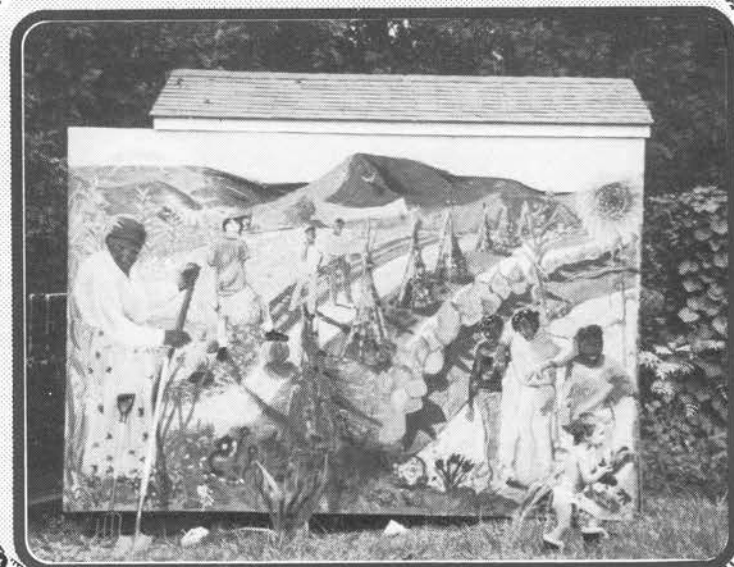


THE PERMACULTURE ACTIVIST

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*Cities
&
Their Regions*



Confronting Urban Sprawl: The Elephant in the Living Room

Steve Arpin

Urban sprawl is creating a host of environmental, economic, and social problems. Our best farmland, which is generally at the urban edge, is being covered with pavement, houses, and the strip malls that serve the new developments. We need to begin changing our transportation and land use patterns. We need to cease sprawling out.

According to American Farmland Trust, "About one million acres of productive farmland disappear each year...on the urban edge, where more than half of total U.S. agricultural production and more than 80 percent of domestic fruit and vegetable production occur."

We are also losing family farms at an alarming rate. Prairie Fire Rural Action, a farm-rural community non-profit advocacy (and partner of Oxfam America), reports that "Between 1982 and 1992 over 19,000 family farms went out of business in Iowa alone. Every year, between 1987 and 1992, 32,500 family farms went out of business around the country." (Oxfam works with grassroots organizations to combat global poverty.)

The Missouri Rural Crisis Center elaborates on some of the ramifications of the disappearance of family farms: "When family farmers are eliminated, the rural communities that have been service centers to our agricultural-based economy are also eliminated. The results have meant a loss of over 30 percent of our rural population, increased poverty and hopelessness, and exploitation of the region, people, and culture."

They go on to say, "...[B]esieged with huge animal [processing] factories, toxic waste incinerators, and landfills; we are told that this is economic development. In fact, these are sorry replacements for agrarian-based, sustainable development. Not only do family farmers create five jobs each, those dollars are circulated through the (local) economy seven times. In contrast, huge, corporate livestock factories do just the opposite."

This sort of development is occurring all over the world. Huge corporations working with governments and financial

institutions (such as the World Bank and the International Monetary Fund) formulate and implement policies which concentrate control over land and the world's resources into fewer and fewer hands, thrusting the vulnerable who get in the way into a state of desperation. Simply stated, without their land, people flee to urban centers for food.

Thus the most suitable agricultural land is being removed from production and covered over with human constructions. Marginal lands brought into production require greater applications of fertilizer, higher energy expenditures, and other extravagances to achieve similar yields. These lands often have served as refuges for wild or semi-wild life and the habitat is significantly modified, if not destroyed, by this cultivation.

In addition to paving over the land that feeds us, sprawl is a major cause of resource depletion, the pollution of waterways and the atmosphere, decline in forests, loss of wilderness, species extinction, and the disintegration of community. It represents a heart-wrenching misappropriation of the earth's life-supporting capacities.

Sprawling development is an unthinking assault against life on earth, an unbroken development of billions of years of increasing complexity and beauty, marked by diversity, fullness, and adjustments to limits. Instead of allowing urban sprawl to degrade the health of communities and the land, we need to begin supporting only what is most life-affirming, enhancing, and considerate of all. We must cease supporting whatever is inconsiderate, unfeeling, and exploitative. Doing this not only helps to bring peace and joy to the world, but also to our own hearts and minds.

If compassionate impulses are to mature into completion, they must find expression in the material realm, give proper regard to all of creation, aid our inner development, and further life as a whole.

We could build our cities, towns, and villages compactly, with walkable distances between home and work, shopping, services, entertainment, etc. Walking and biking obviously require a

lot less energy, materials, and space than a personal auto and certainly contribute less to pollution. (Automobile infrastructure includes roads, garages, service stations, driveways, parking lots, enormous bridges and overpasses...)

It is difficult to develop healthy, integrated communities while roaring past one another in automobiles. Even when we are interested in sharing and cooperating for the good of all, the reality of being part of this destructive vortex of highways, sprawl, cars, and oil is that we are far from living in harmony with Earth's life-supporting processes and capabilities. Too few realize the significance of taking action to change this. Doing the best we can in the moment, changing what we are able, can get us unstuck and help create movement in a life-affirming direction.

"There is talk of a global village, yet I think we might be far happier with a globe full of villages."

Building compactly would enable us to leave large areas of wilderness intact, preserving habitat for other species. There is talk of a global village, yet I think we might be far happier with a globe full of villages. People could live near their work or use mass transit, car-pool, walk, bike when appropriate, or simply drive less. Such caring responses require honest self-confrontation, an openness to relevant information, and concern for the well-being of all.

The challenge is enormous. Most of us don't want to look at the horrors unfolding in the world or to evaluate our lives in relationship to them. Facing the truth, we would feel the joy and pain of life, and of our love for it—a love that would pierce our complacency, open our hearts, and permeate our actions and intentions.

On a public scale, we need to convert the political process from one serving limited interests to one benefiting life as a whole. We are all responsible for this. We must see that laws are passed that help us move away from environmental destruction, and the exploitation of vulnerable people and other species, toward restoration of damaged lands and cultural values, toward truly sustainable development, and compassion for all.

Steve Arpin lives in Asheville, North Carolina.

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To Our Readers:

The Permaculture Activist invites thoughtful readers to contact us with suggestions for themes, features, or information which you would like to see in our pages. Our aim is to create useful resources for grassroots ecological design relevant to the cultures of North America.

Our publication schedule is irregular, a subscription "year" consisting of three magazines and three newsletters. Ideally the magazines will reach readers in March, July, and November. Newstand readers are encouraged to subscribe, thus giving

more of their money to the publisher and staff. The number on the address label indicates the last magazine & newsletter the subscriber will receive. Magazines and newsletters are paired, eg. 33 & 33-A.

The next issues will explore themes of

- Village Design
- Climate and Microclimate
- Useful Plants

We depend for our continued work on your contributions of written words and dollars. Without them, there is no Permaculture Activist. We need and we thank you for your support.

Happy New Year!

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permaculture© per'ma·cul·ture. 1. permanent agriculture, the requirement for a permanent culture. 2. An ethical philosophy of earthcare and peopelcare supported by the distribution of surplus goods: wealth, labor, attention, information. 3. the condition of abundance in nature marked by cooperation, diversity of species, occupation of essential ecological niches, and stability over time, in contrast to the condition of competition, scarcity, monotony, and imminent decay which predominates under hierarchical social conditions.

To Mend the Broken Circles: Thinking Green in City Spaces

Charlie Headington

The urban scene is the least studied yet most important arena of permaculture. Its importance stems from the apparently unstoppable, albeit misguided, march of humanity to dwell in the centers of commerce and industry. While what we need is a more balanced pattern of settlement—of villages with hub-cities and tracts of wilderness large enough to allow for speciation—what we have is an unruly mosaic of metropoli with sprawling suburbs, a defeated rural culture, and multiple-use “wilderness” tracts. The city, by virtue of its control over financial and political decisions, social and cultural conventions, and industrial inertia, sucks dry the rural and wild places and reshapes them into a homogeneous landscape. Thus we have a “geography of nowhere,” a soulless landscape. Therefore, for the foreseeable future, the urban-suburban scene deserves our best thinking and our best design. All of this is possible on a small or city-wide scale. It can begin here and now.

Several years ago, my wife (Deborah Seabrooke) and I wondered whether to move to the country or stay in Greensboro, a city of 200,000 in the mid-Atlantic Piedmont of North Carolina. At the time, I thought I could do permaculture *only* in the country, with acreage, and without restrictive city social conventions and building codes. We came very close to buying 17 acres, but we decided instead to play an urban tune. We had three pre-teens, for whom existing friendships were very important, we wanted to continue bicycling to work, stores, and friends' homes, and we had some nascent idea about making our 80-year-old home on a 50' x 150' lot an urban homestead.

Turning to our front yard (on a busy and narrow street), we had a few ideas from a variety of sources—Fukuoka, Ruth Stout, English cottage gardens: make it easy, mix it up, mulch, perennialize. We'd also heard about sheet mulching from permaculture. So in early spring of 1992, with newspapers, leaf mulch (six pickups full), and straw, we covered over an American obsession, the lawn. We scavenged for rocks, fence materials, trees, plants, and ideas. We planted annuals and perennials, and waited.

Within two months, the garden filled out. Neighbors attest that it sprang up overnight with ten foot sunflowers, the three sisters (corn, beans, and squash) by the street, goldfinches on thistles, toads in broken pots, cherry tomatoes running over azalea bushes, eggplants popping up next to the yarrow. Plants, animal friends, and neighbors all found a niche in our garden. From an ordinary city scene, the garden converted the area in front of our house to a sacred space of conviviality and intersecting life patterns. Our front porch enjoyed a renaissance as a connector of home and garden. A rose arbor signaled the entrance and symbolized the movement from profane to sacred space. An old maple at long last reveled in its own guild of understory trees, bushes, and herbs. A new tune and a new culture sprang from the old.

We turned to the backyard. By then I had some formal perma-

culture training and, with all we'd learned from our front yard experiments, we had much more specific ideas about design and ecosystems. We negotiated with our kids about social space; they tolerated most of our ideas, but vetoed my favorite—using the jungle gym as the entry trellis, laden with hardy kiwi. We also had a problem to turn into a solution, as the city sewer works had just put in a neighborhood drainage pipe and left a 15' wide swath of hard subsoil where our main garden wanted to be.

In permaculture fashion, we built *up* from the surface, bringing in more leaf mold and forming a terrace with large elm stumps. Then we established several gardens: key-hole shaped beds for annual vegetables, an orchard garden of dwarf fruit trees, fruit bushes, and insectary plants...and (surprise!)—a secret garden by our first three ponds. Closer to the back door, we put in



Front view of the Headingtons', before Pc.

a plucking garden of greens and edible flowers, an herb spiral, a blueberry grove, another orchard garden with a canopy of plum and persimmon trees and, most recently, a patio garden and pond shaded by a grape-laced pergola. These gardens are now in their second growing season, so most of the bushes and several dwarf trees are yielding fruit. Soon we'll have lots of fruit, 18 varieties, ripening from early May to early December.

If you think we have lots of sun space, we don't. About half the back of our lot is shaded, so we have room for shade guilds, shade fruit like black and red currant, gooseberry, and pawpaw, as well as herbs and ponds. Shade and sun means lots of edge, and it's fun to come up with edge-guilds. Some winter squash, scarlet runner bean, H-19 pickling cucumber, elderberry, raspberry, and even a fig do nicely. Shade in the hot Piedmont often creates a social space, and thus we also planned paths, a tree house, a hammock site, a fire pit, three ponds, and several benches to help connect humans and other-than-humans.

At our place, everybody contributes. We never till; we just mulch and let the worms turn the soil. Bees pollinate. Our first-

year hive enjoys more than we do the variety and succession of blooms as well as the moist, carpeted banks of the ponds. We attract and feed beneficial insects with umbellifers and composites. Prospective mulchers may be a bit confused by the disorderly array that confronts them! As many elements as possible are multi-functional. The lovely passion-flower, for instance, grew 15 feet high last year and shaded part of our hot south side. We also ate its leaves, flowers, fruit, and stem. Overall, maintenance effort is low. A lot of our work is cutting back, harvesting, and imagining how we can better work with nature.

We feel that our cooperation with nature has begun to generate a highly functional, productive, and beautiful homestead. This has led us to think that the most significant act of urban permaculture is *restoring* a balance between human society and nature. Since almost every inch of urban and suburban land has been ransacked, covered, poisoned, and altered, it begs to be restored. This does not necessarily mean returning it to its original form, i.e., forest, prairie, or marsh, but restoring a sustainable balance that enriches and provides for all, now, and for future generations. The place where this happens most visibly is the garden. This is where we grow, learn, swap stories, play, relax, and wonder.

It is not hard to imagine cities and suburbs as large gardens. Nature shifts from background to foreground. Each human activity and institution feeds into the loops of natural systems. The *Wall Street Journal* (July 14, 1994) reported front page: "Amid Destruction, Sarajevo Blooms as a Garden Spot: The corn grows tall, beans sprout as residents spread seeds of new civilization." Tragedy has pushed Sarajevo's inhabitants to conserve, grow food, and become self-sufficient. "Beans rise above balcony railings. Tomatoes ripen on rooftops. Onions frame sidewalks. Cows graze on median strips." Former CEOs become master gardeners. Amid the destruction, one can say, "We have all what we need here."

This brings to mind another important practice of urban permaculture: conferring particularity, identity, and conviviality to a place—in other words, making it a "somewhere." Perhaps I should say that one evokes the uniqueness of a place. To convert a lawn into a garden is to give it particularity and, according to the way it is done, an identity. Our front garden says something about who we are and what nature can be. Its diverse interactions evoke the latent conviviality of the home, the sidewalk and porch, and the neighborhood. An elderly woman from England walked by, turned around, and came through the rose arbor. "I feel I've come home," she—a "stranger"—said.

Our homestead is a microcosm of what can happen elsewhere, anywhere, in city or suburb. You can begin where you are, right now, on whatever scale suits you. You can initiate systematic or random acts of restoration and evoke the spirit of the place.

Discovering harmonious patterns

Urban permaculture is intensely social. Everything you do is within sight, sound, or touch of a neighbor...or an inspector.

Everywhere you turn, you bump into another person's body, land, home, or advice. Taking others into account may mean making compromises. This intense interaction is one of the defining and charming features of urban life. Rather than privatize and control daily activities as modern design and technology do, urban permaculture seeks to increase, open up, and share the diverse paths, places, and patterns of urban conviviality. For instance,

my next door neighbor, Vincent, lets us use his backyard as a playing field. We also exchange lawn care (yes, we cut his lawn!) for the privilege of using the south side of his garage as a greenhouse site.

Thus urban permaculture embraces social diversity and interaction, and generates designs that maximize their frequency,

intensity, and continuity. Just as we design plant guilds in the garden, we design people guilds in the neighborhoods. We can put people in touch with one another, match somebody's needs to another person's skill and surplus, connect the cycles and flows of human energy, letting everyone join in and have fun.

Community building is very much a matter of good design. There are patterns that connect and patterns that alienate. I often turn to Christopher Alexander's *A Pattern Language* for good ideas. There is also a growing body of literature on sustainable urban design. Some of these ideas may go mainstream, as indicated by the cover articles of *Newsweek* (May 15, 1995): "Bye-Bye, Suburban Dream," and "15 Ways to Fix the Suburbs."

Lest this sound too theoretical, let me turn to some things happening in Greensboro and hereabouts. Last year, a team of eighth-grade teachers at Kiser Middle School asked me to work with students to create a permaculture garden. A year later, we sit within our garden of trees, fruit bushes, an herb spiral, pond, swirling paths (they chose an amoeba shape!), and ripe strawberries. From the beginning, I foresaw the most important part of this venture, namely, the building of community: teacher and student, principal and janitor, gardeners and non-gardeners, bus drivers and parents. With regard to learning, it brought together hand and mind, text and deed, classroom and outdoors. The garden will continue to grow and with it, the community and curriculum, because social and natural ecologies are connected.

