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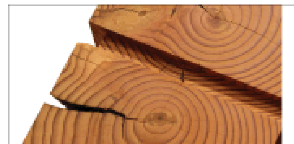

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IN THE GARDEN

The Permaculture Movement Grows From Underground

Tony Cenicola/The New York Times

Carrots from Claudia Joseph's gardens. More Photos »

By MICHAEL TORTORELLO
Published: July 27, 2011

AS a way to save the world, digging a ditch next to a hillock of sheep dung would seem to be a modest start. Granted, the ditch was not just a ditch. It was meant to be a "swale," an earthwork for slowing the flow of water down a slope on a hobby farm in western Wisconsin.

And the trenchers, far from being day laborers, had paid $1,300 to $1,500 for the privilege of working their spades on a cement-skied Tuesday morning in late June.

Fourteen of us had assembled to learn permaculture, a simple system for designing sustainable human settlements, restoring soil, planting year-round food landscapes, conserving water, redirecting the waste stream, forming more

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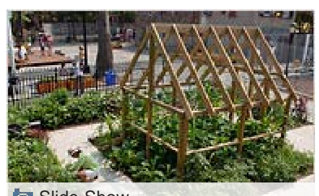

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Can't We Do This Right?

companionable communities and, if everything went according to plan, turning the earth's looming resource crisis into a new age of happiness.

It was going to have to be a pretty awesome ditch.

That was the sense I took away from auditing four days of a weeklong Permaculture Design Certificate course led by Wayne Weiseman, 58, the director of the Permaculture Project, in Carbondale, Ill.

The movement's founders, Bill Mollison and David Holmgren, coined the term permaculture in the mid-1970s, as a portmanteau of permanent agriculture and permanent culture.

In practice, permaculture is a growing and influential movement that runs deep beneath sustainable farming and urban food gardening. You can find permaculturists setting up worm trays and bee boxes, aquaponics ponds and chicken roosts, composting toilets and rain barrels, solar panels and earth houses.

Truly, permaculture contains enough badges of eco-merit to fill a Girl Scout sash. Permies (yes, they use that term) like to experiment with fermentation, mushrooming, foraging (also known as wildcrafting) and herbal medicine.

Yet permaculture aims to be more than the sum of those practices, said David Cody, 39, who teaches the system and creates urban food gardens in San Francisco.

"It's an ecological theory of everything," Mr. Cody said. "Here's a planet Earth operating manual. Do you want to go along for a ride with us?"

It's hard to say just how many have climbed aboard the mother ship. In San Francisco, Mr. Cody saw more than 1,500 volunteers turn out in 2010 to create Hayes Valley Farm, a pop-up food garden near the site of a collapsed freeway ramp.

"I like to say it was the largest sheet-mulching project ever done in the world," said Mr. Cody, who designed the garden following the permaculture principles and directed the process of covering the ground with a cardboard weed barrier and organic material.

"We sheet-mulched about an acre and a half," he said. "That's something like 80,000 pounds of cardboard diverted from the waste stream."

In the last four years, Mr. Cody has helped train 250 students through the Urban Permaculture Institute in San Francisco.

Scott Pittman, 71, who directs the national Permaculture Institute from a farmstead outside Santa Fe, N.M., estimates that 100,000 to 150,000 students have completed the certificate course since the philosophy was developed in Tasmania over three decades ago. "In the U.S., I would say we represent 40,000 to 50,000 of that number," he said.

But then pemaculture has no membership rolls or census-takers. By intention, "it has been, for all of the years I've been involved, a pretty decentralized movement," Mr. Pittman said. The message seems to get out in its own fashion, without publicists. Mr. Mollison, for example, has been permaculture's leading figure since the late 1970s, and his books have hundreds of thousands of copies. Yet his name has apparently never warranted a mention in this newspaper.

Permaculture, Mr. Pittman said, is "guided by the curriculum and a sense of ethics, and that's pretty much it."

The ethic of permaculture is the movement's Nicene Creed, or golden rule: care of the

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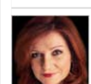
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earth; care of people; and a return of surplus time, energy and money, to the cause of bettering the earth and its people.

In its effort to be universal, permaculture espouses no religion or spiritual element. Still, joining the movement seems to strike many of its practitioners as a kind of conversion experience.

