

## THE ZIMMERMANS: *Boundless Energy and Endless Ideas*

Ask about anything that grows in their yard, and Neil and Carleen Zimmerman will soon be telling you what it does for birds.

Great clumps of bright red, hardy fuchsia? “Last year, for the first time, we had an Anna’s Hummingbird wintering here. It comes to visit these blossoms when most of the other blooms are gone.” Rhododendrons they inherited when they bought the house? “Birds like to hang out here as a staging area. They use the rhodies to check things out, then move to the bird bath, then to the suet feeders.” A tall, shining red and unpruned screen of photinia ranging across the rear property line? “The small birds travel across the property through the photinia rather than out in the open. Lots of birds forage underneath. It’s a nice hiding spot.”

You get the idea. The Zimmermans are ardent birders, with a 70-species list they’ve identified in their own air space on a city lot in the suburb of Brier, between Seattle and Everett. The backyard sanctuary they have created is non-toxic, low-maintenance, teeming with bird life.

Dead snags, gathered here and there and planted upright in the yard, offer splendid perches for songbirds and insect meals for woodpeckers. A Northwest favorite, the large, noisy Pileated Woodpecker, haunts the Zimmermans’ backyard to feast on the bugs that live in the transplanted snags. So do Downy and Hairy Woodpeckers, and a family of Northern Flickers.

Many of the shrubs flourishing in the backyard sanctuary are throwaways from big landscaping projects. Neil’s a carpenter who works on large commercial buildings, and when the landscaping work begins, “I buddy up to the head landscaper, so when they want to get rid of something they let me know.”

The variety of botanical refugees is impressive. Red and blue huckleberry (bird food producers), red- and yellow-flowering currants (hummingbird attractors), wild-looking Rugosa roses (birds love the rosehips), and a half-dozen other species landed here instead of the county dump.

“Variety’s the main thing. The more variety of plants you have, the greater variety of birds. We were part of the Washington State backyard feeder survey last year and we counted 18 species in just one day.”

The Zimmermans are developing their wildlife haven into plant layers to provide clear sight lines for birding. Closest to their back door are the ground covers and low-growing shrubs: native kinnikinnick, Oregon grape (the short



*Neil and Carleen Zimmerman have created an inexpensive backyard sanctuary that is non-toxic, low-maintenance, and teeming with bird life.*



*Scores of species go for the Zimmermans' homemade feeders. Holes drilled in scrap wood are squeezed full of suet and seed.*

kind), salal, and deer fern rescued (with County approval) from a wild area that was about to be bulldozed.

Fronting that lowest layer of plants is a simple and delightful water feature. Birds come to bathe here, where the water trickles musically over a smooth stone channel and falls into a 2-foot by 3-foot pond.

Beginning about halfway from the house to the rear border, you'll find red-flowering currant, serviceberry, scarlet willow, and other medium-height species. All meet the feeding and perching needs of certain groups of birds.

The end farthest from the house offers a shady border of Western red cedar, Oregon wax myrtle and the tall, unrestrained photinia. "The more layers we have the more birds we'll get because different birds like to operate at different layers," Neil explains. "From towhees on the ground, on up to warblers and woodpeckers and Band-tailed Pigeons who like to roost in the tops of the trees."

The layered effect also makes for fine bird sighting from a large breezy sun porch, where Neil and Carleen spend hours watching and making notes on the scores of species their garden attracts.

They had to get rid of the lawn before they could make the wildlife haven they wanted. An easy

choice. "Lawns look great to some people but they're basically sterile. As far as bird life is concerned, they're OK for starlings and crows. But if you want a variety of birds, you need a variety of plants."

The lawn was also home to crane fly maggots, and when the lawn went away, Carleen recalls, the crane fly larva chewed their way through a lobelia border. "Once we took out the lawn, they seemed to think I'd set out a salad bar, and at first they ate everything."

The sight of the unseemly adult crane fly has led thousands of Northwesterners to reach for diazinon. Now banned, diazinon was for years one of the most serious bird killers on the market. Neil and Carleen never used it or any other chemical; still, the crane flies at their place have all but vanished. There's almost no lawn to harbor them, and there's a crowd of hungry birds to go after those few crane flies that persist.

They control aphids with water spray, and Neil sparingly hits a fenceline morning-glory infestation with Roundup. Those are about the only pests they get now that the lawn is nearly gone.

The variety of plants growing where the lawn used to be is a delight to the senses and a blessing to the birds. Blue star creeper, wood sorrel, maidenhair fern, wintergreen, campanula, and evergreen

huckleberry are only a few of the plant species that thrive in a pattern so informal they might have been scattered by a spring breeze.

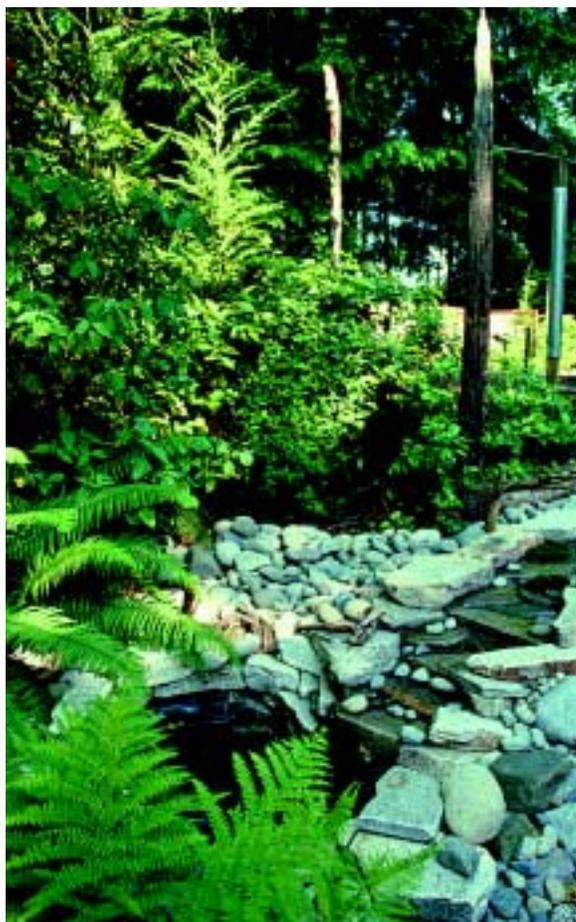
The Zimmermans go native when they can, but they aren't purists. They use several non-native species that have naturalized to the Northwest climate to provide fine bird food and habitat.