Other examples

Under the expert guidance of Ben, a local gardener, our neighborhood joined together to restore nearby Buffalo Creek. Our interventions have been minimal, mainly consisting of planting native species, so the creek is largely on its own. In two years, the vegetation grew lush and diverse; animals, insects, and birds flourished; the water temperature *dropped*, improving



Front view of the Headingtons', after permaculture.

conditions for stream life—and the city spends less money on maintenance. The project is soon to be emulated in other locations.

I also think about a local architect, Bob Powell, who wants to develop Greensboro's first sustainable, mixed-use, low-income housing community. And I think of Elaine Stover's efforts to educate the city council, city planners, developers, and builders about green alternatives and sustainable strategies. Louey Gamble in Madison and Harvey Harman in Bear Creek grow good food and establish urban-rural links through CSAs. Dozens of people have taken one-day workshops in permaculture. No one is in charge, yet the various activities, visions, and livelihoods are beginning to merge.

The last point I'd like to make about urban permaculture concerns the flows and cycles of energy and matter. Cities

use a tremendous amount of energy. Sadly, they use it inefficiently, wastefully, and unwisely. Permaculture teaches us to harvest energy, use less of it, and use the right form of energy for the right job. If the sun can heat food, water, and homes, we should design systems to let it do so. We might think of letting gravity work for us as well. Our home is not yet a model of energy efficiency, but we use fewer appliances than most households and practice low-use (our average, combined utility bill is \$45 monthly). We are also planning to install a solar batch water heating tank, a solar oven, and a wood stove, though large-scale conversions seem daunting and expensive.

When it comes to cycles of materials, our homestead does a little better. The meta-pattern of all matter—water, minerals, nutrients—is to move from the environments of air, water, and soil to living organisms and then back again. These cycles connect us now and with the past. The molecules you breathe may have been inhaled by Walt Whitman, or Eve. To disrupt these cycles or to lock up nutrients creates imbalances in the soil, air, and water we depend on. Bagging leaves and grass clippings, pouring high-dose fertilizers on the soil, allowing runoff of phosphorus and nitrogen, destroying whole ecosystems, overwhelming the waste facilities, drinking the 700 or more additives in city water, paving the land—all of these disrupt natural cycles on a large scale and within the human body.

The work of urban permaculture is obvious: to complete the cycles, to mend the broken circles. Here again you can begin

now, where you are. Think of all the revolutions in your backyard: soil breathing, plants growing, leaves falling, water flowing, matter decomposing, children playing, sun shining, neighbors talking. Loop upon loop, all form cycles within a larger web. Now learn about the the cycles and their elements, observe them, and understand their transactions. Soon you'll discern which human actions assist their efforts and how these natural events can help you. For example, we're using ponds and the slope of the yard for greywater filtration and garden irrigation.

The water loop is extended from the home through the ponds and to the garden. If we caught all our water in cisterns, the loop would be complete.

You'll soon find yourself going beyond your home. You can forage and guerrilla plant in city parks, you can rehab streams, set up community gardens, begin river festivals. Everywhere you go in urban settings, there are opportunities to restore broken cycles. A community in Greensboro, Eastside Park, was racked by drug dealing, crime, pollution from highways, and social injustice. A consortium of voluntary home construction organizations, the city, and the remaining inhabitants of the neighborhood formed a plan and staged a comeback. A team of permaculture designers spent a week there integrating the natural cycles into the newly restored physical and social cycles. The team proposed a solarized community center, gardens and orchards, stream rehab, pedestrian pathways, mixed-use zoning, access to safe and restful places, and waste recycling. A constructed wetland could also have been included.

This is the challenge of urban permaculture: to facilitate the revolutions, the dynamic interactions of the web of Life, and to reestablish natural ecosystems as the context of urban form and activity. This is the basis of sustainable development. Now is the time to experiment and construct models of possibility. Now is the time to invite others to potlucks, workshops, and presentations, so that knowledge can be recycled through the community. Look to your friends. I learned from Dan, Chuck, Peter, and Michael. Close by are other permaculture designers—Erik, Harvey, Louey, Darrell, and Randy. Others speak a similar language; scores have attended events, and hundreds more want to learn. Reach out to city officials, professionals, schools, churches, and your neighbors. View them all as potential allies.

In fifty years, this coalition building will be a necessity. Now it is a choice. Don't, like Sarajevo, wait for war. Plant the seeds of a new culture, a sustainable culture, now. Δ

Charlie Headington teaches Religion at the University of North Carolina, Greensboro. He regularly leads workshops in permaculture design and ethics. His home at 515 N. Mendenhall, Greensboro NC 27401 is an inspiration for all city gardeners.



Charlie Headington and Deborah Seabrooke

Patterns of Settlement

"Keep interlocking fingers of farmland and urban land, even at the center of the metropolis. The urban fingers should never be more than 1 mile wide, while the farmland fingers should never be less than 1 mile wide." **City-Country Fingers**



World Hunger, or Abundance at Home?

Why local organic food matters

Andrew Goodheart Brown

If you absolutely have no space to grow your own healthy food, or if you grow your own and need to supplement your larder, there are almost always local organic growers nearby. (Ed. note: *There are over 500 community-supported farms nationwide today. In 1985 there were none.*) A search at the local co-op, tailgate market, or queries to the local agricultural service will most likely result in the names of nearby market gardeners. Purchasing from these local growers creates a stacking of functions that would make any permaculturist dizzy. The many benefits include: fresh, healthy, nutritious, great-tasting vegetables that lead to good eating habits, improved quality of life, connections to the food source and to the farmer—thereby building community—which encourages sustainability, improves ecology, and removes a chink in an otherwise oppressive system of world hunger.

Not a bad deal at all!

Especially when you consider: the average “fresh” vegetable and fruit in a grocery store is 7 to 14 days old, has been selected for ease of picking and shelf-life, and has traveled approximately 1500 miles, losing nutrition all along the way. In contrast, local organic produce is normally hand-picked just prior to sale, is selected because it is delicious, and has come from not much farther than around the corner (and a little way).

Bob Marley was overheard to proclaim, “You can’t get nothing ripe in America.” Commercial fruits and vegetables are picked green (unripe) to survive the long journey to the consumer. Local produce, on the other hand, is picked ripe, when nutritive values are high, and development is full: this is when a fruit or vegetable is delicious! (Bob didn’t discover the richness of buying from America’s local market gardeners. In his native Jamaica, market gardeners dominate the markets, and if something is neither ripe nor delicious, it remains unsold. We should learn a lesson here!)

Spending your dollar locally leads to an improved quality of life. Local economies are strengthened by money recirculating within the community, and small farmers are encouraged to continue farming, resulting in green space nearby the city. Farmers selling directly to consumers are able to stay small-scale, thereby caring better for the land.

When buying face-to-face from the farmer, curious inquiries and other acts of friendliness may result in an invitation to see the market garden operation. At the very least, there is no excuse for not knowing your grower’s name. Buying direct and locally connects consumers to their food source, and connects farmers to whomever eats their crops. It also bridges the urban/rural gap and puts everyone more in touch with the seasons.

More Than Food, and Less Than Nourishing

If you want to be part of the solution, you have to desist from being part of the problem. The cost of food at the supermarket is estimated to be less than half the true cost of producing it, because of government subsidies to production, processing, and

transportation. That doesn’t even take into account the cost to ourselves, and future generations, of harmful agricultural practices that impoverish the land, poison our waters, and all out decrease the productivity of the Earth. Present reliable sources estimate that industrial agriculture uses 10 calories of energy to produce 1 calorie of food and sends 7-10 bushels of topsoil to the sea for every bushel of corn sent to market. (And we are feeding and leading the world?)

With few exceptions, organic practices are earth-friendly and sustainable. The United Nations Environmental Program defines sustainable as being able to meet the needs of the present in such a way that future generations will be able to meet their needs. Your local organic market gardener practices sustainable methods; therefore, your support is a vote for quality in the present, and its possibility in the future. It’s as possible as any other scenario that Saint Peter, at the pearly gates, will utter one question only: “*And what did you do for our Earth?*”

Many of our supermarket foods are grown on corporate farms in developing countries. Not surprisingly, these megafarms occupy all the prime land (not otherwise directly owned by the aristocracy). Crops produced on these industrial farms are not available for local consumption: they are for export only! A visitor to the highlands of Guatemala can anywhere see corn growing on mountainsides whose steepness is absurd. Meanwhile, most of the fertile flatlands send us bananas, snow peas, and berries. Local people, struggling for existence, take to very steep—and in all ways—unsuitable land for subsistence agriculture. The land quickly erodes its soil and fertility, while marginal production results in a negative cycle of inadequate nutrition, poor health, and poverty. Yet more land, farther from the family and even less suited for agriculture, has to be cultivated to make up for diminishing productivity.

The present policy of “taking the green out of nature and putting it in our back pocket, without putting anything back” has led to an impoverished Earth, and a system of world hunger that accelerates that devastation. It’s an overpowering issue with so many complications that considering it makes one’s head swim.

However, change and empowerment happen on a local and personal level.

As individuals, we *can* have effect. We have the choice and freedom to live in a sustainable manner. It *does* matter what we do, and even more importantly, our intent and attitude matter. If, as an individual, I cannot do a right thing, how can I expect others to do it? If, as permaculturalists and practitioners of other sustainable strivings, we choose not to act upon our growing knowledge of what is healthy for Earth—and her inhabitants—how can we expect others, not so inclined, to halt the destruction?

Our personal day-to-day actions count! Supporting your local market gardener is removing your “chink” from the system of convenience foods that trails harmful practices and unjust systems, and is also investing your dollars—as votes of confidence—in a much more fair and sustainable local system. To bring consciousness into the “ordinary” part of our lives is a step into the extraordinary. And to step into the extraordinary is to wake up and become vital and effective, to empower ourselves. Buying from local producers is just one of a number of ways by which our ethics can empower our lives. Δ

Andrew Goodheart Brown is a permaculture teacher living in Asheville NC. He writes frequently for The Permaculture Activist.

Agricultural Valleys

Patterns of Settlement

“Preserve all agricultural valleys as farmland and protect this land from any development which would destroy or lockup the unique fertility of the soil. Even when valleys are not cultivated now, protect them: keep them for farms and parks and wilds.”

Empowering Independent Regions

Steps to Social Transformation

Gene Marshall

If we are to create a feasible, realistic vision of the future of life, and of human life, on this Earth, we must answer three questions cogently. First, who are "we?" Second, where do we want to go? And third, how on Earth can we get there from here. Who are we?

Every moment of history calls forth a vanguard of aware persons who, having probed the meaningful issues of their time, become a fresh, authentic voice in their culture, and act on behalf of a more appropriate human presence on the planet. They are the primary agents-in-action on whom the positive unfolding of the future depends.

Those in the vanguard of social transformation today share six basic commitments for a practical future. They are committed to:

1. an ecological bonding with the whole Earth,
2. the recovery of the feminine from patriarchal suppression,
3. a post-industrial economics,
4. the completion of democratic structuring,
5. holism in scientific and ethical thinking, and
6. a profound sense of spirit as the key to the quality of social structures.

Times of transformation are times of magic. As members of the vanguard open themselves to these principles, they have to let go of many old ways of thought and practice. But their reward is a new magic in their lives: freedom, compassion, joy, and a fresh authenticity, appropriate to the moment.

Where are we going?

We are going toward a realization of the six basic principles of a viable future, as outlined above.

1. At present, the planetary ecological crises are a primary factor in vanguard consciousness. Forests are turned into deserts at an astonishing rate. Grassland soils that were once several feet deep are mined annually, leaving only inches. Insecticides harmful to the nervous systems of insects accumulate in the fat of humans and other animals, attacking their nervous systems as well.

We live in a creeping nerve-gas attack released not by a military enemy but by our own conscientious food growers. And our food is not only poisoned, often it has lost its nutritional vitality through over-processing common in the mass-market economy.

Pollution from industrial processing has created air that burns our eyes in Mexico City, Los Angeles, even in Dallas. Everywhere industrial smokestacks go undisciplined, everywhere the automobile has flourished. This trend continues.

We have interfered with the ozone layer and greenhouse gases to such an extent that every Earth system is now affected. In a remarkably short span of time, thousands of living species have entered eternal oblivion. All the species that have evolved over the last 65 million years (including humans) have either been domesticated or threatened with extinction by humans.

Such well known and often debated facts still do not convey the magnitude of the crisis. Every economic system, every political system, every cultural formation is up for audit on the planet. The basic values of each individual are being called into question, as our relationship with nature, with our own bodies,

and with the profound depths of human reality emerge as the core elements of our dilemma.

The outward crisis mirrors our inner estrangement from our own natural wildness, our natural, sensual empathy with the wild life that surrounds us. In order to change the trend toward oblivion, we are called upon to sacrifice many well-established and well-loved ways of life.

The vanguard of social transformation, having seen that, along with the suppression of our wildness, our fundamental spiritual freedom, compassion, and joy have also been forbidden, realize that reclamation depends on *an ecological bonding with the whole Earth.*

2. *The recovery of the feminine from patriarchal suppression* is also a primary ingredient in the magic mix of today's vanguard consciousness. There is no sane ecological vision that is not also a feminist ecology, and no sane feminist vision that is not also an ecological feminism. Both women and men are rediscovering what is authentic about gender: how the sexes differ, how we are the same, and how we are each a mix of feminine and masculine qualities. We are learning how each, when grounded in nature, models a new social form in which all have creative, dignified roles that breathe personal power and transformative energy into each other and the world. The recovery of our profound emotional, sensual, and sexual natures also empowers the reclamation of our wildness and our bonding with the Earth, and vice versa.

3. The economic arena is the scene of still another profound societal transformation. Capitalism and communism have been two sects of the same basic religion. Their irrational dogmas rival those of fundamentalist Christians, Jews, Moslems, Hindus and other fanatics, and have spread everywhere.

Let me illustrate by calling your attention to that sinking feeling which may appear in your stomach when I ask you to consider seriously a future in which there are no billionaires, no economic ladders to climb, no nationwide money systems controlled by corporate powers, no stock-selling corporations, no stock markets, no banks charging or paying interest, no free movement of capital across the globe, and no unrestricted economic growth. Such options for our future are unthinkable. Why? Because we are so conditioned in our economic religion, we can't think beyond them.

The vanguard of our time wields a *new economics* based on local money systems, worker-owned-and-controlled cooperatives, interest-free banking, highly reduced global trade, and a steady state policy incorporating appropriate growths and declines. (If you aren't feeling nauseous over the vastness of the changes I'm suggesting, you are not yet getting clearly what I am saying.)

4. Awareness of the need for *completion of the democratic structure* is a fourth important focus of today's vanguard. Not only are many nations still practicing a form of military fascism, even the United States, whose citizens think they have a democratic government, but vast reforms are needed to fulfill the objectives of democracy. So far, we have only replaced monarchies and the landed aristocracy with a moneyed aristocracy. Although this "democracy" is a more flexible form of government involving a wider participation, it is only a beginning

at best. (At worst, it's a kind of truncated fascism, since we inevitably vote for business candidates, either one that leans toward the big money players or another that (possibly) leans very slightly toward labor and small business.

Even when elected officials transcend herd mentality, they have tremendous difficulty helping us resist the aristocracy where its vital interests are at stake. Some new mode of democratic process and structure will have to evolve if the vanguard and the citizenry are to have sufficient voice in the shaping of the future.

5. *Holism in scientific and ethical thinking* also characterizes the true vanguard of this moment. Though we may each continue to specialize or develop expertise in some small area of life, without a holistic view from which to specialize, we will be lost in the fragmentation of the stampeding herd.

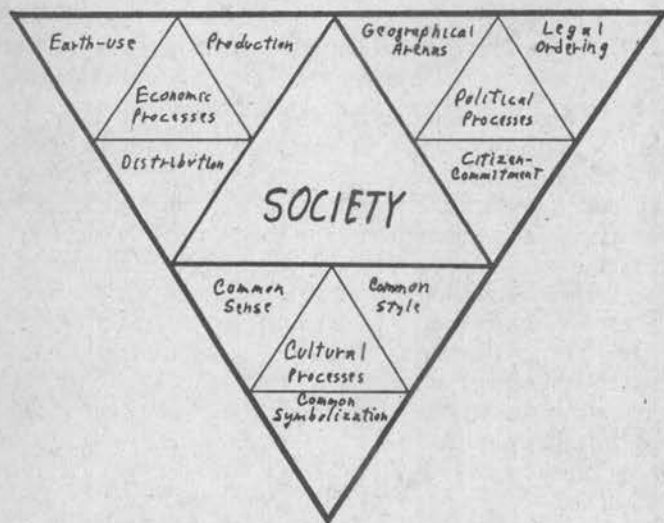


Figure 1

A Transformational Model

This model of societal processes [Figure 1] is only one of many possible models, but it is good enough to illuminate my main point about holism. Although every society has three basic social processes, each of which can be further divided into three sub-processes, each is inseparable from the whole and reflects the rationale of the whole. All nine of these inseparable, interactive processes exist in every society, every primitive tribe, every civilization, every future society.