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MR. Pittman first encountered Mr. Mollison and his teachings at a weekend seminar in New Mexico in 1985. As a system, permaculture impressed him as panoptic and transformational. “It shook my world,” Mr. Pittman said.

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Permies at Work

Almost on the spot, he decided to drop his work and follow Mr. Mollison to the next stop on his teaching tour: Katmandu, Nepal. Soon after, he began to lead courses alongside Mr. Mollison, in cities and backwaters around the globe.

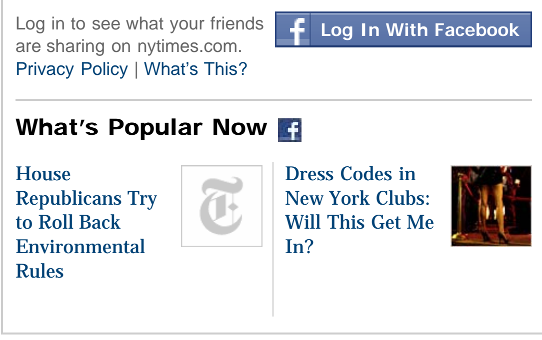
Mr. Mollison hasn’t toured the United States in almost 15 years. At 83, Mr. Mollison has “kind of faded into semi-retirement in Tasmania,” Mr. Pittman said.

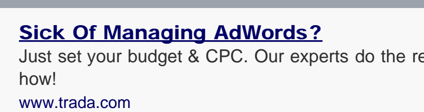
Yet in recent years, Mr. Mollison’s ideas seem to have bubbled up from underground, into the mainstream. “I just trained the Oklahoma National Guard,” Mr. Pittman said. “If that’s any kind of benchmark.” The troops, he said, plan to apply permaculture to farming and infrastructure projects in rural Afghanistan.

It’s a system, permaculturists contend, that can work anywhere. In Park Slope, Brooklyn, Claudia Joseph, 53, has used the precepts of permaculture to develop new food gardens at the Old Stone House. (Its original 1699 Dutch edifice was a locus of the Battle of Brooklyn in the Revolutionary War.) “It’s a huge breakthrough,” she said. “To go from a swatch of grass to 1,000 blueberry bushes.”

The parks department recently bulldozed two of her gardens in an overhaul of the playground in the surrounding Washington Park. But in a few protected spots, Ms. Joseph, an environmental educator and consultant who lives two blocks away, has already started on an edible food forest.

This “guild” of complementary plants is the opposite of annual row-crop agriculture, with its dead or degraded soil and its constant demand for labor and fertilizer. Permaculture





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landscapes, which mimic the ecology of the area, are meant to be vertical, dense and self-perpetuating. Once the work of the original planting is done, Mr. Mollison jokes in one of his videos, “the designer turns into the recliner.”

At the lowest level of a food forest, then, are subterranean crops like sweet potatoes and carrots. On the floor of the landscape, mushrooms can grow on felled logs or wood chips. Herbs go on the next level, along with “delicious black cap raspberries,” Ms. Joseph said.

Other shrubs, like inkberry, winterberry and elderberry, are attractive to butterflies and birds. They’re an integral part of the system, too.

But more likely to appeal to the children who attend the nearby William Alexander Middle School is a Newtown Pippin apple tree, “a variety first grown in Queens,” Ms. Joseph said.

Ruling the forest’s heights are the 40 large pin oaks already in the park, whose abundance of acorns will make a banquet for squirrels. Permaculture also looks favorably on high-quality bushmeat. But Ms. Joseph will be leaving that harvest well enough alone.

WITH its focus on close planting and human-scale projects, permaculture is ideally suited to a small suburban yard or a patio garden. But most of the students I met in Wisconsin had their own 1,000-blueberry-bush visions and ideas on how permaculture could help fulfill them.

Kellie Anderson, a 27-year-old rolfer, lived for five months in a giant sequoia tree named Keyandoora. (At the time, she was protesting a logging plan in Humboldt County, Calif.) After the workshop, Ms. Anderson said, she planned to inhabit a 1986 diesel school bus that she and her boyfriend were in the process of converting into a camper. But fortune seems to have taken her instead to Sanibel Island, Fla., where she is now helping to plan a sustainable-housing community.