One example is pyracantha. This non-native adoptee curves gracefully over the front entrance to the Zimmerman's house. On a fine summer day, it's loaded with scented white flowers. "The birds love the red berries in the fall," Carleen says. "Last year we had eight robins in there cleaning it up, all at the same time."

"Natives are great because they've evolved in this area, they fit the climate and they need hardly any care after the first year," Neil explains. "We've tried to keep an emphasis on those that are at least close to natives. We try to get plants from similar climate zones, so we don't have to be watering constantly."

You can see in a few minutes what the Zimmermans' lawn-to-wildlife conversion has done for the birds. What's in it for the Zimmermans?

- ◆ **Hours of watching and making notes** on the bird life from their comfortable sun porch in summer and a kitchen window in winter.
- ◆ **Free time to do the watching:** "We don't have weeds to pull, don't have grass to cut," Neil says. "We have a couple of projects this summer, but



*Wilson's and Townsend's warblers, bushtits and other birds that don't ordinarily come to feeders drop in at the Zimmermans' for a bath.*

last year we were sort of walking around looking for jobs to do."

- ◆ **Sharing the avocation, person to person:** "I think that when people see the way you live—that you're living outside even when you're in the house, and when you're out here it's like being in a home—that you end up sharing that when people come," Carleen says. "It becomes an immediate connection, and you interact with people in a different way."

"For us, this has been a way of promoting gardening in a way that would maybe make people think twice about using toxins."



*Tearing out a lawn can be mean work. The Zimmermans have the Seattle Times do it for them. They lay down many layers of folded newspaper and then cover it with three inches of soil. The grass dies, the newspaper dissolves into the soil. Planting flowers, shrubs or ground cover is a simple matter of digging a hole through the disintegrating newspaper. However, as Neil points out, their lawn wasn't much to start with. A thicker, heavier turf can require more severe treatment. Some lawn-to-wildlife conversions require cardboard and several inches of wood chips.*

# FINDING SPACE IN A CITY FOR WILDLIFE HABITAT

Stretch out on one of the old wooden seats on a shady patio of Sandra Dean's backyard. It's a good place to ponder some of the things you don't need.

You don't need a lawn to have a lawn party.

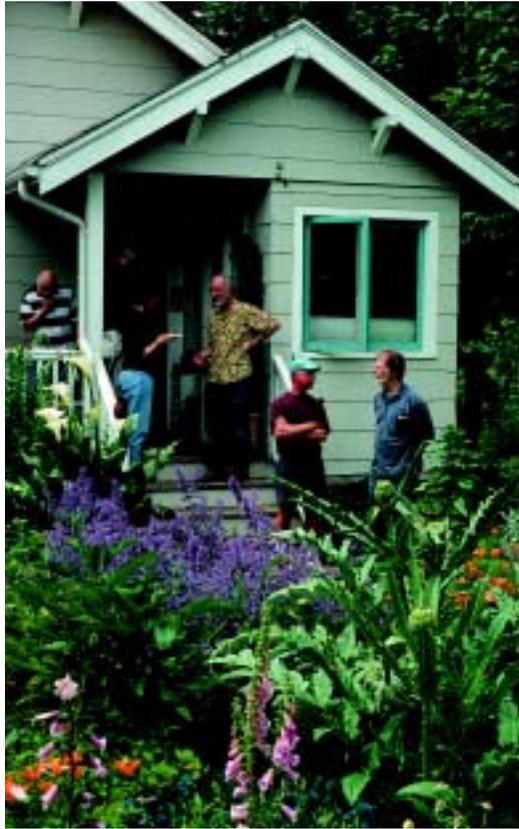
You don't need a big yard to entertain a big group of friends.

You don't need money to create a lovely backyard habitat that's pleasing to both people and wildlife.

This Queen Anne Hill backyard is a lush, welcoming gathering place with various sunny and shady corners, comfortable seating, winding pathways, and cozy "rooms," yet it lies only about ten minutes from downtown Seattle.

Whatever it is that makes friends hang out in a crowded kitchen and ignore a spacious living room works also in Sandra's backyard. "People having a good time don't mind being squeezed a bit," she observes.

What's left of Sandra's lawn is nine feet by nine feet. It serves to extend, into open sunlight, a cloistered patio near the top of the terraced backyard.



*Sandra Dean's garden vision is about as far as you can get from flattening, squaring and rolling the land into a lawn and then meeting a lawn's demands with poisons.*

Sandra mows the tiny patch with an old-fashioned push mower and likes it. She and her husband, David Bilites, spend no money on the lawn. None.

There used to be a lot more to mow. The whole backyard was lawn.

“The first thing I did when I moved in here was to look at this big open area that was just a squared-off piece of grass, sloping from the kitchen door to the back of the property, and I thought, ‘How uncreative can you get?’ I began tearing it out.”

Uncreative, she is not. She’s an artist whose colored pencil works range from explicit representations of plants to vivid abstractions expressing the energy of plants. She’s also a violinist who, with David, a percussionist, plays wild-sounding traditional Greek music with a group called Pangeo. Their garden looks the way their music sounds, with unrestrained splashes of purple, orange and gold. Bees, butterflies and birds are everywhere.

Their entire lot, from the street to the back fence, is 35 by 80 feet. Maybe a quarter of it is taken up by the front planting area next to the street. Their 1930s cottage (just 850 square feet) takes up another third. Even though Sandra and David have entertained as many as 50 guests at a time, there’s no great spacious area left for outdoor living. It just feels that way.

Settling down on a bench on the six-by-six deck outside the kitchen door, lemonade in hand, you can see it all right in front of you. Three gentle terraces, each about a foot high, create the backyard’s topography. On the highest, at the back of the property, the intertwining branches of a fig tree and an old purple-leafed plum create a tunnel over a winding walkway of patio brick.

The terrace below has the largest of the outdoor living spaces. It’s a patio made up of concrete squares, shaded on one side by the fig and plum tree, and at one end by golden hops that reach for the top of a simple arbor. A close relative of the hop that brewers use, it dies back seasonally to allow winter sun on the patio. It climbs eagerly in summer to provide breezy shade.