This model also helps show how society functions, so that we may think more effectively about how to contribute to social transformation.

Economic processes

The upper left segment of the greater triangle is concerned with economics. "Earth-use" means the use of resources. Economists speak of a resource as something that human beings decide to use. Uranium was not a resource until we found a use for it, and water is a resource only to the extent we decide we need it. An adequate transformation of the Earth-use aspect of the current economy would include banning the manufacture of any product that couldn't be thrown on the ground to rot or be recycled one hundred percent by non-toxic processes.

"Production" is the alteration of any resource for use by humans. Replacing corporations with worker-owned-and-

controlled cooperatives would transform the production aspect of our economy. "Distribution" includes decisions about how gathered and processed resources are apportioned, owned, and traded. The creation of a new money system would transform this aspect of our economy.

Political processes

The upper right section of the diagram represents the political processes in society. "Geographical arenas" refers to "social ordering." Today most political power is vested in large national governments. Local neighborhoods and regions have almost no power to affirm their own lifestyles or to influence the planet-wide course of events. A county government in the U.S. has a narrow range of choices before it runs into state regulations. Vast amounts of money sent from local and state governments into federal coffers then have to be begged back in pennies for local maintenance and improvements. This kind of centralized power benefits large corporations and takes power away from ordinary citizens, whereas decentralization is the chosen model for transforming the political process of geographical arenas.

Another key approach to the transformation of geographical arenas is bioregionalism, or "life-regions," an approach which promotes the understanding that geographical arenas need to be governed by the natural biological interactions that occur within them, not by human purpose or whimsy. A neighborhood, community, region, or continent includes trees and grasses, insects and birds, mammals and reptiles, and microbes of all kinds, as well as the interactions between them. The political arenas of the human community can be drawn to honor these elemental realities.

Political processes in every human society incorporate some sort of "legal ordering:" basic agreements, rules to live by, and ways of establishing and enforcing them. This ordering need not be preoccupied with defending the life and property of the rich from the poor, desperate, and crazy. Rather, it has the creative function of giving form to all other processes. Without it, no sort of equity or justice can ever be real or concrete. Our current antagonisms toward legal ordering should be seen as reactions to the inferior quality of legal ordering we have been practicing.

The definition and restraint of locally defined criminal activity has taken place in every primitive society, and will take place in every future society. The real issues are about the quality, equity, and effectiveness of such restraints. Similar statements can be made about the common defense: every social unity must have some means of defending itself from destruction by outside forces, whether natural or human.

When we complete our transition from fascism to democracy and include within that democracy the voices of the natural world, of which humanity is a part, we will finally be addressing the deepest issues of legal ordering facing us today.

"Citizen commitment" is my term for a set of political activities that undergird the whole political arena. Even a fascist state exists by the consent of the governed. The power of citizen commitment to change the current form of political process through legal ordering has recently been demonstrated by the people of Eastern Europe and the Soviet Union. Citizen commitment takes social form as constitutions, bills of rights, voting or consensus building, information networks (especially about issues and pending decisions), and other ways to become competent thinkers and innovators for the common destiny.

Cultural processes

The lower triangle addresses cultural processes. These include all methods, associations, and institutions necessary for maintaining a social group's sense of commonality.

"Common sense" refers to the wisdom, knowledge, and skills shared in a society. Common sense changes: it has recently been common sense to imagine an economic ladder with billionaires at the top. But there haven't always been billionaires in human society and we may want to eliminate them in our next society. The economic ladder could also be taken down and discarded through our common sense.

Another place our common sense values are shifting is in the view of the cosmos held by the empirical sciences. Both pre- and post-Newtonian science held that the cosmos was like a great big clock. They believed that if we discovered its laws of motion we would be able to relate to it more helpfully, while both escaping its terrors and accessing its potential benefits. They also imagined this cosmos as infinite space in all directions, believing the structure of space was unaffected by the passage of time. In the last few decades, empirical science has adopted a new cosmology that is fast becoming common sense. Space is now seen as finite, and as expanding through time. The "big bang" is now believed to have started the expansion of space and sent time on a one-way trip, in which each era is unlike the last and never repeated. In such a view, each moment of natural and human history is an unfolding of potentialities that could not have been realized earlier. The cosmos is no longer a clock, but an unfolding process determined by overwhelming forces and yet, in some measure, undetermined and open to choice. Human beings are no longer mere observers of the action of the clock, but participants in a drama that must still be written.

Similarly, every human society also has social processes I call "common style." For example, we have common styles of being men or women—both currently in profound transition. Not only the social roles, but patterns of dress, behavior, customs, identity—all are style elements and all are changing.

The new styles of relationship between women and men are only just becoming clarified. Newly evolving styles also include new roles for children and elders, new modes of association, of group life, of consensus building, of celebration, of moralities, customs, etiquettes, relations between races, classes, religious groups, and so on.

The social process I call "common symbolization" completes this part of the model. Every society has its language(s), arts, and religion(s), just as it has its economics. Common symbolization includes all the languages, arts, and religions that give social form to deeper levels of human consciousness.

Religion, in particular, is a crucial part of the transformation of cultural processes. It is the symbolization of spirit. In the broadest sense, religion includes any use of myth, ritual, or icon that gives form to spirit.

Spirit is the magic, freedom, courage, compassion, and energy to sustain motivation. A wholesome society would be an expression rather than a suppression of spirit. Indeed, "authentic spirit" is at the very core of an authentic vanguard consciousness. Above all else, the new society is an outgrowth of the authentic spirit bubbling up in this hour of our story.

In order to begin to picture the transformation of the symbolization of spirit, we must first of all be very clear that religion is a social process and not spirit itself. Spirit is a natural part of our lives, not a social invention. As an Oriental sage put it, religion is the finger that points to the moon. Is there a way to picture spirit as an aspect of reality that is not part of human society but something in harmony with it, a part of some larger whole of which human society is also a part?

This circular diagram [Figure 2] helps me picture some

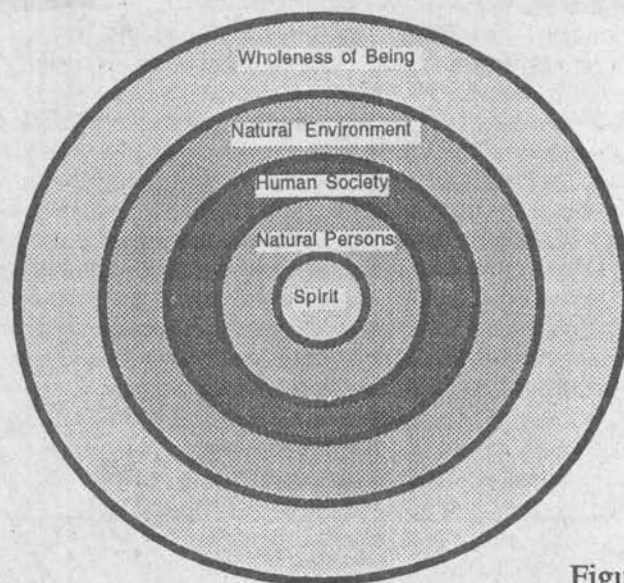


Figure 2

answers to these questions. *Spirit* is represented by the inner circle. It is found deep within the natural wholeness of the *human individual*, symbolized by the next circle. Human individuals, as natural beings, make up *society*, the third ring. Human society is part of nature, in the sense that human beings naturally create some sort of economic, political, and cultural processes. But society is also a product of reasons and regulations laid down on top of nature. Human society, both natural and unnatural, is surrounded by the fourth ring, which represents *nature* beyond humanity—the birds, trees, animals, Earth, and cosmos. The fifth ring represents that *mysterious wholeness* which interconnects all things and might be called the source of all the other rings.

Getting There From Here

When inclusive social change is proposed, we naturally think first about how existing governmental and economic institutions can align themselves with such transformation. Actions through corporate board rooms and the electoral system, through lobbying, courts, and citizen initiatives are worthwhile, but they will not be enough to effect the profound transformation being discussed here. The existing institutions are a big part of the problem. They came into being to empower and sustain the very forces that must now be defeated. In any political campaign, the multi-national corporations alone are able to outspend populist efforts 100 to 1.

Nor will it be enough to add a creative array of non-violent protests to these democratic political processes. Non-violent actions may be effective where democratic politics cannot be, but non-violent actions alone cannot effect the powerful changes we are seeking. Military action has been a traditional means of social change. It is sometimes effective, sometimes necessary. The Haitian situation certainly needed to be addressed militarily so that the generals defending the rich and opposing genuine democracy could be thoroughly disempowered. Yet military action can have only a very limited role in a world where all-out warfare is untenable.

Appropriate military action, non-violent protest, and democratic politics will not be enough, even together. Only cultural transformation that includes institutional innovation, managed consistently and on a massive scale, can create the momentum for carrying society over the threshold to a viable human presence upon the planet.

Cultural transformation means fundamental change in educational, informational, and celebrational social functions: in the minds, hearts, and spiritual sensibilities of most people. It means vanguard consciousness on every urban street and rural pathway, on every continent of this planet. Transformation will be carried by the grass-roots, not otherwise. Therefore, the primary transformative strategy is the awakening of authenticity and motivation in the grass-roots.

Of course, leadership and creative options will have to be available so that people have a sense of guidance and confidence, but these will need to be free of intellectual browbeating and charismatic manipulation. How leadership roles can be carried out in the transformational society are exactly what the vanguard are most focused upon.

By institutional innovation, I mean giving social form to the vanguard consciousness with new cultural, economic, political, and spiritual institutions. Only by giving effective and satisfying social form to our awakening consciousness will we build up the economic and political power to tilt the balance from ecocide toward a viable human presence on Earth. Innovative schools, neighborhood and regional councils, health care centers, local trading systems, worker-owned-and-controlled factories, organic farms and gardens, marketing cooperatives, buying clubs—sooner or later these forms will all be called upon by awakening humanity.

Both cultural transformation and institutional innovation presuppose a focus on local empowerment. If we are going to work seriously toward decentralizing political and economic power, we will need to build a new society from the grassroots out. Local communities have been disempowered to an astonishing degree, even by nineteenth-century standards, while the only fully organized social powers in the world are nations, international agencies (including religious), and multi-national corporations.

Twelve Steps to Local Empowerment

The twelve steps in the recovery of local power cover vast topics that need to be explored extensively. At the moment, my intent is to create a summary of a realistic vision of hope for the future. I am confident that it is possible for us to recover our social balance through these steps.

The Cultural Stage

Step 1. Define your local neighborhood, community, and region in relation to your biome, continent, and planet.

This is a step that each awakened person can take without help from anyone else. Simply sit down with some maps and a pencil and determine where you live. Draw the boundaries of your neighborhood, community, region, biome, and continent. Do this quickly, roughly, in terms of what you know about your watersheds, geographical features, native plants and animals, and all other features that comprise your life-regions. Ignore county, state, and national boundaries. Think only of natural communities including human beings but not comprised of humans only.

As you learn more about your neighborhood, region, and continent, you can improve your maps. Meeting with other awake people who are also redefining where they live, you can compare maps and further improve your sense of where you live. Eventually, groups of awake people will be in agreement about where they live and work. Believe it or not, this mapping is the primary step in "local empowerment."

Step 2. Create a local empowerment vanguard in your region.

The neighborhood will usually be too small an area from which to draw a group of colleagues. A region (or bioregion) of at least 10,000 (e.g. 100 x 100) square miles is likely to have many rooms full of awake and potentially awake folk. Gather

together some of these people. You cannot do local empowerment work by yourself. Just make sure your meetings are spirited events. Let them nurture the magic, the authenticity, and the skills at the heart of the social recovery movement.

Step 3. Create a research and training cooperative in your region.

The vanguard needs its own agents focused on the future course of human history. Every region needs its own research and training center focused on that region's particular realities. Effective centers can also be focused on training and awakening the local empowerment forces of the region.

We have to support these projects financially, as well. We have to do the research ourselves or hire qualified people. We have to teach each other or hire effective teachers to teach our communities what we need to know to complete the twelve steps successfully.

Step 4. Claim your culture-building power as a vanguard group and as neighborhoods and communities.

Cultural transformation of real people in real, local neighborhoods and communities, is the momentum builder for all the other work. A band of disciplined, awake people have the power to initiate this. They need to be inventive and willing to take risks, and they need to have spiritual depth and maturity. Home-grown theater, study groups, community celebrations, workshops, women's and men's circles, couples' clubs, nature walks, parades, dances, music festivals, centers for the arts and education—anything that enables ordinary "salt of the earth" people to take the next step in awareness, in being authentic, in doing that which creates a new and appropriate human presence on the planet, must consistently be made available.

Numerous writers and thinkers have said the spiritual awakening of individuals, not groups, is the key to social transformation. They're right, but only if these transformed individuals take up the task of awakening others in the grass-roots communities. Only when they set out to build the new social forms that embody a down-to-Earth spirit communicable to everyone, will significant social transformation be possible.

The Economic Stage

Step 5. Recognize and support existing local, sustainable businesses.

People are already engaged at local levels in ongoing economic activity useful for the future. Some have dropped out of the corporate maelstrom and are putting together a living in a humanly useful and ecologically sane fashion. These efforts can be identified and supported. (Anyone already supporting themselves in this way should be seen as an ally, not a competitor.)

Many local businesses may have ambiguous values, yet are important places to start which can improve over time, evolving into interconnected entities that will be needed in the next era.

Step 6. Create worker-owned-and-operated cooperatives of sustainable quality.

A somewhat more difficult step is assembling a group of people who want to make their livelihoods and their social contributions through fully democratic and ecologically sound economic forms. Roy Morrison, in his book, *We Build The Road As We Travel*, documents the creation of effective cooperative businesses in Spain. The principles applied there can be applied anywhere. Morrison spells out both theory and practice for worker-owned-and-controlled cooperatives and explains how they can be an effective and thorough replacement for communist and capitalist economics.

The importance of enabling increasing numbers of people to

drop out of the corporate system and drop into a wholesome and future-oriented way of sustaining themselves, while building local economic power, cannot be overemphasized.

Step 7. Create local buying cooperatives and trading associations.

Another way to assemble local economic power and cut merchandisers' excessive profit-making is to create consumer-serving cooperatives that provide modestly priced, quality products, of limited variety, that are focused on members' needs. Combined with worker-owned-and-operated cooperatives, such reductions in the cost of living amount to salary increases and makes the local businesses more competitive with corporations.

However it is done, saving money and controlling the quality of basic items like food, clothing, and shelter is life-enhancing as well as empowering to the forces of positive transformation.

Step 8. Create regional fiscal institutions that support sustainable, local economic empowerment.

If a local community or region can circulate its money (or its exchanges) many times before buying outside itself, its wealth will increase. The extent to which state and national fiscal institutions drain wealth from local communities would scandalize people if they knew. Capital is almost never invested in enriching poor neighborhoods; it is usually invested in order to take the money out of those neighborhoods.

Interest-free banks that invest in local community enrichment already exist, as do banks owned by groups of worker cooperatives. Local exchange systems (such as barter, computerized money, and local scrip) are other examples of enormously empowering fiscal institutions that can and are being established locally.

The Political Stage

Step 9. Claim empowerment for county governments.

Although counties do not exactly conform to the life-regions we want to identify and embrace, local county governments can be used to begin moving political power away from state and national agencies. Anything that can be done at the county level should be done at the county level.

It is not very difficult for a dedicated vanguard to elect some of their number to county commissions. It is more difficult to figure out what to do with the county government once it is in your hands! Most county governments are so circumscribed by state laws they can barely move at all, but spaces do exist between the rules.

