also take advantage of available fruit in their territory like cherries, elderberries or apples. They may also take advantage of sap drippings made by their woodpecker cousin, the Red-breasted Sapsucker. Sapsuckers chisel holes in bark to get a drink of sap. The holes are called “wells” and attract insects which may get trapped by sticky sap—an added treat. In some older texts, the Acorn Woodpecker is referred to as “Ant-eating Woodpecker” and which is retained in their scientific name *formicivorus* (*formic* means “of ants”, *-ivorus* means “eater”). Unfortunately, that’s an inept name since they eat ants less than any other woodpecker.

Newcomers

It has also been called the California Woodpecker and they indeed are very common there. In fact, records indicate that they are newcomers to the Willamette Valley, arriving in the 20th century; Eugene 1920; Corvallis 1950; Tigard 1975 and Washington State 1979. It has been hypothesized that their range extension is due to fire suppression resulting in closed-canopy oak stands which are more favorable to the woodpeckers¹.

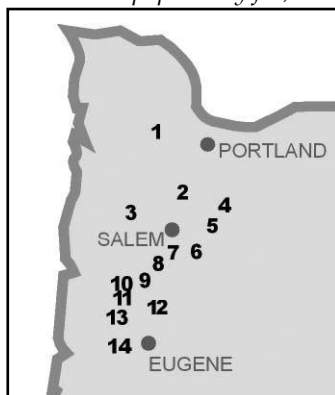
Suggested Reading

¹*Birds of Oregon, A General Reference.* David B. Marshall, Matthew G. Hunter and Alan L. Contreras. 2003 OSU Press

Favorite Acorn Woodpecker Colonies

I asked birders throughout the Willamette Valley about their favorite places to see Acorn Woodpeckers. These sites are all easy to find and publicly accessible.

- 1) Pacific University in Forest Grove – most popular by far;
- 2) Champeog State Park;
- 3) Wortman Park, McMinnville;
- 4) Molalla Buckeroo Rodeo Grounds;
- 5) Mark Twain Middle School, Silverton;
- 6) Sublimity City Park, Sublimity;
- 7) Ankeny Hill Rd & Liberty Rd, northwest corner of Ankeny NWR;
- 8) Adair County Park, Benton Co.;
- 9) Woodland Meadows Park, Corvallis;
- 10) Benton County Fairgrounds & Campus Way, Corvallis;
- 11) Philomath Elementary School, Philomath;
- 12) Fayetteville, Linn Co., Fayetteville Dr & Pugh Rd.;
- 13) Mill Hill Barn, Finley NWR;
- 14) Fern Ridge Reservoir, Royal Ave & Fir Butte Rd.



Of course, there are many other places to see Acorn Woodpeckers. Find their preferred habitat and start watching. 🦉

The Age of Soil Bugs

by Don Boucher

Last spring we looked the astronomically numerous springtails. Springtails are minute arthropods which live in the soil and are closely related to insects. In this issue I would like to introduce you to another denizen of the humus beneath our feet, the pseudoscorpion. Before I do that, I’d like to set the record straight on the importance of the little-known critters of the soil.

Humans are vertebrates and our perspective on natural order is skewed in our favor. We look at eras of natural history based the presence or absence of vertebrate megafauna. You may have learned about the “age of mammals” in textbooks. This is the era of geologic time since the extinction of the dinosaurs. Before that was “the age of amphibians” and then the earlier “age of fishes.” Downplayed is the fact that, during the “age of fishes” in the Devonian period, the land was colonized by arthropods. At that time, arthropods and soft-bodied invertebrates set up an ecosystem which created the first soil. As we all know, all life on land still is dependant on the health of that soil. Most animals in the soil have changed little since about 400 millions years ago when they claimed the continents. I would say we’re still living in an “age of soil bugs.”

Pseudoscorpion

This is a living fossil whose ancestors likely preceded the appearance of spiders on land—that would mean more than 380 million years ago. As the name implies, they are not quite scorpions, but they are arachnids, like scorpions, mites and spiders. They are more related to a spider than a scorpion and they lack the scorpion’s venom-pointed tail. They’re tiny, about 1/8 inch or less. Pseudoscorpions are predators and feed on their arthropod and soft-bodied neighbors. They seize their victims with venomous pinchers. As in scorpions, these pinchers are oversized pedipalps, an analogous structure to a spider’s mouthparts. Although not particularly numerous, I’ve found them while looking for fall mushrooms, but they’re present all year long among leaf litter, soil and rotten logs. One beneficial species, the book scorpion (*Chelifer cancelloides*), can be found in houses, where it hunts book lice.



Pseudoscorpions produce silk from the mouth area. The silk is used for making cocoons, in which they may overwinter or molt. In most species, the hatchlings remain in a brood pouch attached to the female’s abdomen, where they feed on a milk-like liquid produced by the ovaries. Some species can live up 4 years. 🦉

Events Calendar

Acorns as Food

Sunday October 15, 2 – 5 pm

Avery House Nature Center, Avery Park

Acorns are edible, tasty and nutritious and you can learn how to process this abundant food source. We'll learn how to gather and leach acorns as well as some recipes which we will taste in class.

\$4 to register: Contact 541-753-9211, email: ecenter@peak.org or stop by 214 SW Monroe Avenue, Downtown Corvallis. www.corvallisenvironmentalcenter.org/

Bicycle Birding: Audubon Society

9 AM to noon on Sundays. Easy and flat ride of 3-10 miles. We'll poke along and find birds in every nook and cranny along bike routes in Corvallis. Bring water, binoculars and rain gear. Led by Don Boucher.

September 24: Meet at the Avery Park Rose Garden.

Destination—Philomath along bicycle path.

www.audubon.corvallis.or.us

Naturalist Adventure

Free, Monthly, Starting in November

Meet at Avery Park Rose Garden, Avery Park in Corvallis

Tracking - Wild Edibles - Wildflowers - Birding

Each trip will focus on a seasonal topic of interest. Sometimes we may seek edible plants, find mushrooms, visit a tracking spot or even birding. They will be conducted in a 'poke-around' fashion and nothing of interest will be ignored. If the focus is plants for the field trip, we will not pass up good animal tracks if we find them. If we are visiting a tracking spot, we won't pass up a good bird sighting. If you want to learn about tracking, these field trips are for you. Since tracking is best learned as holistic nature observation, other topics we study will be relevant. Children are welcome, but trips are not structured for small children. Please leave dogs at home.

November 19, 2006, Sunday, 9am-Noon

December 17, 2006, Sunday, 9am-Noon

January 21, 2007, Sunday, 9am-Noon

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