Kris Beck, 48, a founder of an energy-efficiency tech company, had a notion to build a sanctuary with a megalithic stone circle (think Stonehenge) on her family’s old Wisconsin dairy farm, along the Mississippi River bluffs.

Bruce Feldman, 60, who spent two decades as an English teacher overseas, experienced the collapse of the baht in Thailand (he was being paid in that currency), and an earthquake in Japan, in 1995, that left him wandering the streets for four days. These events, Mr. Feldman said, “got me thinking that I should start preparing for my own future,” ideally, a four- or five-acre self-reliant homestead in the Ozarks of Arkansas.

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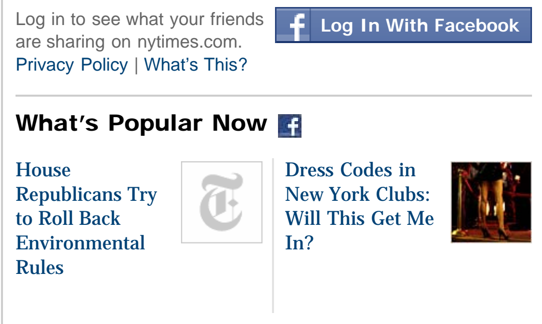

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The site of the workshop was a permaculture Shangri-La unto itself: 60 acres of rolling pasture and woodlands, a few miles from the Buffalo River in Wisconsin. In 2004, Jeff Rabkin and his wife, Susan Scofield, bought this Amish farm for $125,000.

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The original plan was to lease out the fields and build a cordwood cabin as a weekend home. Instead, under the influence of permaculture, Mr. Rabkin became seized with the idea of stewarding the property himself. To this end, he and a permaculture buddy, Victor Suarez, 44, bought a small flock of sheep and planted 300 fruit and nut trees.

During the work week, Mr. Rabkin, 49, and Ms. Scofield, 48, run a marketing and public relations firm in Minneapolis. That background is apparent in the catchy name they gave the place: Crazy Rooster Farm and Amish Telephone Booth.

But the Amish telephone booth is no gimmick. The couple installed a phone line in the shed next to their farmhouse, and their neighbors roll up in buggies to make calls.

While Amish visitors mill around in Mr. Rabkin's yard, they may strike a deal to sell him three steer and two heifers, or 20 black-locust fence posts. Like a coneflower patch draws honeybees, Mr. Rabkin said, "I like to say that the telephone attracts beneficial wildlife — our Amish neighbors — which is what permaculture tells us to do."

Ms. Scofield collected asparagus, beets and raw milk from neighboring farms to feed the permies. The occasional Amish visitor, like Thomas Zook, who delivered a bucketful of new potatoes in the middle of a downpour, gave a glimpse of what low-impact living might look like, taken to an extreme.

Mr. Zook's father, Jonas Zook, even dropped in to watch a video about pond management, but walked out after a minute or two. After marathon days of PowerPoint presentations, I wouldn't have minded joining him. For all its exhilarating ideals,

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permaculture is a movement grounded in “zones,” “patterns” and “functions.”

Labs, as it were, took place in the toolshed. On the first day, Mr. Weiseman demonstrated how to create biochar, or partly burned charcoal, in a primitive “rocket” stove, a device he assembled out of a piece of ductwork and a paint can.

Helpful mineral elements attach themselves to the unique molecular structure of biochar, Mr. Weiseman explained. Mixed with compost, it makes a top-dressing for trees.

Next, he started bubbling compost tea with an aquarium pump in a plastic bucket. (“Even petroleum has a place in permaculture,” he said. “The five-gallon bucket is the greatest application of petroleum in the world.”) He wrapped a clump of standard compost in a cloth like a hobo’s bandanna pack and dunked it in water. Next, he added molasses to feed the brew.

After a couple of days, we would fling this brownish broth over the kitchen garden to enrich the soil with beneficial bacteria.

That was the concept, anyway. A week after the workshop, I ran these theories past Jeff Gillman, 41, an associate professor at the University of Minnesota and an author of four books about gardening practices and the environment.