Step 10. Create a county governments' association in your region.

The first overt step toward the political empowerment of a life-region or bioregion might be envisioned as follows: A local bio-region (perhaps a group of 12 or 15 counties) achieves local empowerment as described in Step 9 in, say, 60 to 80 percent of its counties. The empowered county governments decide to convene a preliminary embodiment of bioregional governance. (Yes, folks, this can happen in our lifetimes!) Such a locally empowered bioregion could easily become a political force by collectively adopting programs appropriate to their entire region and then carrying them out individually, to the extent politically feasible, in each locality.

Step 11. Begin steps toward full democracy: neighborhood assemblies, community councils, and regional councils.

The completed patterns of a full democracy appropriate for the next era will replace county governments, too, in my view. I imagine neighborhood assemblies of about 500 people representing the microbes and other life forms in the area, as well as the soils, rocks,

atmosphere, and all else that makes up a local living environment. These assemblies are the basic unit of a full democracy.

Issues involving the governance of wider areas can be handled by special councils. For example, in a larger community of some 5,000 to 10,000 humans, each neighborhood assembly would send delegates to the community council. Each community council would then select delegates for a regional council. Perhaps each neighborhood would also send delegates to the regional council.

The task of council delegates would be to represent the needs of their neighborhoods or communities. They would not be making deals with multi-national corporations! Making a system like this work, however, depends on proper, effective training of the citizenry, as described in Steps 3 and 4. Training the ordinary citizen in local responsibility is one of the most important aspects of the creation of a viable future human presence on the Earth. In fact, turning our lives over to experts (and wealthy egoists) has been at the core of our problem in too many cases.

A new citizenry and its democratic structures will not be created overnight, but if we wish we can make these far-reaching changes in decades, rather than centuries.

Step 12. Create your regional constitution and demand appropriate recognition by the wider social arenas.

To complete the transformative process of social recovery, the neighborhood assemblies and community and regional councils must be in full operation. They will then have gathered considerable political power, and the state and national governments will have no other option but to yield a place to these powerful local confederations. Regional bodies, in assuming power, can also empower continental and sub-continental bodies to carry out necessary inter-regional functions.

In order for these roles to be clear and apparent, each region will have to create its own constitution, declaring its role in the wider social scope, and asking other regions and continental and planetary organs to recognize its intention to be a politically active force in the future of the planet. Although this is a far more complex process than I can describe here, the feasibility of full regional governance is completely realistic and plannable.

These twelve steps for local social empowerment are meant to communicate a vision of hope to small, struggling groups of vanguard individuals who are just beginning to consider their potential roles in the process. In light of the immense power held by multi-national corporations in collusion with state and national governments, it is easy to feel weak and small. However, these great dinosaurs of industrial civilization are short-lived compared to the local groups that will survive them, just as the mouse-like mammals that evolved over the millenia replaced the great lumbering dinosaurs that once seemed so omnipotent. Δ

Along with his wife, Joyce, Gene Marshall publishes Realistic Living, a journal of bioregional ethics. Subscriptions are \$15/yr from Rt. 3, Box 104-A5, Bonham, TX 75418.

Patterns of Settlement

Independent Regions

"Metropolitan regions will not come to balance until each one is small and autonomous enough to be an independent sphere of culture."

Building Community in the City: A Visit with the Los Angeles Eco-Village

Rachel Freifelder

On a sunny afternoon at the intersection of White House Place and Bimini Place, Mary Maverick and Lois Arkin are sitting on Lois' front porch stripping leaves off branches for compost. Six-year-old Jonathan Choi wants to help.

The branches came from the locust tree around the corner. As Lois was bicycling home from errands that morning, she noticed that Jeff—who owns the teriyaki cafe—was “trimming” the tree. He had topped it off by about 6 feet and removed all the lower branches. The shade the tree had provided was lost and it looked awful! Jeff's neighbor, George, livid, accused him of “murdering” the tree.

Lois explained to the cafe owner that the neighbors depended on the trees for oxygen, and that in the future, if he would come to discuss his trimming needs with Eco-Villagers, they would trim the tree for him and use the branches and leaves to make new earth. Neighbors might then grow organic lettuce, tomatoes and onions, which they would sell him very cheap for his business. And perhaps, she added, “In exchange, if we brought some veggie burgers over when you aren't too busy, you could grill them teriyaki style for us?” The cafe owner smiled and agreed to bag up the branches.

Mary and I walked over to get the bundles, stopping to chat and commiserate with George. The tree was decimated, but its sweet-smelling leguminous leaves and pods would make a nitrogen-rich compost which urban soil desperately needs. And so the afternoon activity became the stripping of leaves, and conversations about the need for constant vigilance by Eco-Villagers, as well as how to involve nearby businesses in the growing culture of the neighborhood. Jeff had recently taken over the cafe business, and Eco-Villagers hadn't yet made a serious connection with him. The damage to the tree opened the dialogue and a deeper understanding of the potential connections between the cafe and the neighborhood.

Eco-Village activities are often as spontaneous as the cafe incident, and are by definition interconnected on many levels. Neighbors working together on a compost are building soil, but they are also building community, trust and security in a somewhat blighted neighborhood in inner city Los Angeles. The neighborhood gardens grow food for those who care to tend them, but also empower neighbors for whom growing food might have seemed like a specialist's task, teach children about ecological interactions, and demonstrate the possibilities of urban gardening in a small space. At the same time, the physical structures of these gardens challenge mainstream notions of what a garden looks like—minimal external inputs, curvilinear beds centered around fruit trees, no rows anywhere, edibles interplanted to showcase their beauty as well as maximize beneficial connections.

Eco-Villagers work to make the neighborhood healthier by optimizing positive connections within and between economic, social and physical systems. The linkages might be quite simple, such as composting kitchen scraps to improve garden soil, and interplanting garlic and broccoli to reduce pests on both.

Connections may be more complex, such as when children work together with adult mentors (social) to plant and care for fruit trees (ecological) which can be harvested for profit (economic). Bicycling is encouraged as an earth-friendly alternative to cars that provides good exercise, and opportunities for learning about the city and interacting socially with other bicyclists and neighbors along the way. A natural healing, self-help group and community-supervised playground, where children of many ethnic groups play together, further encourage a growing social web out of which more economic and ecological activity can evolve, based on a solid foundation of trust built from learning and playing together. For the neighborhood economy, there is a long list of visions for cottage industries which keep money circulating in the community and bring social and ecological benefits.



Junior Eco-Villagers Amber Johnson and Paola Ramirez play on front yard compost.

A QUICKIE OVERVIEW OF L.A. ECO-VILLAGE

The two block area near downtown L.A. is home to 500 people representing 13 ethnic groups in 172 units of rental housing. The neighborhood, which also contains a light industrial area, is adjacent to commercial and retail spaces and good public transit. The Eco-Village in process is a holistic approach to community development which works toward integrating ecological, economic and social systems for long term sustainability. Approximately 60 people, one-half of them youngsters, are involved in Eco-Village activities. There is a committed leadership group of five. The major thrust of its activities so far has been to build a sense of trust and community by working with neighbors on a number of small physical projects that regenerate soil, air, and water.

—RF

No detail is overlooked—I want to mend some of Lois' broken china and start to go off to buy some glue. "Wait," she says, "First see if any of the neighbors have any." Sure enough, Maria Vazquez has a tube of Krazy Glue to share—not the least toxic option, but likely to dry up and go to the landfill if only one household is using it. What's more, asking for it affords an opportunity to visit with Maria. After a few turns of the conversation, I've agreed to help her garden the next morning, and she will take me on a tour of East Los Angeles in the afternoon. A beneficial connection in the physical realm has created another in the social realm.

Community organizing in Eco-Village is often impromptu and organic. Just before my visit this spring, the neighborhood lost a 20-year-old fig tree and, during my visit, several more trees, including a peach. Some of the tenants living in the apartment building where the trees were cut had complained about the fruit dropping on the driveway. To the absentee building owner, the solution was simple: cut the trees down. This pointed out some needs in dramatic fashion: in general, Eco-Villagers want neighbors to have the option to think up creative solutions, and balance the costs and benefits of an action. For example, had the owner and tenants of that building discussed a full range of options with Eco-Villagers, they may have agreed that the fruit trees provided an opportunity for youngsters to start a fruit stand; several of the kids already had been looking forward to harvesting other neighborhood trees before the fruits hit the ground. More specifically, better communication was needed with both the landlord and the tenants, since the latter were not aware of the landlord's solution till the tree was cut.

Although several residents have expressed sorrow at the rash of tree cutting, none have conveyed those feelings to the landlord. For most neighbors in the two four-plexes, Korean is their only language, and there are no Korean adults actively involved with Eco-Village. To address this issue, Lois asked a colleague, Hee-Ju Kahng, a Korean architect interested in sustainable communities and working with multi-ethnic populations, to facilitate a neighborhood dialogue with these residents. With Hee-Ju's help, Eco-Villagers expect more positive interactions will lead to better communication, more actual involvement in Eco-Village activities, and empowerment to plan and carry out ecological activities on the east end of the block.

An important thread in this tapestry is that people are feeling empowered to improve their quality of life through simple, direct actions. Saturday brunches in the middle of the intersection of White House and Bimini Place force passing cars to slow down.

Says Lois, "We need more people in the streets, reclaiming them for the positive social purposes they were intended for." Asked if they have obtained permission from the city to take over the streets this way, Lois adds, "No one's complained yet, and it's easier to get forgiveness than permission, especially when you know what you're doing is in the public interest." Indeed, seemingly disgruntled drivers smiled upon realizing that the "barricade" was a friendly neighborhood group. Eco-Village kids are aware of the ecological implications of the street brunches, and make posters from recycled materials showing how cars affect air quality.

Several children have taken responsibility for stewarding fruit trees. Trees planted nearly three years ago are bearing fruit. At a recent Eco-Expo, seven-year-old Amber Johnson earned \$84 selling her loquats at five cents each. She is very proud. Jimmy Vazquez, 16, is writing a proposal for a community greening grant; it's a class assignment, but he may be the only student in

his tenth grade class whose proposal is likely to directly benefit his community. "We need them to make more connections between what they're learning in school and what they're doing here in the neighborhood. Often, the kids don't realize how much they know," says Mary.

As an urban project, Eco-Village has to contend with some problems that most permaculture farms or intentional communities can forget about. Occasionally vegetables get stolen from the unfenced gardens. The soil in gardens sloping away from the buildings may be contaminated with lead from the paint

An eco-village is a human scale, full-featured settlement in which human activities are harmlessly integrated into the natural world in a way that is supportive of healthy human development and can be successfully continued into the indefinite future.

—Robert Gilman, Context Institute

in the outside walls. From time to time, one must rinse off a white patina deposited from the air before cooking vegetables, and the rain is frequently acidic. Eco-Village gardeners persist, knowing organic produce grown in urban centers has proven to be more nutritious and less toxic than inorganic produce purchased in local supermarkets. Building a small terrace bed in the front yard of the Eco-Village Center, we found ourselves scrambling to find a few more shovels of soil. Solar access between the buildings requires strategic planting. Some mothers are still reluctant to let their children play outside because of drivers speeding down the street, and worse fears: three blocks away there is still significant gang activity. Maria has lived in the neighborhood 25 years, but until two years ago she didn't know any of her neighbors. "I just went from my car to my house to my car. I never went on the street, because I didn't know anybody."

That vicious cycle of isolation was broken when Lois began to talk with neighbors in early 1993. "First she came and looked at our fig tree, and said to my kids that when the figs were ripe maybe we could trade some for the vegetables from the garden she was working on. I wasn't used to this, but I said, 'okay'." From that point, involvement with the Eco-Village project came easily for Maria. "It's important for neighbors to know each other," she says now, adding, "It's fun, and we need to protect each other."

The trust that has developed is dramatic to one who has observed other L.A. neighborhoods. The day I arrived, my first thought was amazement that Eco-Village was only a block from Vermont Avenue, an ugly street with very heavy traffic. Yet as I rounded the corner and parked, three children greeted me, and more came rushing over. "Are you the person coming to see Lois?" asked Amber. A boy named Jose saw that I had a guitar, and before I could even go in and introduce myself, he wanted me to unload it and play a few songs. Rosie Vazquez, 11, asked me if I would give guitar lessons to her parents. In small town America, this might not be unusual, but near downtown Los Angeles it seemed miraculous, as does the fact that neighbors greet each other as they pass on the street.

To Maria, gardening is an important part of Eco-Village: for its health benefits, the enjoyment of connecting to the soil, and as an activity that brings neighbors together. She never gardened before this year, but was inspired by the example at the Eco-Village Center (which doubles as Lois' home). Now she is reaching out to neighbors who may have some memory of

kitchen gardens as part of their culture. Doña Isabel lives in the same building as Maria and speaks very little English. In her native Ecuador she gardened on fertile soil; here in the city she has a small row of corn next to Maria's garden, but is discouraged by its poor growth in the hard gray soil.

One day, she happened to come out when Maria and I were sifting compost, and asked what we were doing. Maria explained in Spanish, "You take your vegetable and fruit scraps from the kitchen, mix it with dry leaves and grass, put them in a pile and turn it over every month. After a few months you get this stuff. You mix it in the earth, and your plants grow better. It's free and you don't use any dangerous chemicals." Doña Isabel looked interested and commented on how beautiful Maria's plot is. Maria agreed to show her how to make compost.



Photos by Lois Arkin

Eco-Villagers and friends enjoy brunch in the street while slowing traffic down.

The origins of Eco-Village were as serendipitous as are the daily events. The Cooperative Resources and Services Project, which Lois founded 1980, had been planning a "Los Angeles Eco-Village" for several years, to be built from the ground up on a landfill some seven miles away. After the 1992 uprisings, CRSP decided to refocus its energies on its home neighborhood, which had been deeply affected by the riots.

The activities of Eco-Village and CRSP reach far beyond what happens on Bimini and White House Place. Several Eco-Village neighbors participate in the region-wide Los Angeles Local Exchange Trading System (LETS). CRSP board members and advisors have worked to include Eco-Village concepts in the City's Housing Element. They've also proposed a vision for a sustainable future and a set of guiding principles in the City's new General Plan Framework. Several are active in the City's Eco-Cities Council, co-founded by CRSP with the Eco-Home Network after their successful First Los Angeles Eco-Cities Conference a few years ago. The two organizations co-edited the book, *Sustainable Cities: Concepts and Strategies for Eco-City Development*, widely used in academic programs. Lois sits on the Advisory Committee for the Community Redevelopment Agency, and has introduced to it such concepts such as economically productive street trees, organic community and rooftop gardens, and privatization of public services to small neighborhood co-ops.

Eco-Village hosts a steady stream of prominent national and international visitors involved in sustainability issues. These visits are also used as occasions to create empowerment, as

neighbors are introduced to people who have come out of their way to see what is going on in their neighborhood.

Locally, networks of people and organizations sharing a vision of a sustainable Los Angeles have brought aid, attention, and perhaps most importantly, new neighbors to Eco-Village. Diana Sacks saw Eco-Village as a sane place to make a life within walking distance of her work. Mary learned of Eco-Village from the 1991 Eco-Expo and began volunteering, then moved here to be more active. Much of her time and energy go to the gardens, but it is the comprehensive nature of the project that drew her. Ian McIlvaine, an architect specializing in sustainable design and building retrofits, also moved here to be more involved, and similarly feels Eco-Village is unique among community development projects. Says Ian, "Many community development projects are doing wonderful things—each is working on an important piece of the picture. But Eco-Village is the one place where, little by little, all the pieces are coming together in a single neighborhood."

For more information on Los Angeles Eco-Village, contact: Lois Arkin, Cooperative Resources and Service Project/L.A. Eco-Village, 3551 White House Place, Los Angeles, CA 90004, (213) 738-1254, email: crsp@igc.apc.org. Δ

Rachel Freifelder is a graduate student at the Univ. of California at Davis, studying agricultural ecology and sustainable community development. She visited Eco-Village in May, 1995.

RESOURCES FOR ECO-VILLAGES

Communities Directory: A Guide to Cooperative Living, 1995, 440 pp, Fellowship for Intentional Community, \$21. Available from The Permaculture Activist, add 10% shipping.