The third terrace slopes slightly towards the kitchen. Clouds of catmint, with their radiant deep blue blossoms, draw hundreds of bumblebees. Here and there huge artichokes ripen. Sandra and David don’t harvest the globes but let them open to a light blue, a different shade from the mint but just as brilliant and attractive to birds and butterflies.

Winding through the terraces is a pathway made of large chunks of broken concrete. Sandra stored the chunks for six years before cutting them into curves with a concrete saw and placing them in easy winding patterns to connect the garden’s many nooks and crannies.

Sandra’s a pushover for anything that comes up in the yard and looks decent. Once the lawn was gone, California poppies showed up uninvited. They found a home. So did Russell’s lupine, foxglove, fennel and cow parsnip.

“I didn’t plant any of these things, but here they are,” she says, delighted at what the birds and the Seattle breeze have brought her. “I suppose some of them are weeds, since I didn’t plant them. But don’t they look wonderful?”



*A golden hop vine climbs eagerly onto the arbor in summer, offering breezy shade. It dies back in winter, allowing the sun to warm the garden patio.*



## BUILDING HABITAT Layer by Layer, Step by Step

The building that houses the Seattle Audubon Society is one of those chunky Roman brick buildings dating from the 1950s, when someone came through Seattle who really knew how to sell Roman brick. There are thousands like it throughout the city, made of the same narrow, beige brick that was so popular for a few years after the war.

When Seattle Audubon recycled this house to make an office in 1995, a landscape committee decided to “hide” the outside with native plants. The same plan would also give those inside some relief from the visual and aural effects of a noisy street.

The result is a lot more than camouflage. It’s a fine little demonstration garden where you can learn a lot about using native plants, and what landscape architect Keith Geller calls the “hop, skip and jump” design for attracting birds.

“They need food, shelter and water, but they also need a layered landscape from big trees all the way down to ground cover,” says Keith, who headed the volunteer team creating the Seattle Audubon garden. Different birds favor different heights of trees and shrubs, he points out. Some seldom venture lower than the branches of tall trees, others feed on the ground. Still other species move from top to bottom, perching, watching, hopping down to scratch for food in the lowest level.

This layered effect, created to benefit the birds, also happens to present a pleasing and effective screen between street and office.

Keith doesn’t hide his satisfaction at the way the garden has thrived.

“When you look at the building from afar, you see not the building itself but the habitat,” he points out. “And from inside, you really get the feeling of being *inside* the habitat.”

There was lawn here when they started, but not anymore. It was the first thing to go. Keith’s team grubbed it out by hand, piled the sod into gentle, curving mounds, and covered it with soil and wood chips, before they planted anything.

They left in place the top layer of the habitat (composed of a half-dozen large Douglas firs) which preexisted Seattle Audubon by many years. For the next layer down they chose vine maple and serviceberry, both native to the Seattle areas. They added seedlings of Pacific Coast dogwood, a native whose huge white bracts light up the middle canopy in woods all over the green side

of the Pacific Northwest.

All three—vine maple, serviceberry, and dogwood—provide food as well as shelter for the birds. So do the seed heads of the rhododendrons. These had grown from foundation plantings into wall-huggers as high as the roof; they now add to the screening effect mentioned above.

Naturally, the bottom layer of the Seattle Audubon garden is by far the most diverse. At least two dozen species of plants, most of them natives and all of them offering food or shelter for birds, thrive in the partial shade provided by the upper layers. Lower-layer evergreens include blue huckleberry, Oregon grape, and salal. These form a deep thicket along the street and will grow taller and more dense over the years. Between that screen and the building are deciduous shrubs including red-flowering currant, red huckleberry, and mock orange. A final sub-layer includes low-growing herbaceous plants like vancouveria, trillium, sword fern, deer fern, and vanilla leaf. (See page 40 for a complete list of plants in the Seattle Audubon garden.)

On the building's sunny side, next to the parking lot, Seattle Audubon inherited non-native foundation plantings Geller calls "the 1940s" – mostly juniper and tree heathers. His volunteers tore out the junipers. They left the heathers because they are "nice looking."



*False lily-of-the-valley grows in a shady corner of the Audubon garden.*

The designers consciously built the garden around native plants, but it isn't a strict regime.

"Yeah, it's a native garden," says Keith, "but a large English laurel tree remains. We decided to keep the main part of the garden truly native and consign foreign plants mostly to the parking lot area and the side street."

It's a given that no pesticides will ever taint Seattle Audubon's garden. As more and more native plant gardeners are discovering, the chemicals with which we poisoned our gardens for so many years are useless when we transform the lawn into a garden full of thoughtfully chosen, well-placed native plants.



*A young section of Seattle Audubon's garden promises bird habitat and a useful screen against a busy and noisy street.*



# GOING NATIVE WITH A PLANT SOCIETY



*Pacific rhododendron, the state flower of Washington, is an evergreen shrub with pale purple blooms.*

It's the fun and companionship, Catherine Hovanic says, that has made the Washington Native Plant Society (WNPS) thrive. Assemble people who delight in getting to know native plants in the wild, and they will form strong friendships around the effort to protect and expand native plant habitat.

WNPS has more than 1800 members with chapters throughout the state. They learn about and propagate northwest native plants, enjoy field trips, get involved in restoration projects, and advocate for native plant habitat protection.

Native plant landscaping has soared in Washington, says Catherine, WNPS's Administrator. One consequence: attendance at the organization's annual native plant sale has tripled in recent years. To help satisfy the surge in popularity, members propagate natives from seeds and cuttings in hundreds of backyard beds throughout the Puget Sound Region. Members promise *not* to collect plants in the wild, but do—after thorough training—help salvage natives from development sites about to be bulldozed.

*Catherine Hovanic makes some strong arguments for getting rid of your lawn in favor of native shrubs and ground covers. Natives, after the first year, can do without the fertilizer and pesticides that you would be pouring on a grass lawn (and that find their way into your local salmon stream), not to mention the high-priced drinking water that grass lawns thirst for.*

Native plants are especially popular among those trying to establish or improve wildlife habitat. "Our native wildlife co-evolved with our native plants," Hovanic points out, "and natives are the best habitat you can provide for the species you want to keep here. Exotics may work well for bird habitat or as a source of food in certain locations, but at the same time they may be crowding out native species that would work better."