He professed to be “a believer in the whole concept of permaculture.” But he dismissed the compost tea as “lunacy.” Scattering a few foreign microbes into a sea of soil, he said, was like parachuting 10,000 people across the breadth of the Sahara. They would not survive.

Normal compost, the solid stuff from a backyard bin, “should already contain all the microbes that are beneficial to the soil,” he said. And if it doesn’t, “beneficial microbes move in very, very quickly.”

With biochar, Mr. Gillman admitted to a bit of bafflement. “Charcoal, in general, is not in and of itself harmful to soil,” he explained. “It helps to hold on to nutrients. But having said that, it boggles my mind why you would take a perfectly good block of wood that you could use as compost or mulch, and burn it.”

IN a broad sense, though, permaculture is not about the scientific method or textbook agronomy.

“I don’t know that anyone has ever done a double-blind study of permaculture,” said Mr. Pittman of the national Permaculture Institute. “Most people in permaculture are not that interested in doing those kinds of studies. They’re more interested in demonstrating it. You can see the difference in species diversity and yield just by looking at the system.”

As Mr. Weiseman observed, permaculture may be a “leap of faith.” But not leaping might have its own consequences.

Beginning with Mr. Mollison, permaculturists have forecast a near future of resource scarcity. “Not just peak oil,” Mr. Weiseman said, “but peak water, peak soil.”

And the news, with its drumbeat of economic decline and ecological catastrophe, feeds the prophecies. In this dystopia to come, permaculture won’t be a lifestyle choice, but a necessity.

“We know what’s right,” Mr. Weiseman said. “We know what’s best. We feel this thing in our bones and in our heart. And then we don’t do anything about it. Or we do. And I did. And it’s bearing fruit.”

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But preparing for doomsday in San Francisco, Mr. Cody said, is not what draws a crowd of busy souls to shovel horse manure on a drizzly Saturday morning. To the 12 central tenets of permaculture, then, Mr. Cody added a 13th: "If it's not fun, it's not sustainable."

In other words, why mourn the eventual demise of our office blocks and factory farms, when there's a feast to be made, right now, in your own backyard?

The Movement in Your Backyard

A GOOD introduction to permaculture is Bill Mollison's 1991 book, "Introduction to Permaculture" (Tagari Publications, $25). For a start, it's 350 pages shorter and about $75 cheaper than his "Permaculture: A Designers' Manual," the movement's full, unexpurgated testament.

The greatest hits of permaculture are all in the "Introduction": the ecological ethics, the landscape design principles, the domestic architecture. The book also dabbles in some colorful minutiae. Will shredded licorice root make suitable wall insulation? Does a goat like to munch carob pods? (Spoiler alert: the answer to both is yes.)

New Yorkers won't have much use for the section on "Avenue Cropping Techniques for Monsoon Tropics." Permaculture's philosophy may be universal, but its practice, focusing on microclimates and native ecosystems, is strictly local.

In this spirit, dozens of cities hold regular permaculture gatherings. The New York Permaculture Meetup Group is one such place to post questions and view local projects. New members can join at nycpermaculture.info, and attend the next assembly on Aug. 2, said Alice Lo, 29, of Rego Park, Queens, one of the event's hosts.

If Meetup participants go home believers, they may be ready for the baptism of an immersive Permaculture Design Certificate Course. Many of these workshops take the form of a residency. Ms. Lo suggested a permaculture-and-yoga biathlon, Aug. 5 to 25, at an ashram/ranch in the Catskills. For information: (845) 436-6492 or sivananda.org/ranch/perma_design.html.

Wayne Weiseman, who taught my course at Crazy Rooster Farm and Amish Telephone Booth, worked as an organic farm manager, an outdoor skills instructor, a public school teacher, a cabinetmaker, a luthier and a New York cabdriver. He brings these trades to the teaching of permaculture. Mr. Weiseman will lead fall workshops in Jessup, Md., and Americus, Ga. (For information: www.permacultureproject.com).

Permaculture should be practiced at home. Commuters can be sojourners at courses in Brooklyn (permaculture-exchange.org), San Francisco (upisf.com), Oklahoma City and Albuquerque (permaculture.org).

And if all these newly minted permies feel compelled to quit their day jobs and start urban farms? Well, there goes the neighborhood.

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