Communities: Journal of Cooperative Living, \$18 for four issues, Fellowship for Intentional Community, Route 4, Box 169, Louisa, VA 23093.

Eco-Villages and Sustainable Communities, 1991, 213 pp, \$20. Order from Context Institute, P.O. Box 11470, Bainbridge Island, WA 98110, (206)842-0216.

Ecovillages, Tranet Pamphlet No. 24, 4 pp, \$2. Order from CRSP, 3551 White House Place, L.A., CA 90004.

Ecovillage Training Center at the Farm conducts a variety of workshops and seminars on a broad range of ecovillage topics. Contact ENNA, P.O. Box 90, 560 Farm Rd., Summertown, TN 38483-0090, (615) 964-4324.

In Context: A Journal of Hope, Sustainability, and Change, \$24 to In Context, POB 11470, Bainbridge Island, WA 98110.

UPCOMING EVENTS

Third International Eco-Cities Conference, Jan. 3-10, 1996, Yoff, Senegal. Contact Rakey Cole, Eco-Cities Conference, Anabel Taylor Hall, Cornell University, Ithaca, NY 14853.

Patterns of Settlement



Identifiable Neighborhood

"Help people to define the neighborhoods they live in, not more than 300 yards across, with no more than 400 or 500 inhabitants. In existing cities, encourage local groups to organize themselves to form such neighborhoods. Give (them) some degree of autonomy as far as taxes and land controls are concerned. Keep major roads outside these neighborhoods."

The Ecological Neighborhood

Creating the Sustainable Urban Community

Jim & Eileen Schenk

Imago, Inc., founded 17 years ago in Cincinnati, Ohio, is an ecological education organization. The mid-70s concerns around resource depletion and social justice brought together this membership organization of 500. Although we are about education, we have known ever since Imago was conceived that we wanted to *create* the future—not just write and talk about it.

After giving much thought to the eco-village concept, studying and dialoguing with individuals and groups in the process of building new communities with sustainable designs, we decided to focus our efforts in the urban environment. This is where most people on the planet live right now, as we enter the 21st century, so finding ways to live in urban settings that are more in balance with the rest of the natural world is critical.

Imago has taken on the challenge of creating sustainable culture in an urban district of about 40,000 humans. Price Hill, where we live and work, is one of Cincinnati's largest "neighborhoods." This city of some half a million has been divided into 51 such districts, each with a community council in a quasi-legal relationship to the city administration in regard to planning and the delivery of services. Historically, Price Hill has been 95% Catholic, conservative, and blue collar. Significant changes became visible here only in the 1970s, as new housing outside the city limits began attracting younger buyers and broke the tradition of commitment to the neighborhood of origin.

Beginning

In March, 1993, ten people gathered to launch the effort to make Price Hill "The Ecological Neighborhood" in Cincinnati. The following mission statement was developed:

"The Imago ecological group is committed to caring for the Earth and to working to develop Cincinnati's Price Hill as a sustainable ecological community. The Imago group seeks to promote earth-harmonizing activities as a joyous, magical, community-empowering experience. We envision Price Hill as a diverse, green neighborhood, a demonstration of what others can do where they live."

The Ecological Neighborhood, it seems, is a concept that appeals to many, and no one has yet laughed at or objected to this goal. The creation and preservation of significant green space (over half the neighborhood) is basic to our "asset planning and mapping" approach. Asset planning and mapping is a method of working toward the positive, whether talking about a family or community, by taking all strengths into account and then developing strategies to build on them. This sharply contrasts with the "disease model" that focuses on what is wrong. We also hold a deep commitment to the inalienable rights of non-human species and strive to uphold and balance this commitment in all our dealings with our human neighbors.

Early on we realized convincing people of the viability of the goal was the first step in the plan, so we talked, and talked, and talked to whomever would listen, not only our neighbors, but others throughout the city. We encouraged the local newspapers to cover our activities so that Price Hill's ecological image would become familiar. And we continue to promote this vision.



*Expanding the vision, building consensus:
Cincinnati mayor Roxanne Qualls talks with Eileen Schenk.*

Beyond persuasion, we needed knowledge of our urban landscape. We began an ecological survey of Price Hill by observing each lot on each street to determine the percentage of tree cover, diversity of plants and human-made cover (house, driveway, cement, garage) in the neighborhood. Through a series of computer analyses, we found that housing conditions are much better than we thought, although there is lack of tree cover in many front yards. Most of these aren't landscaped at all, but are simply covered with lawn grass and a few flowers, shrubs, or other decorative plants. The survey supplied information we needed in order to set our priorities, as well as a benchmark to compare how we are doing five years from now. It also got us in touch with our neighbors and helped spread the word.

We have developed an Outdoor Earth Lab on eight acres of green space. It provides an exciting place for children to learn how their lifestyles affect the planet. The project gave us the opportunity to talk to all ten schools in the area, both about the Lab itself and the concept of the ecological neighborhood. All offered to endorse the Earth Lab, and to be on its advisory board. Three high schools sent students to help clean up the site, and some 3500 children attended the Earth Lab programs during the 1994-95 school year. Helping the children learn alternative lifestyles that can lead to a sustainable future connects us to the ones with the most stake in it: those whose future is in jeopardy.

Price Hill's housing stock is older and its rehabilitation for energy efficiency is central to Imago's purpose. We decided to acquire and retrofit an older house as a demonstration. Energy conservation, efficient appliances, solar hot water, and alternative landscaping all became part of the remodeling project.

An increase in the number of street trees has been a continuing priority moving us toward The Ecological Neighborhood. Our efforts succeeded in making Price Hill one of the neighborhoods in which Urban Forestry concentrated its tree planting, adding 6000 trees to our streets.

Protection of wildlife areas has also been an ongoing concern. In addition to purchasing 15 acres of land, Imago organized a Western Wildlife Corridor Task Force (now Western Wildlife Corridor, Inc.). The goal of the Force is to protect the 20-mile wildlife corridor—continuous, except for the occasional road running through it—connecting Price Hill to the forests beyond the city, and providing habitat to fox, deer, coyote, and other animals. Only five minutes from downtown, we are actually graced with a great diversity of species sharing our community, and the welcome recognition of their presence is essential to us.



A survey showed many Price Hill houses lacked tree cover.

Challenged by the need for a spiritual underpinning to The Ecological Neighborhood, we helped form an eco-church to celebrate the sacredness of creation. Of 21 neighborhood churches we contacted, four came to a meeting with the eco-church. The first project of this group has been an energy audit of the church buildings, an activity that promises to be both ecologically and financially sound. While the diversity of the other churches in Price Hill makes organizing them difficult, their influence can be important, and so we continually take opportunities to communicate with them, including sending minutes of our meetings along with suggestions for ecological actions they can take themselves.

Landscaping that replaces lawns with trees, shrubs, and gardens is essential to avoid the groundwater, soil, and air pollution commonly created by maintaining lawns. The use of fertilizers, herbicides, and pesticides on lawns, along with the use of the lawn mower, causes more pollution than all of farming. To carry this message to Price Hill residents, we plan to have a Yard-and-Garden Fair next Spring to demonstrate alternatives to grass

"Decentralize city governments in a way that gives local control to communities of 5,000 to 10,000 persons. As nearly as possible use natural geographic and historical boundaries to mark these communities. Give each community the power to initiate, decide, and execute the affairs that concern it closely: land use, housing, maintenance, streets, parks, police, schooling, welfare, neighborhood services."

Community of 7,000

yards, including a tour of the gardens of Price Hill. We also write a bi-weekly article for the community newspaper on alternative yard care and other aspects of an ecological neighborhood.

Under a grant from the local gas and electric company to reduce energy consumption by Price Hill residents, we aim to lower electric usage by five percent and gas consumption by ten percent by emphasizing the economic and environmental benefits to the citizens of lowered energy consumption.

In the Planning Stage

The removal of commerce from neighborhoods to shopping centers has increased automobile traffic and pavement with their attendant costs in fossil fuel consumption, pollution, sprawl, accidents, distortion of local economies, and waste of human energy. In cooperation with the business community, we are planning a campaign to encourage people to shop in their own neighborhood: we will present the facts about the economic and ecological intelligence of supporting neighborhood businesses.



Photo credits IMAGO

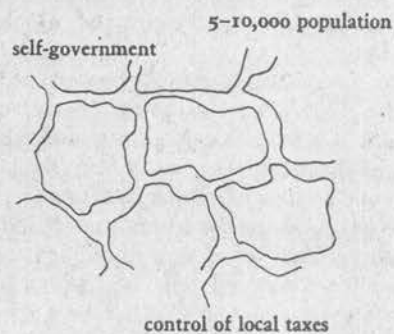
IMAGO worked with 3500 area school children last year.

We realize that any major upward change in Price Hill will bring about an upward movement of housing prices. We have begun discussing ways to retain an economically integrated neighborhood in the face of this probability with Santa Maria Community Center, the Urban Appalachian Council, and the Metropolitan Housing agency.

Other ideas for the neighborhood include: a no-car day; bike racks on the busses that stop here, bike trails connecting parks and green spaces, and an eco-restaurant. The possibilities are exciting...and endless.

Jim & Ellen Schenck are founding members of IMAGO and welcome comments at 553 Enright Ave., Cincinnati OH 45205.

Patterns of Settlement



Planting with MAGIC

Roberta Greenspan

Gardening is MAGIC! It's educational and therapeutic. Gardens stimulate the mind, calm the emotions, and enrich the spirit. They provide nutritious and tasty foods. On a deeper level, gardening is a permanent, self-empowering, and urgent solution to the problems of poverty and lack of community today.

MAGIC (Mountain Area Gardeners In Communities) is a 14-year-old, non-profit organization whose goals of alleviating hunger and malnutrition through increased food availability, nurturing environmental stewardship, encouraging personal empowerment, and promoting community, are achieved through cooperative, persistent, and successful gardening efforts. MAGIC is committed to urban gardening and food production as a means of creating a network of neighbors and neighborhoods across city, county, and region. Funding for MAGIC projects comes from grants, corporate support, individual memberships, church funds, and events.

We work towards our goals by locating underdeveloped resources in our neighborhoods and turning them into community assets: garbage-strewn lots become blossoming beds of flowers and food; children pour their excess energy into creating green space; and neighbors, previously strangers, come to share their labor, produce, minds, and lives with each other as they tend their little piece of the earth. Under MAGIC's guiding hand, these transformations occur again and again in public housing, city neighborhoods, homes for special populations, nursing homes, and our schools. MAGIC has over 30 garden sites in many diverse places: community gardens, public and private elementary schools, senior citizens' apartments, senior day programs, homeless shelters, public housing developments, nursing homes, youth shelters, and day programs for mentally retarded adults.

Lettuce Save the Salad Bar

The Asheville (NC) City Schools had decided early in the Spring to stop serving salad at all their schools because of the high price of California lettuce. Lettuce prices had tripled. California, Florida, or local school officials couldn't seem to offer any alternative greens or even ideas on how to stop the demise of the school salad bar!

Goodbye, lunchroom salads?

Enter "Garden Woman" (also known as Victoria Maddux). She seized this golden garden opportunity to prove a point, offer practical gardening lessons, and relate food to economy and self-sufficiency to 16 K-5 classes at Isaac Dickson Elementary School. "Garden Woman," Education Coordinator for MAGIC, happened to be at the right place at the right time, teaching the school's Spring Vegetable Garden classes which, by the way, correlate very well with the new state elementary school science curriculum.

"So I went and talked to the lunchroom manager," said Maddux. "I said, 'let's just grow it ourselves.'" Thanks to local nurseries, donated lettuce seedlings and seeds were planted in Spring garden beds. As of early May, the students had collected pounds and pounds of lettuce *just from the thinnings!* Children of all ages have learned the art of thinning lettuce plantings, harvesting, cleaning and spin-drying lettuce.

The lettuce is stored in the lunchroom refrigerator after it's cleaned and bagged. On salad bar days (Tuesdays and

Thursdays), it can be requested by the children (which it always is). The lettuce itself is served right at the tables in order to bypass Health Department regulations. Carrots, cucumbers, and dressings are stocked as usual at the salad bar.

The lettuce project is a lesson in food supply, distribution, and economics. The children have noted the continued high cost of supermarket lettuce. Self-sufficiency is being learned through experience. Working together towards common goals and for the good of all built a community camaraderie. There was a part for everyone in this project—from the kindergardener just learning to pick, to the special education student who loves to turn the compost pile; from the fifth grader publicizing the project with signs, to the supporting parents, gardening teachers, and cooperative lunchroom staff.

The whole school is "sprouting with pride." Parents ask if



The lettuce project is keeping Asheville school lunches green. there is any lettuce for sale. Children that no longer eat salad at home eat it at school. Lunchroom manager Bea Guthrie says it's a godsend to help her feed all the vegetarians at the school. The kids are growing six varieties of red and green lettuces, all nutritionally superior to iceberg, and—perhaps most importantly—grown without pesticides, traveling no further than 200 feet in five minutes' time, and eaten within hours or days of being picked.

How does it taste? "Last year's lettuce wasn't good," seven-year-old gardener Andrea Levesque said. And this year's crop? "It's the best lettuce I ever tasted!"

Grow-Yourself-A-Garden

(Another MAGIC project.) Sure, it sounds easy: grow a garden. But for many elderly, those without transportation or the ability to dig into typical North Carolina clay, it's only a passing thought. MAGIC began the Grow-Yourself-A-Garden (GYAG) program in 1992, helping families living in public Asheville and Hendersonville housing to grow their own food.

The recipe is simple: a framed, raised-bed garden, with quality compost and mushroom manure mixed with the native, mineral-rich soil; a watering can, hoe, organic fertilizer, and some instruction. The result: over 100 families with the potential to grow \$15,000 worth of food every year.

It's hard to quantify all the successes of such a program. Eighty-year-old Mildred Johnson, who hadn't gardened since her husband died 33 years ago, showed folks how to can nine quarts of beans and five quarts of tomatoes grown in a mere 32 square feet. She was often heard saying, "We're proud to death of our gardens." And Ben finally figured where all the cherry tomatoes

in his salad were disappearing—into the hands and mouth of his five-year-old daughter. Ben often remarked to his neighbors that, having grown up in the Bronx, he had no idea he could harvest 20 beans from one plant grown from one seed. Marty Thies, a MAGIC GYAG Coordinator, observed gardening as a catalyst for new family interactions and watched teenagers develop an intense interest in the vegetable patch. Neighbors began helping each other plant, offering tips and recipes, and watching each other's gardens in order to "keep up with the Joneses." In Marty's words, "When the earth was between our fingers, I watched the barriers fall."

Gardening is a Community Builder

The role that plants play in the development of healthy human communities is crucial. Research continues to prove that gardening and growing food nurtures contentment, empowers people, and helps build thriving communities.

Plants serve to revitalize individuals. According to University of Michigan psychologist Stephen Kaplan, studies prove that "Nature is a vital ingredient in healthy human functioning." Other documented studies show that simply looking at a plant can reduce stress, fear, and anger. Prison inmates in cells overlooking gardens were found to request and require less medical care.

Plants build happy communities. In a 1985 study of apartment dwellers, the most important factors in neighborhood satisfaction were "the availability of nearby trees, well landscaped grounds, and places for taking walks... Opportunities to grow plants... were significantly related to the sense of community." Research by Rutgers graduate student Jill Roper concluded that community gardens get people talking to each other both in and outside of the garden area and season.

In contrast to the term redlining, which describes imaginary

lines drawn by banks to determine low-income areas not eligible for loans, a graduate student named Bjornson at Northwestern University coined the term greenlining. In her studies she found that gardeners working together to save community garden and green space "gained access to public policy, economic resources, and social interaction." Once gardeners began to know the political process and local officials, they stayed active in protecting their community and asking for what they needed. Lastly, there have been a number of studies that showed very significant decreases in crime in highly populated, urban areas. A Philadelphia police officer noted crime had decreased from 40 to four incidents per month after she started a community garden in one of her assigned neighborhoods. On Dearborn Street in San Francisco, the crime rate dropped 28% after one year of gardening. Today crime is down 78%, now that a neighborhood watch group and the many people outdoors gardening have made the area unattractive to criminals.