In other words, just because birds are feeding on English ivy or Himalayan blackberry doesn't mean that's what they prefer. These invaders crowd out native plants and with them any number of beneficial insects or other organisms that are beneficial to birds.

The plant society advocated successfully for the official listing of English ivy as a noxious weed, and helped organize the "ivy out" campaign in Seattle. Volunteers are currently working the hard way to remove English ivy from local parks and greenspaces—by yanking it out.

Asked to define her organization, Catherine says, "We're the voice of Washington native plants, trying to protect the incredible plant diversity we have here. We'll keep on doing that, and enjoying native plants with others sharing the same interest."

## JAMES JACKSON: "This Garden is Me."

There's no lawn, but there's a riot of color in front of James and Octavia Jackson's house. It's the only house in the neighborhood with no grass, and Octavia says people are forever calling to her from the street to say how nice it looks.

While she keeps an exacting eye on the flowerbeds in front, 82-year-old James supplies the vegetables grown from containers on a concrete patio in the back. Dark purple eggplants hang in extravagant bunches next to big, scarlet bell peppers. They aren't supposed to grow in Seattle, but here they are, thriving without pesticides in the orange sunlight of a Puget Sound autumn.

There are six-foot-tall tree collards along the patio fence. James and Octavia Jackson eat collard greens all year, along with their squash, cucumbers, tomatoes, cabbage, broccoli, garlic—all from pots on the small concrete patio.

Here in mid-September, he's setting out new starts of cabbage and broccoli, not in a greenhouse but here in the open, in the backyard. He expects to eat them in late December.

James is in frequent demand as a lecturer on container gardening. He proudly displays his credentials as a King County Master Gardener Emeritus, a title he earned after a long career in the military and another as a construction supervisor for the City of Seattle.

He exhorts in brief homilies as he works. "Soil does not wear out but you have to help it." He refreshes the soil in a container with small handfuls of compost and a smidgeon of fertilizer. "You can use it over and over. We wear out, but the soil does not."

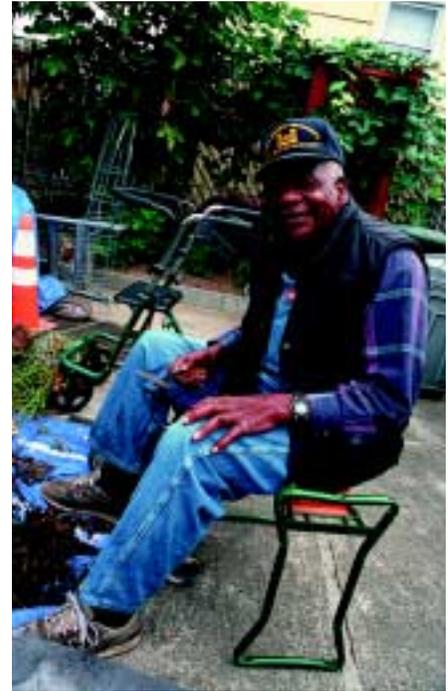
"You have to fit the plant to the pot." He eyeballs a cabbage plant and chooses a squat, broadly rounded clay pot. "Place it just so the edges of the cabbage head will meet the edges of the pot. That way it won't fall over and break off before you're ready to eat it."



He uses only one tool: a well-worn triangular bricklayer's trowel that's as high tech as he needs to go. "It does everything I want it to," he explains. "It's just right for digging, for scraping, for moving soil from one place to another."

Getting around the garden with the aid of a walker, wielding his trowel from a portable garden seat, he maintains a personality as sunny as his patio.

"This garden is me," he chuckles. "This is what I am. I'm not here forever, but I'm not gonna be laid up in any bed. When I go, I'm gonna go from right here, in the garden. Yessir."



# DON NORMAN: Sharing the Bounty

Birds love fruit, but there don't seem to be a lot of fruit growers who love birds. Don Norman is an interesting exception. He does everything he can to *attract* birds to the same land where he grows abundant apples, pears, cherries, kiwi, grapes and raspberries. Somehow, for Don, it works.



Other than the occasional flock of starlings, the birds don't take enough of his fruit crop to worry about. And whatever they take, there's plenty left.

"This is half an acre; even on a quarter-acre you could produce far more fruit than you'd ever want to eat. I compost ten or 20 big buckets of fruit every year because I can't give it away before it rots."

He offers some ideas for lessening the competition that can turn a fruit grower into a bird chaser.

"Part of it's providing alternative food for the birds, and timing it so that it works with your orchard," Don says. "If there's Indian plum or service berry or mulberry coming ripe at the same time as my fruit, then I won't get much predation off the fruit trees."

A professional environmental toxicologist, Don doesn't merely admire birds as they pass through; he bands them and studies their migration habits. He meticulously records sightings, bandings and recaptures, and analyzes the data to discern seasonal patterns for both resident and migratory birds. More than 70 species have stopped in his sanctuary since he began keeping records in 1980.

A burgeoning frame of fruit trees, wax myrtle, serviceberry and nut trees provide fine mid-level structure for the constant bird visitors and nesters at Don's half-acre place in Richmond Beach, a few miles north of Seattle. Now he's working to make the lower-level bird habitats more welcoming. He's planting snowberry, red-flowering currant, and small Oregon grape, directly under and adjacent to his fruit trees.

At the same time, he's mixing these native plants with his summer vegetable garden. "I'm growing zucchini squash, snowberry and red-flowering currant together. Or you could put potatoes in the row with natives, and have a great place for the birds to scratch around in."

Don buys native shrubs from a Bellingham nursery at a bulk rate. A hundred snowberries for \$30; 50 red-twig dogwood for a dollar each. He's

interested in setting up a native-plant buyers' club so that gardeners converting from lawn to backyard wildlife habitat could save still more money by ordering more plants at a time.

This orchardist/ornithologist offers some tips for a flourishing native plant landscape:

- ◆ **Grow the bare root plants in pots for the first year** in a central, shady spot where it's easy to water. "That way you don't have to dig 100 holes the first day. You've got a full season to decide where you want 'em and get the holes ready."
- ◆ **Use big pots**, ten inches or more across. Those in the smaller pots get rootbound in the first year.
- ◆ **Buy small plants.** They'll grow faster and put down better roots than the bigger ones.