MAGIC Finds a Home

A dream is coming true for MAGIC. We now have a piece of land to call our own! Our goals are to create teaching gardens, offer field trips, grow hold plants, and store tools and a truck there. Located in Asheville, the land will become home this year to the Youth Market Garden. This latest MAGIC project, in conjunction with the city's Public Housing and other Area Youth Programs, will work with children and teens to grow chemical-free produce. The harvest will be marketed back in their own neighborhoods at reasonable prices, and the youths will learn gardening and marketing skills while making new friends with their gardening peers, master gardener volunteers, and MAGIC friends. They will create their own community in the garden and extend it to all who purchase their produce.

MAGIC is looking for volunteers, plant, and seed donations, building materials, and your ideas! We really need a secure shed for storing tools and donated fertilizers, and an open canopy to provide shade during classes and strategy sessions. If you can help, please call us at (704) 251-5666, or write us at P. O. Box 168, Asheville, NC 28802. We are also offering *A Vegetable Garden Guide to North Carolina*, by Martin Thies, Ph.D. (\$4 plus \$1.50 postage), and *A Guide to Gardening in Schools* (write or call for pricing information). Δ

Roberta Greenspan is an avant garde fiddler, community organizer, and vibrant spirit, as well as a permaculturist, a gardening educator, and the Executive Director of MAGIC Community Gardens.



Photo credits MAGIC

Shared gardening and green space creates an active and cohesive community.

Patterns of Settlement



Living in the Garden

*"Besides dooryard, balcony, and rooftop gardens for each house or apartment, leave a fine-grained mix of housing and agricultural land, even in the city. Community gardens, parkways, boulevards, public greens, and transport corridors can all be 'farmed' so that a rich abundance of food is available everywhere people live" **

** from "A Pattern Language for Earthaven village settlement, 1995."*

Permaculture in the 'Hood

Sabrina Merlo

Last summer, at the Turtle Island Bioregional Gathering, Larry Patrick, a permaculture activist and teacher from Pennsylvania, explained how cities can benefit from a permaculture design perspective. He described how to look objectively at one's resources: observe and discover that even the cold, concrete face of a high rise building provides shade, or an often needed cooling environment. He helped me realize what could be accomplished by providing the city's huge numbers of unemployed people with meaningful work.

The San Francisco League of Urban Gardeners (SLUG) has been offering job training in landscape carpentry to under-employed or post-prison adults for the last six years. The construction crew has gone up and down in numbers over the years, depending on the project (mostly the crew builds community gardens). It is not a bureaucratized "job training program;" it's a job. People hear about it in the 'hood: a cousin tells someone about SLUG, so they come in and apply.



The SLUG adult crew learns sod installation.

A couple of times a year special projects come along, like the re-landscaping of a housing project, and the SLUG crew multiplies. In early 1994, SLUG started work on the 158 unit Alemany Housing Development. Approximately 550 people live at Alemany; the unemployment rate is 86 percent.

SLUG selected 15 men and women from the development to learn landscaping skills: irrigation installation, tree planting, how to build a retaining wall, how to get to work on time.... The community was consulted and defined the design. One year later, the site looks magnificent: lawns are green (because the irrigation works), kids play on jungle gyms, the community garden is jamming, trees are taking root. Vandalism has been amazingly sparse.

SLUG's involvement now focuses on the previously abandoned five-acre parcel of land adjacent to the development, re-named Alemany Farm. It is in the early stages of what SLUG

hopes will become a highly productive, demonstration urban farm that will produce rare chicken breeds, honey, massive amounts of tree collards and more. The site will remain undeveloped in some areas to allow restoration of rare inner-city native habitat and a seasonal creek.

Most of the workers at Alemany Farm are African American teens (there are 50 of them) who either live at Alemany or another, nearby housing development. Food grown at the Farm is distributed free to the teens' families and other residents. Several supervisors for the Youth Garden Internship Program are "graduates" from the original Alemany adult landscaping crew.



Alemany Farm teens planting perennials.

It's difficult to quantify or describe the dynamism of the transformation at Alemany. How rundown and neglected the place was. The drive-by shootings. How the freeway runs along the length of the entire development like Big Brother. How hard-core—armed, impoverished, and illiterate—most of the residents of these "projects" were and still are. And how many people call or come into the SLUG office every day for job applications. Nevertheless, greens and community are growing, and SLUG continues to expand. (SLUG now runs four ongoing job/urban greening programs employing people from the general Bayview/Hunter's Point neighborhood.) Additional self-sustaining income- and job-producers are playfully roaming the drawing board at SLUG, including a garden supply store, a landscape construction company, and a shop offering products produced at the Farm, all of which are mere vehicles in the mission to uncork a city's most untapped resource, human energy. Δ

Sabrina Merlo is Project Coordinator for Planet Drum Foundation's Green City Project, through which she brings bioregional awareness to SLUG, helping connect them to Northern California's sustainable foresters for lumber.

GREEN CITY DOIN'S

Green City Project does a lot of exactly the 'hood kind of "connecting," referring volunteers and information-seekers over the phone to 350+ Bay Area groups working on any and every aspect of urban sustainability. Urban gardeners. Bicycle advocates and bicycle commuters. Architects and city planners for sustainable design. Native habitat and creek restorers. Wildlife monitors and rescuers. Auto mechanics who retrofit cars to run on electricity. Community Supported Agriculture. Urban foresters. Profitable reuse and recycling businesses. You name it, the Bay Area's got it, and Green City can tell you how to get in touch with them.

Green City also publishes a Bay Area-wide bi-monthly Green City Calendar publicizing an astounding array of hands-on workdays (you've got to see it to believe it!), runs an outreach program to the schools offering in-class hands-on environmental education, and co-sponsors monthly workparties for curious and benevolent adult volunteers.

For more information on SLUG or Green City, write to: Sabrina Merlo, Planet Drum Foundation's Green City Project, P.O. Box 31251, San Francisco, CA 94131. Call: 415/285-6556. E-mail: planetdrum@igc.apc.org.

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CoHousing: Ending Social Isolation, Building Sustainable Neighborhoods

Z'ev Paiss

How often have you sat down at the end of a busy week, feeling exhausted and overwhelmed, and wondered where the time went? Why is the very act of living in today's world so draining? Why do we create lives so full of work, family, and errands that we rarely have time to enjoy our friends or the places we live?

Part of the reason for this seemingly endless and unfulfilling cycle is the way we design our communities to be isolating and almost completely car-dependent. Current zoning philosophies divide work, play, shopping, and learning centers into often distant portions of a community. The resulting design requires travel by car to satisfy most basic needs. (The automobile has been accurately described as "the most destructive agent of social disintegration, ecological contamination, waste of energy, urban sprawl, and even homicide," by Richard Register in his book, *EcoCity Berkeley: Building Cities for a Healthy Future.*)

Fortunately, there is another way...

The CoHousing Option

By incorporating CoHousing neighborhoods into community design, several of these problems can be reduced. CoHousing is a realistic attempt at reconstructing neighborhoods to recreate a sense of community, while restoring environmental sensitivity to the way we build homes and treat the land. These communities are resident-developed, cooperative neighborhoods in which individual households cluster around a common house of shared facilities such as dining, childcare, workshops, and laundry. Each home is self-sufficient, and has its own complete kitchen, but dinners are usually available in the common house for those who wish to participate. Because of the emphasis on creating safe areas for children of all ages, automobiles are often restricted to the outside of these developments.

Imagine the following: It's Friday night and you have just arrived home from work. The parking lot is about three-quarters full and several of the community kids are playing tag in and around the parked cars. As you get out of the car, several of the kids run up to you and pull you into their game. After a mad dash to the entry gate, they leave you to your adult ways and go back to playing among themselves. As you approach the common

house, several neighbors who have gathered on the large porch are chatting quietly. As usual, Mark is playing his guitar at the west end of the porch, his silhouette accented by the setting sun.

Inside the common house, you head for your mailbox, glancing at the announcement board by the entrance. Looks like there is going to be a dance after dinner with a western theme. (Got to remember to bring your spurs.) Mary Lou, Pete, and Mr. Wilson are in the kitchen preparing for dinner. Several children are setting the tables and Marissa is making centerpieces for the table from a bunch of freshly cut flowers.

You still have 45 minutes till dinner—time enough to get home and spend some pleasurable quiet time with your family before eating.



Spring plant sale at Nyland.

CoHousing has become one of the fastest growing concepts in community development because of several interconnecting issues which have reached a critical level for millions of Americans. In our increasingly busy lifestyles, large numbers of individuals and families are looking for relief from the multiple constraints of inappropriate housing designs, environmental degradation, and increasing isolation. By redefining the neighborhood concept to better address the structure of

contemporary lifestyles, CoHousing projects can create multi-generational communities for singles, families and the elderly. **The Need for New Housing Forms**

Traditional forms of housing no longer address the needs of many people. Dramatic demographic and economic changes have resulted in a mismatch between today's households and conventional housing. Suburban single-family housing developments were designed for a 1950's model family, with a bread-winning father and a full-time housewife. Despite the impression given by the mass media, this traditional family structure now comprises less than 20 percent of the total number of households. The combination of single adults, single parents, couples without children, and seniors, vastly outweighs the number of nuclear families. Modifications in housing and corresponding neighborhood design are needed to address these changes.

Financial constraints and increasing awareness of energy resource issues are encouraging homeowners to look for living options that reduce individual energy expense. Incorporating resource-efficient building techniques, passive solar designs, and shared common facilities, we can reduce the overall burden on limited resources used in construction of and day-to-day-living in our homes.

Creating Community

Community is a theme which many people notice is lacking in their lives. The dream of having their own house, yard, and two-car garage is beginning to be surrendered by those who realize the mounting inconvenience built into that model, and that interdependence is more desirable than independence.

Even though the original CoHousing model says nothing about energy efficiency and conservation in neighborhood design, most groups have a distinct bias towards these values. The overall concept encourages cooperation, sharing, and reduction in the duplication common in traditional neighborhoods. Growing awareness of options for reduced or non-toxic building materials is pushing the industry to create

designs and materials that address indoor air pollution. The Nyland CoHousing community in Lafayette, Colorado has incorporated several product lines that decrease inhabitants' exposure to the usual effects of indoor air pollution, including recycled carpets, non-toxic paints and wood finishes, sealed kitchen cabinets, and electronic air cleaners.

CoHousing and Permaculture

The very act of redesigning neighborhoods to support the development of social harmony and a wiser use of land, makes

CoHousing an integral part of a permaculture landscape. When we create neighborhoods that foster the use of a native, agricultural, and medicinal landscaping regime, we take a significant step toward creating living communities that move our society toward sustainability.

Many CoHousing groups around the country are looking at the possibility of transforming existing neighborhoods into CoHousing neighborhoods. By purchasing contiguous

homes, taking down backyard fences, and converting a home into a common house, this developmental model can begin to reverse the damage done by conventional suburban design. I look forward to the time when this kind of neighborhood is commonplace.

CoHousing is one of several emerging housing options that satisfy a growing need to adapt our living situations to the realities of a world of limited physical resources and increasing social isolation. While not an answer to all contemporary challenges, CoHousing plays a significant role in reducing the environmental and social strain of urban and suburban developments, while providing a realistic example of permanent culture for human settlements. Δ

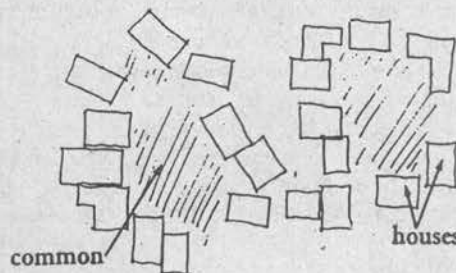
Zev Paiss has been a resident of the Nyland CoHousing Community in Lafayette, Colorado for the past two years. He is the Managing Editor of the CoHousing Journal, a quarterly publication devoted to the co-housing movement, and is a consultant to CoHousing groups around the country.



Nyland Community House

Patterns of Settlement

"People will not feel comfortable in their houses unless a group of houses forms a cluster, with the public land between them jointly owned by all the householders."



House Cluster

City Markets: Creating A Regional Identity

Mollie Curry

Pike Place Public Market in Seattle. A riot of color—cherries, lettuce, shimmering salmon—competes with the scent of fried food. Gulls cry and their wings loudly ruffle the air as they swoop in and out, scavenging their subsistence. The jostling of the crowd, as all shapes, sizes, colors, and persuasions mix, excites the spirit. People doing their weekly shopping, businessfolk looking for lunch, bicycle messengers from the docks listening to buskers of musical talent, great and small—all combine to create a fascinating scene. Tourists hardly know where to point their fingers and camcorders. That's the thing about public markets: they've got character. In fact, each one has its own unique character, which is what makes them all so fascinating. It is also part of what makes them work.

Unlike malls, no two markets are alike. Public markets—not to be confused with farmers' markets, which feature mainly fresh produce, or festival markets, which concentrate on up-scale clientele—public markets have a broad scope. Their guiding philosophy is to feature a wide variety of locally owned, usually owner-operated businesses. As a result, they meet diverse local needs and reflect local culture.

To succeed, a public market must be patronized by area residents intent on satisfying everyday needs and desires. Tourists supply no more than a third, and often less than a quarter, of the revenue of most thriving public markets. Fresh foods and restaurants usually occupy a large portion of space. Goods and services are geared for all income levels and supply a preponderance of daily use products and services such as those found in restaurants, produce stands, daycare centers, dry-cleaning marts, craft shops, hardware stores, clothing shops, furniture stores, newsstands, and bookstores. And the character of each shop is dictated by its owner, not a corporate headquarters seventeen hundred miles away.

In the last 40 years, increasing layers of middlemen and a concentrating of production by huge corporations has intensified the trend towards centralization of the economy. A profound separation of the producers and consumers dominates our commercial interactions. Owners are most often located outside of the community. They hire employees at low wages, who have a low level of control over the business, and a very low sense of ownership in it. Workers generally have a low level of product knowledge and very little incentive or opportunity to learn. Customer service suffers as a result, not to mention the sense of alienation and uselessness that many employees feel.

In contrast, local producers of food, crafts, and services have been taking their wares directly to the consumer for as long as cities have existed. While Americans have been occupied with malls, chain stores, and moving every industry possible out of the downtowns, "...public city markets have been chugging away... They are 6000 years young," says Aaron Zaretsky, former director of Pike Place.

Producer-based markets are good for the producer, the consumer, and the community as a whole. Many markets are great places to have a business: resources like copiers, computers, and the like are often shared. A diverse pool of customers can be reached, and where shops share walls and common areas with

other businesses, maintenance and utility costs can be significantly reduced.

Selling goods and services directly, instead of going through middlemen, producers reap a greater percentage of profit than they would otherwise. Consumers get good deals because they are dealing directly with the producer. Prices can be lower, food fresher, and the service better. Even when the seller does not directly make or grow the product, locally owned businesses can be more responsive to local needs and reflect the character of the region more clearly than another Taco Bell or Kroger. In addition, shopping at a market is certainly a more interesting experience than mall cruising or supermarket trolling.

Regular customers develop personal relationships with store owners and other people who visit the market. When farmers sell only their own produce, customers can tune in to the reality of the seasons, since market produce is usually very fresh and reflects the realities of the local environment rather than having been shipped from exotic locations all over the world.

Many public markets are wholly or mainly pedestrian in nature. Because they tend to thrive near population centers, people can walk, ride bikes or buses, or at least not have far to drive, and less driving means less pollution and less wasted fuel.

The pedestrian draw of markets produces a feeling of safety and security. They attract people to live near them, which reduces crime because residents tend to look out for their neighborhoods. "The bottom line is that we've spent the last 30 years focused on creating industrial development in suburban sites by using public funds to subsidize private gain," says Zaretsky. Governments, hoping to create more jobs and a bigger tax base, have been eager to abandon downtowns in favor of the development of suburban malls, industrial parks, and office parks. Besides extending substantial tax breaks to entice big projects to their region, local governments have further facilitated this kind of development through infrastructure subsidies in the form of extending sewer lines, waterlines, roads, and other public utilities.

In contrast to the infrastructure-poor outlying areas, city centers "...are designed to handle industry. We've created the problems of inner city decay and crime through these very policies [of infrastructural subsidy] when we could have been subsidizing city center development instead." Zaretsky says the fact that big business has been, and will continue to, move overseas is not the issue. "They are not the job-makers," he says.

As evidenced by U. S. Small Business Association (SBA) figures, it's the comparatively tiny businesses that are providing most of the jobs. All but the smallest (under five employees) and biggest firms (over 500 employees) are experiencing a net decrease in job creation. The largest firms are creating less than five percent of the jobs that the smallest businesses are (1.2 million vs. 26.2 million from 1989-'91).

Public markets can create jobs in the center cities to replace the ones exiled to the outskirts and other countries. As evidenced by the examples of Pike Place and the market in Roanoke Virginia, they stimulate the economy.

Pike Place in Seattle is perhaps the most widely recognized and successful public market in the country. Over a million

people per year visit it. Over 98 percent of the people living within a 30-mile radius visit it at least once a year, and many of them are regulars. In the 1960's the city wanted to tear down the old disintegrating market building (operating since the early 1900's) and sell it for private development of high-rise condominiums, or other such projects. With its prime waterfront location, they probably would have had little trouble doing that, but for a group called Friends of the Market that was determined to save and revitalize the place.

They were up against the powers that be. The city, the chamber of commerce, and both newspapers were publicly against saving Pike Place Public Market. The Friends took to the streets and managed to get enough signatures on a petition to get the issue onto the ballot as a public initiative (common in Washington State). When the votes came in, the market won hands down. The mayor came out the next day in firm support of the plan, reversing his earlier stand.

Now, where the market was languishing before, it is obviously thriving. One reason for that success is that where there were no housing units, 1500 were included in the revitalization plan: one-third low income housing, one-third mid-range, and one-third high-end in the market district.

Seattle's a big place, but public markets thrive in smaller cities and are even possible in some rural areas. In the 1980's, the modest mountain city of Roanoke Virginia, population 55,000, had abandoned its downtown to drugs and crime. It was a dangerous place after dark.

The city, with lots of support from the community at large, decided to start a public market. One million people a year now visit the market, and the downtown has come alive. The Roanoke Hotel, a historic Victorian-style building which was empty for 20 years is now fixed and booked up. Further development, such as a newly built 24-story First Union Bank office building, has moved into the area now that it has a secure feeling. First Union representatives have even commented that they never would have chosen Roanoke to move to if it hadn't been for the positive influence of the public market.

Resurrecting a Public Market in Asheville NC

With any luck, Asheville, North Carolina, similar in many ways to Roanoke, will soon get its own public market. The Grove Arcade Public Market Foundation (GAPMF), a private non-profit directed by Zaretsky, has spent the last three years pitching the idea to the community. Support is high from individuals, potential tenants, various levels of government, and business organizations. It hasn't all come together yet, and its not guaranteed, but things look promising.

The building, known as the Grove Arcade, was designed as one of the country's first indoor markets. Built by E. W. Grove, the wealthy builder of the renowned Grove Park Hotel, and opened in 1929, its original function was as "a gathering place for consumers." The architecture is spectacular. Gargoyles, grotesques, and noble faces peer from the walls. Ornate single and double hearts, grapevines, and fanciful figures carved in stone abound. Two solemn stone griffins guard the ramps that lead to the open roof.

Shop spaces (currently bricked over where the plate glass once was and may be again) line all four sides of the three-story rectangular building. The inside is doubly bisected, the main promenades having interior facing shops and soaring up through three stories to the glassed-in roof. Spiral staircases lead from one floor to the next. It was an active market and office building before the federal government requisitioned it for its own use

during World War II, and, now that they have moved into a new building...

The current vision is of a renovated building thriving with a variety of locally owned and operated shops, their mission to offer diversity and meet local needs of a variety of income groups, neither allowing chain stores nor catering to the up-scale buyer. The record of public markets in doing this is excellent. Whereas malls' annual gross sales are growing at 2 to 3 percent a year, public markets are growing at 8 to 14 percent. Ideas for the Grove Arcade Public Market include putting an ice-skating rink on the roof, along with a fancy dinner/dance joint that could also host concerts. A small orchestra pit already exists above one of the wings of the roof! The expansive roof, with its sweeping views of the city and the surrounding mountains, could also support a daycare center, safe from the threat of traffic, and a sculpture garden.

Survey results show public support for market

Ninety-eight percent of (Buncombe) county residents and 95 percent of area business owners support the formation of a public market at the Grove Arcade. One in five consumers said they would be more likely to live in downtown Asheville if the market were established.

Over 175 separate businesses have expressed interest in the 60 to 75 potential Grove Arcade shopfronts. Nearly 100 of those would be new businesses, while 75 would be second locations for existing shops. The planned rents at the arcade would not undercut existing locations. However, some of the shop sizes would be small enough for individual craftspeople and other micro-businesses to afford.

GAPMF projects that a public market in the Grove Arcade could generate annual sales of \$14 million and create 300 to 450 jobs in construction and retail by the year 2000. Quoted last year in the Asheville *Citizen-Times*, Zaretsky noted that "...the public market is designed to create new jobs and opportunities, not move around existing pieces of the puzzle. As a matter of policy, we are not interested in people shutting down to move into the arcade."

The Grove building also houses substantial office space that the city, county, state, or a private entity could lease. (In the current plan, the market would occupy only the ground floor—about half of the building. A concentration of offices right downtown would also undoubtedly benefit many existing businesses.

Returning the Grove Arcade to its original use as shops and offices has not been easy. Just because the building's highest use seems obvious does not necessarily mean it will be used that way. There are a lot of entities to convince—local, county, state, and national governments, the business community, local citizens, and private foundations. The Grove Arcade Foundation is committed to raising \$5.2 million for renovations. So far, public and private sources have pledged over half that amount (\$3 million from government sources and \$400,000 from private). There's no guarantee people will contribute the rest, and if they don't, the building could become a homeless shelter, halfway house, or just be left to rot, even though it is on the National Register of Historic Places. (*Since this writing, an additional \$1 million has been pledged by local benefactor Julian Price, bringing the project within spittin' distance of launching — Ed.*)

GAPMF has produced lots of publicity, a survey on local support, and lobbied and raised funds from a multitude of available sources, coordinating the ideas of many into a cohesive, attractive vision. Dealing with the local and national political quirks and realities, has been a tightrope balancing act.

Public markets don't work everywhere, nor are they the solution to every problem. They work best in places with a strong agricultural and crafts base near at hand, in communities that aren't too homogeneous (so that they have something of interest to offer over chain stores), and in locations not clearly the "turf" of either the rich or the poor. A location on the edge between established neighborhoods, is usually best. Public markets also do best where there are problems to solve: "Qualities that traditional real estate developers consider problems—adversity, diversity, proximity to "bad" neighborhoods—are the things that make markets work. There has to be a need for them. If there's no unemployment and everything is fine, it's not a great place for a public market," according to Zaretsky.

In general, rehabilitating and restoring an existing historical building, if available, is preferable to building anew. Historical buildings set the stage for the right atmosphere to develop. (Of course, the practical logistics of shipping and receiving, parking, structural integrity, etc., must be taken into account.) However, for a market to get started and succeed, perhaps what it most needs is strong community support. If the people don't want it, or cannot form a relatively cohesive vision of what they want, then it may not be the right time or place for a public market.

Proponents of a new public market need to realize that getting it going will take a lot of hard work. It may take years, so people must be prepared for the long haul. Getting such a project off the ground requires complex real estate, financial, and political dealings. Get professional help from the appropriate, knowledgeable parties. An idea of sources for the necessary development money is important. Many private foundations and government programs (especially matching funds) are

possibilities for such an undertaking. In fact, the U. S. Department of Agriculture formed a "Wholesale and Specialty Market Development" branch which focuses on farmers' and public markets, and may offer useful assistance.

To focus promotional efforts there needs to be a lead organization for the development of the project. Some entity—the County Board of Commissioners, a non-profit group, the local chamber of commerce, the city government—needs to carry the charge. In addition, an operating entity must be created with a combination of qualities going for it: business sense, accountability (just like elected government), and commitment to public service. Build into the plans the capacity to encourage and support small business development. Without this capacity to help small businesses get started, the market may be slow to reach tenant capacity, which could spell its downfall.

Markets create a heart, a gathering place for all kinds of folks. They foster a sense of community, their pedestrian nature encourages a feeling of safety, and people want to live nearby so they can walk to an exciting, lively place, throbbing with upbeat energy. It's common turf, owned and shared by everybody.

The number of public markets that focus on local businesses and reflect the needs and characteristics of the local community is growing nationwide. A definite surge in popularity is taking place, as people realize the value to the community and local economy. As more markets spring up all over, local economies will grow stronger, combating the trend towards the dominance of multi-national corporations without roots or regard for the needs of real people.

Mollie Curry is a staff writer for The Permaculture Activist.



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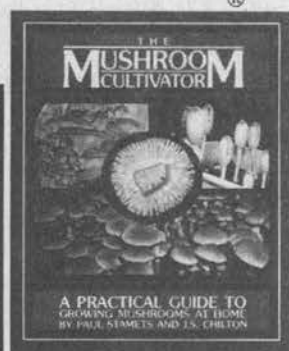
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Rails to Trails: A Case Study for Roanoke Rapids, NC

Mary Woltz

Like some of you, perhaps, I was unfamiliar with the concept of rail-trails when my landscape architecture professor first informed our class we'd been engaged by the Roanoke Valley (No. Carolina) Chamber of Commerce to conduct a design study for them. The Roanoke Valley Trail Project (RVTP) was an appropriate conclusion to a semester that had focused on landscape description (analyses and synthesis of natural/cultural/experiential factors). It proved to be a compelling topic for me as a permaculturist, since rail-trails illustrate many permaculture principles.

Rail-trails result from the conversion of abandoned rail corridors into trails for recreation, transportation, and the preservation of open space. They are also an effective strategy for preserving the possibility of future rail or transit service. Approximately 160,000 miles of abandoned rail corridors are scattered over the U. S. In 1983, Congress amended the National Trail System Act to allow for "railbanking" of about-to-be abandoned lines by trail managing agencies. Three years later, the Rails-to-Trails Conservancy was formed to focus on protection of this legislation. Their influence as national advocates, as well as direct project assistants, has been felt at all levels: between 1987 and 1992, the number of rail-trails increased from 90 to 514, amounting to 6,230 miles of trails serving more than 75 million annual users. Rail-trails have also benefited from the Intermodal Surface Transportation Efficiency Act (ISTEA), passed in 1991, which encourages state Departments of Transportation (DOTs) to spend a portion of their federal transportation dollars on non-highway transportation activities, including rail-trails.

In hopes of attracting some of these ISTEA funds, the Roanoke Valley Chamber of Commerce approached North Carolina Rail-Trails (NCRT) and the NCSU School of Design to conduct the aforementioned design study. The topic of the study was a 32-mile corridor in Warren and Halifax counties that roughly parallels highway 158, between Norlina and Roanoke Rapids. Our class efforts were focused on Roanoke Rapids, population 16,000, and an 8-mile section of trail west to the towns of Thelma and Summit.

Roanoke Rapids is located west of I-95, just south of the Virginia state line. It lies on the fall line between the Piedmont and the Coastal Plain. Local industry includes a paper mill, a textile manufacturer, and a hydroelectric power plant fed by a large reservoir, commonly known as Roanoke Rapids Lake. The trail project was proposed because of it promised social, economic, and recreational opportunities for area residents.

Our initial task was extensive biophysical and socio-cultural

analysis and synthesis to identify potential benefits and constraints. We conducted surveys and interviews, sponsored community design workshops, and visited the proposed trail and other existing rail-trails to conduct field research.

A sense of scale

After this first phase of gathering information, the class divided into smaller groups that could study the proposed trail at different scales and generate master plans for recreation and conservation. Some of us worked at the 32-mile regional scale, and others focused on the 8-mile stretch between Roanoke Rapids and Summit. I joined the conservation side of the latter group and, although my permaculture background probably influenced that choice, it was interesting to note that all of us in the conservation group had experienced the trail on foot, whereas the recreation group had been through it on bikes. Speed helps determine what we experience as we move through the landscape: slower speeds focus our attention on the foreground and faster speeds on the background. Our group was taken with the inherent beauty of the trail and saw our main task as encouraging local appreciation of the dynamic variety of landscapes connected by the trail.

The trail begins at the Roanoke Rapids train depot, on the south side of town, and leaves town to the west. In its first two miles, it passes through urban, suburban, cultivated, and managed landscapes to arrive in a semi-wilderness area along the edge of the reservoir. The trail then curves around the reservoir for about three miles. At the halfway mark (approximately four miles from the depot), it crosses an arched railroad trestle, built in 1907, over Deep Creek. Ultimately the trail swings to the south, away from the reservoir, and is joined by an old spur that once led to the now flooded town of Old Gaston to the north. After this intersection the trail continues southwestward towards Thelma and Summit, two hamlets with a combined population of 180.

After a thorough consideration of the biophysical and socio-cultural aspects, as well as the experiential qualities we observed on the trail, our group focused on creating links between the different landscapes. From providing a ferry service literally linking two sides of the reservoir, to the much broader sense of protecting and connecting the different types of landscape, this approach yielded many good ideas. In order to emphasize these connections, we focused on four areas:

- wildlife habitat,
- retaining farmland and farmers,
- sensible lakeside development, and
- connection through public art.

Permaculturists understand the value of edges, and the multitude of edges found both on and around the trail are only some of the many significant features compatible with wildlife



habitat. Roanoke Rapids is located along the Atlantic Flyway, which brings in millions of birds each year. The many sheltered inlets along the edge of the reservoir are ideal for wildlife of all types. A large lagoon at the north end of the spur, west of the trestle, is particularly significant because it gives trail users scenic

perspective while providing adequate refuge for waterfowl. And finally, the trail itself furnishes an excellent wildlife corridor. Though the popularity of the trail poses a potential threat to wildlife, without the

protective policies associated with preserving the trail, the prevailing land use patterns of clear cut and development (scrape and build) would devastate the area.

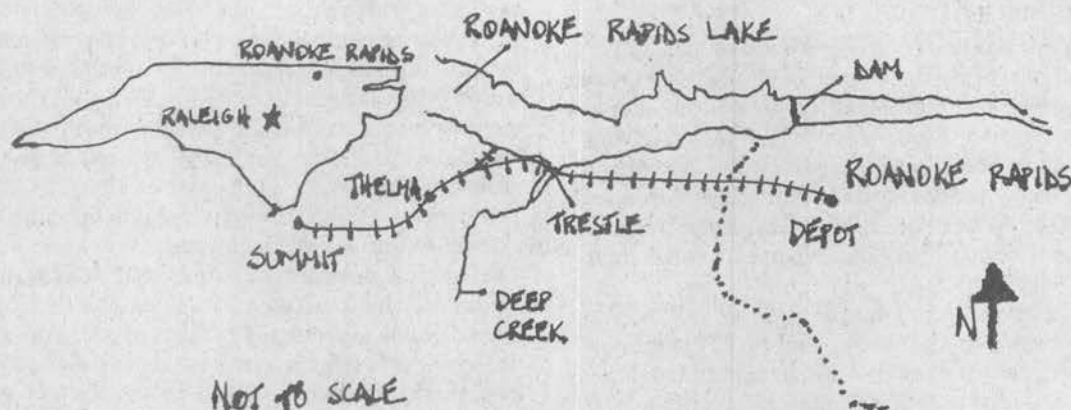
Farmland and transit corridors preserved

Our team saw that retaining farmland and helping farmers stay on the land was an essential support for the varied character of the trail. The farm landscapes also offered opportunities for stacking multiple uses in the trail design and for backing up essential functions. Trail users could be fed and accommodated at farms, either as paying guests or WWOOFers (willing workers on organic farms). Host farmers, already feeling the pressures of rising taxes and anxious developers, stand to benefit from direct income and on-farm labor, as well as from discussions of current use taxation and land trust opportunities, or agricultural enterprise districts and marketing supports—only a few of the many strategies being explored in support of the trail project. The two aims of preserving farmland and retaining transit corridors are “birds of a feather,” and it is vital that those concerned be aware of the many ways that each can support the other.