Don's twenty-plus years converting from lawn to orchard to lush wildlife habitat have whetted his appetite to learn more. For example, he'd like to know about successional tree and bush plantings to provide more bird food throughout the seasons.

"How do we know what to plant so that there's food as the birds move through? Here's a cascara; it provides a lot of fruit for birds. And it comes later than Indian plum. Where does serviceberry fit in there? How about tall Oregon grape? This stuff is important to know, but I've never seen a real good paper on the best succession for the bird life in a region like ours. Someone needs to do that."

He's justifiably proud of the ripening pears and sparkling red apples that hang in extravagant bunches in September. But after all these years of



*Don mixes native plants with his summer vegetable garden—here, squash and snowberry.*

getting to know the birds up close, fruit production is clearly secondary. If harvesting fruit conflicts with encouraging birds, the birds will win, every time. It's not even close.



**Money-saver, too:** *What's the difference in cost between maintaining a lawn and maintaining the same area as wildlife habitat? Don Norman thinks the comparison would be pretty amazing.*

*"By the time you put in the lawn, put in the irrigation system, and add the money you spend on water and fertilizer, you have spent thousands of dollars. Then you spend hundreds more to have a gardener come and take care of it, or that much worth of your own labor to care for it."*

*"Compare that to others who put in a wildlife habitat area instead of lawn, establish it and let it grow—and just enjoy it."*

*"I bet the difference would be huge."*

# BRADNER PARK: Hoops, Cukes and Stir-Fry



The Bradner Park neighborhood's view of things has certainly made life complicated.

Its view of things is stunning. You can sit on the high stone steps at the southeast corner of Bradner Park and watch what's happening in downtown Seattle, on the gentian waters of Elliott Bay and in the green and snow white grandeur of the Olympic Mountains beyond. A view to be coveted. That was the problem.

Not that long ago, when the site was mostly asphalt, the Seattle Parks Department owned it, but the city administration wanted to sell it to a developer, who wanted to build houses here to capture that coveted view.

"We said 'Whoa! Wait a minute. You mean we're going to sell a park to a developer?'"

That's Joyce Moty, co-chair of a neighborhood group called Friends of Bradner Park. "We organized a successful 'Save Our Parks' initiative, so if the City's going to sell park land they've got to replace it with the same kind of property in the same part of town."

Joyce can tell you about Bradner Park's history, its ethnic and cultural diversity, and just about everything else concerning this remarkable piece of

urban agriculture and community.

P-Patches—plots where individuals and families grow flowers and vegetables—have been a great grassroots success in Seattle for a couple of generations. But the City battled with the local residents over one of the factors that has made this one succeed—the basketball court. Officials granted that basketball courts are good for neighborhoods, but asked why on earth anyone would want one next to a garden. Balls bouncing into the gardens? Kids tromping the squash and tomatoes?

The neighborhood committee members insisted. The basketball court stayed.

"We're talking subtle education here," Joyce says. "P-Patchers come to garden and the kids come along to shoot hoops. This sort of intro kids to plants. If they see where food comes from, at least they'll know it grows out of the ground. Maybe some day they'll get interested in gardening instead of being totally sports-oriented."

A grant allowed the Bradner coalition to put in a fence high enough to block basketballs. Local sculptors, both amateur and professional, have woven

into it some amazing designs made of pitchforks, garden tools and parts of old farm machinery.

Mixing cukes, hoops and art typifies the Bradner Park story. Not much more than an acre, the park combines vegetable and flower patches, demonstration gardens, art, architectural invention, creative landscaping, and a leftover strip of lawn (neither watered nor fertilized) where little kids romp and couples come to get married.

At the entrances to the park hang artistic symbols of salmon contributed by local artist Buster Simpson. They symbolize the health of the poison-free garden. As Moty puts it, "What we put on our gardens goes into the water environment. If we apply pesticides up here, the fish will be taking them up. It's all connected."

The subject of pesticides rarely arises. In Seattle P-Patches, pesticide-free gardening is a given.

Bradner Park's 61 P-Patches (each one ten feet by 20 feet) rent for \$39 a year. They feature raised beds filled with deep, black loam. Most are planted so intensively you have to be nimble to make your way through the beans and broccoli.

Soil-building happens all over the park, especially at two composting centers where gardeners chop the stems, leaves and other detritus of gardening, and turn them into soil using the "hot compost" system of half-green half-dry plant material, stored in a series of bins and turned once a week.

A mysterious layer of deep black mulch covers the ground in several of the plots. It's rotting milfoil, a pesky aquatic weed that plagues local boaters. The City harvests it to keep the lakes navigable and the Parks



*Joyce Moty and her determined neighbors passed a citizens initiative to stop the proposed sale of Bradner Park.*

Department delivers it to the P-Patches. This near-perfect mulch holds moisture in the soil, deflects the heat of the sun and delivers abundant nitrogen. And plants grow, and grow, and grow....

*Benches carved from logs include salmon designs to symbolize the interconnectedness of the gardens and the Sound.*



There's a lot more than plants growing here. The community-building among the neighbors is a gratifying story in itself.

Mien families from Laos have been using the P-Patches from the beginning. "We've learned so much from them," Joyce says of the Mien. "There has been a constant exchange of plants, seeds and ideas across language barriers and cultural differences."

"When they started coming here, I noticed that the women did all the gardening while the men sat in the cars and chatted," Moty recalls. "Now some of the Laotian men have become the lead gardeners in the park."

One of the most popular of the many Friends of Bradner Park workshops is a Southeast Asian cooking demonstration, led by Kouï Seng Sachaou, one of the Mien P-Patch gardeners. Neighbors chip in a few dollars to the P-Patch fund in return for learning the secrets of savory stir-fries.

At a small, open-sided pavilion, neighbors celebrate New Year's Eve, throw a whopping Fourth of July potluck, and participate in the September "Week of Giving" harvest celebration. That's when Seattle gardeners bring surplus produce—from home gardens as well as the P-Patches—to be distributed to needy families through Seattle's food banks.

Architecture students have left their own imprint on Bradner Park. University of Washington students built the pavilion, with its unique laminated beam in the shape of a leaf. They designed and built a wooden footbridge arching across the stony streambed that bisects the park. They created three portals, each with an individual design tied to the theme of gardening with nature. Again—symbols of connection and openness.

The great wonder of Bradner Park is that it happened at all. Determined neighbors and visionary City employees transcended disagreements and city hall politics. They transformed a vacant lot to a place of great beauty, function, and diversity in less than five years. After a rocky start, the City came to be a steady supporter. But mostly it's been the work of neighborhood volunteers.

Blocks of Tenino sandstone mark the softly curving outlines of the garden's center pathway. Citizens have inscribed names and garden homilies, in return for contributions to the P-Patch fund. One of the inscriptions speaks for many of the diverse community using this thriving neighborhood park: "To garden is to love."



*Each September, P-Patch gardeners bring surplus produce to Bradner Park for distribution to needy families and food banks.*



# WOODLAND PARK ZOO: Do Do That Zoo-doo....

Step into a little corner of Seattle where Monarchs and Queens and Viceroy's and Admirals will look you over, their curiosity punctuated by dark Commas and bright red Question Marks.

A thousand butterflies of more than 30 species flutter over your head, land on your arm and keep you spellbound in Woodland Park Zoo's "Butterflies and Blooms" exhibit.

They feed from brilliant nectar sources. Butterfly bush, heliotrope, yarrow and scores of other bright blooms flourish here. Not surprisingly, so does powdery mildew, that ugly fungus that disfigures leaves, flowers and fruit for every home gardener. It's a constant menace in the carefully enclosed, warm and humid environment.

Chemical fungicide? You've got to be kidding.

"We couldn't possibly," says horticulturist Barbara LeBrun, who oversees the exhibit. "Butterflies are supersensitive. It would destroy them."

Barbara and her gardening associates head off plant diseases with compost tea, once a week, twenty-four gallons at a time. She soaks the plants—especially scabiosa, cosmos, verbena, all quite susceptible to powdery mildew—and drenches the soil. Sprayed on plants, the elixir of compost, aerated water and nutrients works magically against diseases like black spot, apple scab, tomato blight, and many more.

While powdery mildew is the main target here in butterfly land, experience has convinced LeBrun that compost tea is good for whatever ails a plant, even insect damage.

"The plants are just so much greener and more vigorous with the tea. You can ward off a lot of problems just by having a healthy plant."



*Horticulturist Barbara LeBrun heads off powdery mildew in Woodland Park Zoo's Butterfly Dome. Barbara uses a backpack applicator to soak plants with compost tea.*

The butterfly exhibit is one small piece of the Woodland Park Zoo's 90-acre domain, containing the most diverse plant mixture you could dream up, populated by an equally great mix of exotic animals, birds and insects. Nine thousand people check it out on a busy day. It has to look good. A lot of the wild animals (and some of the people) rub up against the plants. The landscape *has* to be poison-free.

That's E.J. Hook's challenge. He's the Landscape Supervisor. Follow him around for an hour, hear his enthusiasm for natural plant care, and you wonder why you might ever have considered using pesticides.

E.J. not only wants you to understand his craft, he insists on it. Bits of plant care philosophy fly off like ladybugs on the wing:

Plant disease?

*"Compost tea to the rescue!"*

Your favorite greenhouse plant overrun by insects?

*"Dunk it in water, wait for the bugs to come up for air, then squish 'em!"*

Holes in the leaves of cabbage and broccoli plants?

*"Tolerate, tolerate, tolerate!"*

Tolerance is essential here. "Count on some plant damage," E.J. says. "Some weeds, some aphids. That's all part of nature. We're not after exclusion, we're after control and management."

Total pest eradication wouldn't lead to a healthy garden, even if it were possible. The Zoo's landscape staff instead pursues balance. Balance between human desires and natural functions, and between different kinds of natural functions. You can't get such balance with pesticides.

Natural controls apply here, with two exceptions. First, the Zoo quarantines and "disinfects" newly-arrived exotic plants to eliminate any hitch-hiking insects that might get loose. Also, the Woodland Park Rose Garden gets a periodic dose of sparingly applied chemical fungicides. "This is one of only two dozen All-America test gardens for roses," E.J. explains. "People expect it to look *exceptional*."

It does look great, but E.J. wishes it could all be done with natural controls. "We'd love to use

compost tea here in the rose garden but we haven't figured out how to make our labor resources match up with what we want the roses to be. We just don't have the manpower to keep mixing and spraying it on five thousand roses."

E.J. and his crew do use compost tea wherever they can. The Zoo has an unending supply of raw material, from elephants, zebras, and giraffes. Tons of their byproducts are stacked in a dozen huge mounds in the zoo-doo yard. From the freshest to the ripest, the manure is systematically turned, stirred and re-stacked every two weeks. That process creates a huge pile of deep brown, crumbly compost that looks good enough to eat (well, almost).

From one of the middle mounds, part way through the natural digestion process, E.J. shows us how to find the best material for compost tea. "You look for the white fungus clinging to the plant material," he explains as he digs into the pile. "It means the beneficial organisms are at work, creating compost. You get 'em while they're at their most active, and that's the basis of your compost tea."

Unlike E.J. Hook, you can choose whether or not to use chemicals on your home garden. But he says it's a choice you should never have to make. He suggests that you think instead about ways to change your garden.

"Don't start by asking 'What's the least toxic approach,' but by asking what the real problem is. If you have areas of your garden where you regularly have to go in and add water or pesticides, or weed-weed-weed, maybe you need to change that area of your garden. Could be the wrong plants are growing there."

"Look at the location, variety, and so forth," he suggests. "And make all the other decisions based on that. Then you shouldn't even have to consider using pesticides."

Thousands of delicate butterflies show that E.J.'s approach has a lot going for it.



*These warm, humid conditions are conducive to dozing butterflies (as well as powdery mildew).*



# Let's Have Tea and Compost

You can buy a complete outfit for brewing compost tea like E.J. Hook's. But commercial setups are much bigger than backyard gardeners need. So why not rig your own "teapot" for much less?

Start with good garden compost, a five-gallon bucket of water, and a small mesh or burlap bag. Half a gallon of compost, held loosely in the cloth bag, is about right for a five-gallon batch of tea. Add an aerator (a large aquarium air pump—\$27 at Seattle pet stores—will work). This is important, because non-aerated compost tea becomes anaerobic, also known as a stinking mess, and can damage your plants. You'll then need to add a few ounces of nutrient to feed the billion tiny organisms you're about to produce. Plain, un sulphured molasses will work, but the commercial, pre-mixed SoilSoup (\$25 a gallon at [www.SoilSoup.com](http://www.SoilSoup.com)) seems to inspire more of the beneficial organisms to multiply like crazy, and that's what you're after. And a gallon goes a long way.

(A tip from E.J.: chlorine is almost always in tap water—get rid of it *before* you start mixing. Either bubble air into the water for an hour, or let the water sit in a bucket overnight before you begin brewing.)

Start the bubbler. Soak a half-gallon of compost in the bag in the five gallons of water. Add the nutrient. Stir it now and then. Bubble air into it for 36 hours, and bingo! it's ready. Spray it on your plants as soon as you can, because the wonder-working organisms begin to decline within a few hours.



*E.J. Hook holds a handful of Woodland Park's famous Zoo-doo compost, his preferred ingredient for the Zoo's compost tea.*



## Roses Without Chemicals?

*Compost tea is great for preventing black spot and mildew on roses, but they haven't found a way to use it at the huge Woodland Park Rose Garden—at 2.5 acres with 5,000 individual rose plants. Instead, they apply a baking soda compound and commercial fungicide.*

*"If we can ever figure a way to make it cost-effective we'll use it," Landscape Supervisor E.J. Hook explains. "As it is, with the mixing, brewing and spraying of huge batches, we wouldn't have time for all the other things we have to do."*

*"And this particular garden has to look super, all the time. It's an All-America test garden, one of only two dozen in the country. We have to keep it as near perfect as we can."*

*Here's where you have an advantage over the zoo's landscapers—even if you don't have an elephant. "At home, with a reasonable-sized rose garden, compost tea's the thing. Start putting it on early in the season and keep it up every two weeks," E.J. advises. "Mildew and black spot won't even be able to find a place to get started."*

# FAUNTLEROY CREEK:

## Save Fish, Help Birds



*Judy Pickens, Phil Sweetland and the rejuvenated Fauntleroy Creek.*

*Last year Friends of Fauntleroy Creek published a list of 68 bird species that frequent the shady ravine and travel up and down the stream. And volunteer salmon watchers counted 167 coho in the quarter-mile spawning channel.*

They were trying for salmon. The birds were a wonderful surprise.

Judy Pickens and her husband, Phil Sweetland, began a campaign in 1969 to restore Fauntleroy Creek, a neglected little stream in West Seattle that was once bank-to-bank trout and salmon.

The salmon quit coming upstream about 1910. By 1969, blackberry briars covered a sluggish creek disgraced with bottles, cans and other human debris. About all Fauntleroy Creek had going for it was a large number of fine old trees and a handful of families who cared about what became of it. Its rebirth has become a symbol of what can happen when organized citizens and government agencies manage to get on the same page.

Pickens, Sweetland and the Friends of Fauntleroy Creek enlisted Youth Conservation Corps members to help clean the trash from the stream, yank out briars and plant native shrubs. Children from nearby elementary schools planted coho salmon, starting in 1990. When two of the fish (the neighbors named them Terry and Louise) tried to come home in 1994 and couldn't make it through a failing, 83-year-old culvert, Seattle Public Utilities (overseer of the City's water and surface drainage services) installed a new culvert, then agreed to engineer and build a state-of-the-art fish ladder.

Two weeks after the fish ladder was opened, big salmon were thrashing their way through the weirs.

As though scoring a bonus for their hard work, Pickens and Sweetland found that the winding creek's restoration made their backyard a prime birding area. Birds now flock into the shady canyon to feed on the fruits and seeds of red osier dogwood, red-flowering currant, Oregon grape, and dozens of other natives now growing tall and thick along the stream.

"We chose native plants as best we could for renovating the creek," Judy Pickens recalls. "We were thinking about the insects, attracting insects to the water as fish food. It wasn't more than two years later that we began seeing birds we hadn't seen before, and lots more of what we had seen."

Children from Seattle schools come by the busload to watch the fish, count birds, measure waterborne insect life, and learn the mysterious ways the plants, insects, birds and fish interconnect.

Above the creek, on a public hiking bridge, Olympic Peninsula artist Tom Jay has created "echoes" of the creek in concrete, stone and bronze. Here, surrounded by birdsong and the music of a healthy stream, you can trace the recurring miracles of small salmon headed for the ocean, and of great salmon struggling eternally homeward to create new beginnings.



# STEVE HALLSTROM: Who Needs Rain, Anyway?

When Steve Hallstrom goes to the field at daylight to harvest the rich produce of his 2.5-acre river bottom farm, he finds the soil moist and the plant leaves wet. It hasn't rained, but his crops look as though it has, late in a very dry summer in the Snoqualmie Valley. Indeed, even at 9:30 on a warm August morning, much of the ground remains very damp.

Steve can't waste water. His irrigation well yields about one and a half gallons per minute, not nearly enough for heavy watering. But he has nature working for him: The Tolt River delivers airborne moisture during the cool nights, and broad-leafed vegetables collect it like funnels. The loamy soil of his farm holds moisture at the root level where the plants can make best use of it. He never subjects the land to the drying effects of chemical fertilizers.

A steep, grassy hill with a crown of fir and cedar a few hundred feet west of the gardens casts an early shadow on the fields, to reduce the intense afternoon heat of late summer. Thick woods border two sides of his fields. They shade the fields in the morning and help hold the dew and fog that have already burned off in the sunnier parts of the garden.

The house, barn, hillside and bottom land are all of a scenic piece; Thoreau material, had Thoreau been at all interested in the bruising, hands-in-the-dirt toil that organic truck farming demands.

Steve makes use of the microclimate by matching crops to the best hours of sun and shade. Plants such as cabbage and broccoli, whose leaves trap the dew and funnel it into the center of the plant, grow on the shady sides of the field, and get very little irrigation. Corn, squash, and pole beans, heat lovers all, get the sunny sections and most of the carefully applied well water.



*An essential principle at Steve Hallstrom's farm: Don't try to control nature. It isn't necessary and it probably won't work anyway.*

They shade the fields in the morning and help hold the dew and fog which has already burned off the sunnier parts of the garden.

Interestingly, Steve doesn't go along with the trend toward drip irrigation and plastic mulching.

"I don't think much of those systems," he says. "Maybe you save some water, and that's environmentally sound. But the yards of petroleum-based vinyl tubing you buy, and the yards and yards of petroleum-based plastic sheeting? That all winds up in the landfill."

Ordinary oscillating sprinklers, perched on platforms just above the crops, work best for Hallstrom. "It's the closest thing to rain," he says. "When you're irrigating in hot weather you want large drops that fall quickly, with the least evaporation." Impact sprinklers break up the drops, and seem to him to deliver less water to the ground, where it's needed.

Water timers to control the sprinklers? "I'm the timer. I look at the plants and the soil and when it needs watering, I water."

Insect control? He dusts with diatomaceous earth and rotenone for flea beetle. Otherwise, nothing.

Fertilizer to feed those lush and juicy vegetables? "Chicken manure. That's it." How much? "I really don't know. I put it on with my manure spreader until it's an inch thick or more, and till it in." (Hallstrom is careful to keep the manure, like the rotenone, out of the water.) He uses moderate-to-heavy applications of ground limestone, but no additional phosphate or potash.



It works. The proof comes on the Wednesday evenings and Saturday mornings at the University and Columbia City farmers' markets in Seattle. Hallstrom rushes to serve the customers who queue up at his stand, and to replenish the wide range of produce. Pumpkins, pole beans and brilliant red lettuce all fly out of his boxes.

The payoff for the Hallstroms and for scores of other small Seattle-area organic farmers? Their customers' gratitude.

"Now and then someone will take the time to say how much they appreciate our being here, and how important it is to be able to buy good, healthy food. That makes it all worthwhile."



*Steve Hallstrom thrives on his customers' enthusiasm for his tasty, healthy organic produce.*

# GIVING UP PESTICIDES

## Not Just for the Birds... For the Kids.

If you're still looking for a reason not to use chemical pesticide on your lawn and garden, try this:

Ninety-nine percent of the four-year-olds in a recent study had at least one compound in their systems traceable to *organophosphorous* pesticides. That's the group that includes diazinon and chlorpyrifos, two of the most common household lawn and garden pesticides. Three quarters of the kids had two of the compounds in them.

University of Washington researchers tested the urine of 96 toddlers from two communities; one in a highly urban, low-to-middle income setting south of Seattle where apartment buildings are common, the other in a suburban area north of Seattle, with upper-middle income families living mostly in single-family detached homes. Of the 96 children, only one showed no measurable trace of the pesticide compounds (that was the tot whose parents reported using no pesticides at home and buying only organic produce.) The results were similar in the two communities. No matter where you live, the kids are exposed.

The same studies showed high levels of the highly toxic compounds known as *dialkylphosphates*, or DAP's, even where families had not applied pesticides for months. These pesticide residues can be tracked easily into the house, settle in the carpet and hang around for a long time.

The UW researchers are still studying the long-term health effects of exposing children to these chemicals.

It isn't just for the birds that organizations like Audubon discourage the use of pesticides in favor of benign methods of pest control.



*Good news for people and birds: The EPA recently decided to phase out retail sales of both diazinon and chlorpyrifos (e.g. Dursban). Gardeners should immediately dispose of any leftover supplies and containers at a King County hazardous waste disposal facility.*

*See [www.metrokc.gov/hazwaste](http://www.metrokc.gov/hazwaste) for details.*



# JON ROWLEY: Linking Soil and Flavor

Jon Rowley pursues the link between great soil and exquisite flavor.

Rowley's a professional food-marketing consultant who has spent his working life searching for superbly flavored fruits and vegetables, the kind that come from superb gardening. His quest inspired an intense curiosity about the natural processes that produce the plant sugars that affect the flavors, and, logically enough, from there to an investigation of what makes truly great compost.

At 59, Jon has become the dean of dirt in Seattle. He lectures widely on his technique for hot composting and for a cooler but equally effective system he calls Interbay Mulch. He and other gardeners at the Interbay P-Patch are four years into a ten-year experiment, seeking to understand the role of organic matter in producing the most abundant and highest-quality vegetables.

They run the tests on eight plots with eight different soil treatments. One of the ten-by-ten plots receives only chemical fertilizer. It does poorly compared to the others, including one with leaf mold only, one with composted livestock manure, and a "sea bed" mixture of kelp, seaweed and crab shells.

Jon not only weighs the amount of vegetables produced. He also checks the "brix" reading—the level of dissolved plant solids in the juice as measured with a refractometer, a device commonly used in winemaking. High plant sugars mean a higher brix reading, and more distinctive flavors.

The experiment may help answer a question that he and many others have been asking for years: Why do many fruits and vegetables lack the flavor that they had in years gone by, and how can those flavors be restored? The answer seems to be in the soil, and Jon Rowley will dig happily until he comes up with it.



## HOT TIMES IN THE COMPOST BIN

*Here's the short version of Jon Rowley's secret recipe for quick, hot compost: half browns, half greens.*

**Browns** include dried grass, dead leaves, wood shavings, even shredded paper. This stuff has a high ratio of carbon to nitrogen. **Greens** are garden leftovers, fresh grass clippings, barnyard manure, coffee grounds, or anything with a low carbon:nitrogen ratio.

Mix it all in the bin, protect it from the rain, leave some of the sides open for air. Turn it once a week to add oxygen. It gets so hot that you could probably bake a cake in there—but don't. The heat kills weed seeds and disease organisms, and turns the plant material into mealy soil in a few weeks.

*For easier, cooler compost, take the same 50:50 mixture of greens and browns. Mix it directly on top of the garden bed. Add a wheelbarrow load of your own compost to inspire microorganisms. Cover with burlap. (Jon uses heavy coffee bags discarded by a Seattle coffee-roasting company.)*

*Check it now and then to be sure it's moist. Otherwise, ignore it 'til spring, when you'll find 2-3 inches of soil for every foot of material you started with.*

*Hot compost or cool, flowers and vegetables just about leap out of the beds. Best of all—they do it without a pinch of chemical fertilizer or pesticide.*