The third focus of our project was sensible lakeside development. We wanted to design a master plan for a large, clear cut area which is on the verge of being developed west of the trestle. Most developments around the reservoir consist of

single family units on large lots which greatly restrict public access to the water's edge. Our design focused on several points: compact development with large areas of community open space, riparian zone protection, built-in alternative energy sources, community orchards, ponds and gardens, and a mixed

commercial area serving locals and the nearby community as well as trail users. Since the trail forms the northern, lakeside boundary of the community, in our design, lake access was guaranteed for everyone.



The Roanoke Rail Trail

Opportunity for local artists

Public art was our fourth key focus for linking the landscape, the trail, and the community. The use of locally generated public art at trail heads and in transition areas between landscape types, would add another layer of meaning to the trail. Benches and other trail amenities could also be designed by local craftspeople, tapping their creativity and inspiration while enhancing their own links with the landscape.

Throughout this project, I found myself continually referring to permaculture principles as a foundation for design decisions. The experience provided yet another gratifying example of the tremendous range of applications available through permaculture.

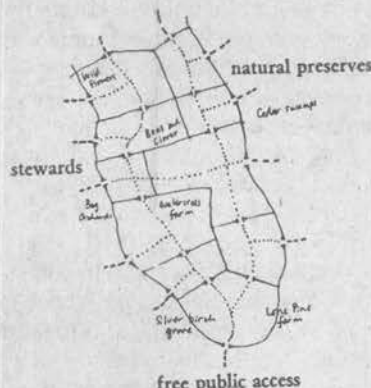
For more information on rail-trails, contact the Rail-Trails Conservancy, 1400 Sixteenth St. NW, Suite 300, Washington, DC 20036. △

Mary Woltz is enrolled in the Masters program in Landscape Architecture at North Carolina State University at Raleigh. She has studied permaculture both in the U.S. and in Australia. She has a strong interest in permaculture applications in urban areas and in developing countries. Readers may contact her at 815 Greenhill Road, Mt. Airy, NC 27030.

Patterns of Settlement

"Define all farms as parks, where the public has a right to be; and make all regional parks into working farms.

Create stewardships among groups of people, families, and cooperatives, with each stewardship responsible for one part of the countryside. The stewards are given a lease for the land, and they are free to tend the land and set ground rules for its use—as a small farm, a forest, marshland, desert, and so forth. The public is free to visit the land, hike there, picnic, explore, boat, so long as they conform to the ground rules. With such a setup, a farm near a city might have picnickers in its fields every day during the summer."



"I conceive that land belongs for use to a vast family of which many are dead, few are living, and countless members are still unborn."

The Countryside

Creating Habitat: Living With Animals in the City

Andrew Goodheart Brown

At any stage of permaculture consciousness (and mania), we need to be aware of our dependence upon and links to the greater environment. One of the major problems of our western attempts at culture is intense fragmentation, isolation, and removal from natural cycles. We have been raised in an artificial environment that insulates us from the natural world: a thin veneer dependent upon easy access to fossil fuel and unlimited natural resources. Arrogance is the mask for our ignorance. Nowhere is this more evident than in the city.

However, once we heed permaculture's wake-up call, no longer are we at the mercy of the somnambulism of the present day *impermaculture*. Permaculture is created on site, at our feet, and all around us. Those of us living in cities have many opportunities to create and foster permaculture awareness by transforming lawns and other waste places into vibrant and dynamic environments that include a nearly full range of natural systems such as garden, pond, and forest. While renewing city landscapes, we can at the same time provide wildlife habitat, corridors, and refuges. We can dwell in the city, that most human of worlds, yet retain the awareness, power, and ability to create within it a microcosm of the natural world.

What better way than to include and encourage animals in the city permaculture scene! And what better way to start than to expand our definition of desired animals.

The basic divisions among animals are wild and domestic. Wild animals in the city include (but are not limited to) birds, bats, rodents, rabbits, squirrels, raccoons, possums, snakes, amphibians, insects, bees, spiders, fish, and soil micro- and macrofauna. Domestic animals include birds, fowl, rabbits, snakes, amphibians, earthworms, bees, beneficial garden insects, spiders, fish, and of course, dogs and cats. (The overlap is obvious)!

"Come in she said, I'll give you ... shelter from the storm" (Dylan)

Encouraging, including, and actively designing site systems for many of these animals is basic to permaculture ethics: life is intrinsically worthwhile, and we should always accommodate the natural community of the area in our cultivated systems. Paul and Ann Erlich describe the web of life as an airplane, with each species a rivet. They ask: how many rivets can we remove before it is no longer safe to ride on the plane? In the face of all-out assault on the variety of life expression, via habitat destruction, poisoned air and water, highway carnage, and outright killing by non-scrupulous gun toters (I am not pointing at ethical hunters.) the very least we can do is provide refuge. Although few city residents can provide habitat for larger life forms like fox, deer, or bear, many spectacular and valuable species can inhabit an individual permaculture site with wild areas built into its design. Even better, city folks can provide a network of mini-refuges. With varied land- and plantscapes, a variety of animal life will appear. If you build the habitat, they will come!

The more intimately involved you are with your site, the more noticeable will be the presence of other animal life forms, such as beneficial insect predators (wasps, spiders, and birds), pollinators (bees, butterflies, and hummingbirds), and soil enrichers (earthworms and other detritivores). The closer you live to some natural areas, the easier animals can migrate to your site. Birds

can move great distances with ease; however, most animals do not like to be out in the open (everything has to look over its shoulder for danger), so a corridor of trees or fencerow vegetation within your community is helpful. In the midst of a barren monoculture of sterilized lawns, a permaculture site forms an oasis, and continuity over time will result in a richly filled and productive habitat.

Other desired and delightful wildlife may need specific habitat preparation as well as inoculation onto your site. Amphibians are a delight, not only in their valuable services as insect and mollusc predators, but also in their very presence, not to mention their most obvious gift: song. The rhythmic ventriloquy of spring peepers, leopard frogs' peculiar sound (of thumb sliding across an expanded balloon), deep reverberations announcing bullfrog, and trilling of toad: any and all a delight, give a feeling of inclusiveness and deep serenity.

Amphibian habitat needs are relatively simple: moisture, food, and cover. (Toads need protected structures to live under; stones or boards uplifted a few inches above the ground, preferably under cooling vegetation). To bring them onto the city site, create a small pond in your permaculture design, inoculate it with frog and toad eggs in the spring, add duckweed (*see* Permaculture Activist #32), green algae, and perhaps a waterlily. Although the smaller plants provide food for the tadpoles, you may want to supplement with goldfish food, especially in a young pond. For education, amazement, and sheer wonderment, bring some tadpoles into your home. In my household—at the moment of this writing—there is a 2-gallon spherical aquarium with both frog and toad tadpoles swimming in and around an elaborate ceramic castle (one can never tell when or if a prince/princess will appear). Not a day goes by that I am not sitting in the nearby rocker, crystal gazing in awe at their life process. This simple ritual involves me in the greater unfolding of life.

As the tadpoles turn into frogs, we gently net and carry them to their new home base: a small pond at the feet of a statue of Quan Yin parasoled under a maroon-colored dwarf plum tree.



Frog and toad habitat in author's city garden

Creating a pond is well within the ability and resources of almost any city dweller. My pond is a 20-gallon heavy plastic tub (approximately 22" x 15" x 15") set into the soil, and surrounded

with stone—salvaged from an old pillar—to soften the edges, add respectable natural appearance, and provide safe habitat. Water is provided from a simple rainwater catchment: barrels under downspouts. Duckweed and waterlily cover the surface; variegated calamus and two bee exit sticks extend from the waterline (honeybees gather water for the hive, and if they have no safe entry and exit to the water, they drown).

The mini-pond already adds beauty to the garden, and as the site is high and dry, provides a home base for the reintroduction of amphibians onto the property.

Another pond building technique involves the use of plastic sheeting sandwiched between inward-facing carpet scraps. Almost any size pond can be created, almost any shape too! Materials can be salvaged from carpet companies, neighbors, or from dumpsters and curbsides on a trash day cruise.

It is easier to ask forgiveness than permission

Cities, like permaculture sites, have zones that occur over time.

In many instances, outlying rural areas succumb to uncontrolled sprawl. In these zones, containing older houses on established sites, it is often possible to raise a few domesticated animals for food, services—such as manure and vegetation maintenance—companionship, and other delights. Small scale is the order here, and it's a good idea not to draw attention, since zoning may preclude animals other than cats, dogs, and other indoor household life.



Beginning a carpet-sandwich pond

A few chickens—hold the rooster, please!—are relatively quiet, and can provide valuable services to your site, especially when combined with a chicken tractor: a small, lightweight enclosure made of chicken wire and wood (or bamboo). Narrow enough to fit between your beds, a chicken tractor can be moved along by hand, in order to cover the various parts of your site. The protected inhabitants can scratch to their hearts' content, thereby controlling whatever vegetation they are placed over, and fertilizing the space in the process. Moved over finished beds (for instance, spinach or sugar snap peas), these two-legged compost piles can prepare your bed for the next crop or season, without expensive machinery, fossil fuel use, noisy exhaust, or hard labor. All your chickens ask for is some shade, water, and some supplemental feed.

If you are sheet composting an area, chickens can greatly speed the process. Additional benefits are eggs, meat, and feathers. Some breeds lay within a season, so if eggs are desired, investigate reliable breeds. For an additional food crop, most chickens can be harvested at the end of the garden season,

HOT OFF THE PcA PRESS...!

What a great idea! In the classic permaculture vein of stacking functions, this advice applies to city as well as country practitioner: **Create an earthworm refuge on your site!** How to? Designate an area, add lots of organic matter, plant a cover crop, add and otherwise encourage earthworms. Keep this space sacrosanct. Then, periodically inoculate other less populated areas on your site by removing a shovelful of worm-rich habitat and placing it in the desired location. Dig in some organic matter too. The healthier your soil is, the more earthworms you'll have. The more earthworms you have, the healthier your soil. At the heart of sustainability, healthy soil is true wealth, and creates vibrancy in your system, in addition to reducing the designers' work, which allows more reclining time for the permaculturalist, which leads to more dreaming up of Permaculture ideas to implement! A.G.B.

eliminating the need for winter quarters, and providing delicious organic meat. In most of the southeast, winter quarters can be simple. The most common problem is keeping the drinking water unfrozen. If you are fortunate to have an outbuilding, simple modification can convert part of it to a suitable winter coop.

Rabbits can also be combined with a tractor system, although caging must also cover the bottom, since rabbits have a reputation for digging and could escape. The Salatin's of Swoope, VA solved this problem by laying wire permanently on the ground, and moving the tractor across the wire (See *PC Activist* #32). Guinea pigs, valued in many parts of the world for food, hides, pets, and services, can be used in a similar way.

A more traditional rabbit (or Guinea pig) enclosure, a rectangular cage on legs, is generally unobtrusive to neighbors obsessed with zoning righteousness, and provides worthwhile benefits of copious amounts of high grade manure (easily harvested beneath the cage) sustainable harvests of fur—in the case of long haired varieties such as Angora—pet companions, or food and hides. In the case of all animals, investigate and otherwise nose around until you are able to find breeds that are hardy, non-fastidious, and have other desirable traits.

Closing Thoughts

There are few hard and fast rules in permaculture (with the exception of this rule). This applies to the inclusion of animals in city permaculture design. Be creative, experimental, generous, and allowing. As Copernicus' revelation—that the universe did not revolve around the earth—caused a major shift in human consciousness, an even greater shift is required now. **Life on Earth does not revolve around humans.** Permaculture does not have the sole corner on this simple truth, and as it should be, shares it with other sustainably oriented ways of living.

All beings are equally part of the web, even if we do not understand them. The discrepancy is ours.

From a permaculture perspective, the highest guidance is: create habitat. Allow life to be. With permaculture consciousness, manipulate it gently for the desired results of food, beauty, serenity, security, and satisfaction. Δ

The Garden That Compost Built

A Suburban Permaculture Story

Trina Paulus

For most of the 15 years I've lived in suburban Montclair, New Jersey I've wanted to change my front yard. It was dull (a wide, straight walk from porch to sidewalk cut the lawn into two 8-foot strips), and the street on which it fronts is dangerous (so busy it can take five minutes to cross). The noise has grown every year as Newark sprawls out toward East Orange. My spirit has been reaching for a more tranquil, wholesome spot for almost as long as I've lived here.

So, holding out for a brighter future elsewhere, I long resisted improving the place I live. What got me to bear down and make changes was in part the decay of the house itself: the front porch needed new steps and supports lest it go the way of the collapsed side porch. Also, I found an adventuring man, Phil Winter, willing to create with me. A third element was an inner sense that this good old house deserved something I had not yet given it. Warned that the next buyer mightn't reward the cost of my venture, I nevertheless felt called to go ahead. Two summers into my project there is no doubt that I've been repaid to overflowing in the most essential way.

A partnership in junk

In the spring of 1993, Phil and I began planning. We cleared the site, taking down the rotted porch, fixed the front steps, and most significantly for the garden (not yet imagined), moved the ancient flagstone walk. Suddenly there was a new space crying for immediate attention where the removal of the walk had left large, deep scars.

Phil, once a Bronx child, thought topsoil and re-grassing would do fine, but I, inveterate composter, wanted a natural landscape from the raw ingredients-leaves and grass cooked right on the spot. He yielded his ideas to me in matters organic, turning his attention to the sculptural elements of the landscape.

This partnership, at once cooperative and by turns, "a boxing match," sallied back and forth over the meaning of "junk." Phil Winter, artist and *bricoleur*, finds just what a project calls for the day before we need it. He encourages me to let go of "junk," but I hold onto everything, seeing a future in old socks and rusty lamp shade frames, not just leaves and grass. "Trina," he pleads, "you can let it go, we've already had three epiphanies this week. There will be another one when you need it."

An eye for hidden treasure

One of permaculture's strengths is its common sense. It lends itself to expression by thoughtful folks who don't know the lingo. Borrowing techniques from gardening, forestry, and architecture into a layered multi-functional design, permaculture brings many different dimensions together in a plan that can be realized in gradual steps. It reveals a vision of human and earth meshing respectfully. To the extent folks are living with such a vision, they are part of a movement which is much more than technique. His mind's eye full of visions, Phil is one of those who are designing the future.

Searching for sculptural elements, Phil hauled into my tiny yard over 3000 stones of every shape and size. Each morning brought a new find, from excavations all over the county: a gas station tank, a school's new underground electric line, a house

foundation going in. Mostly red, mostly sandstone, the stones became a treasure of abundance to imagine with. Phil's roaming eye caught more than stone: he found windows and furniture and wood for every need. He rescued a thermal window and a display case from the Montclair art museum's trash bins and made them into a skylight in the storage shed. Recycled garage doors made our tiny greenhouse. The list goes on!

Composting in public

Just as the game of finding discarded materials and putting them to use was the art of *bricolage*, at which Phil excelled, the game and art of composting was mine. But I had never done it where all the world could watch everyday!

This was to be no polite pile. We needed tons of material if compost was to be the sole amendment and fertilizer for a garden on top of a compacted, neglected old lawn. It would have to cover the whole area that had been in grass and front path, the first thing a passer-by would see. Composting in this location and on the scale needed was socially risky, but the neglected soil, the abundance of compostables, and my life of composting advocacy all said, "Go for it!" I began one pile at a time, and by the first the snowfall, over 200 square feet was "waste-deep" in compost at all stages of breakdown. I worried about my neighbors and didn't ask permission so as not to elicit rejection. I hoped that I had done enough good things that they would put up with this messy performance in which the essential drama of the microorganisms creating fertilizer remains invisible. As the fox reminded the Little Prince, "That which is essential is invisible to the eye!"



photo credit Alice Paulus

Trina pitches compost over the remains of the old lawn.

Beginning in the summer of 1993, with the bulk of materials to come from the fall leaf drop, I knew it would be spring at the earliest before the compost would be ready. And that was optimistic thinking-autumn leaves really need the following year's warm summer months to finish properly. In November of that year, I put up a fence to keep the leaves out of the neighbor's raked yard and counted on Montclair's eclectic character (every type and race, every occupation and interest is represented) to

permit me the pregnant time to birth something new. (And it took about nine months!) I hoped the force of spring growth would complete the composting cycle and transform the scene before the neighbors or town authorities despaired of me.

Recipe for compost stew

Leaves, grass, soil, water, air, microbes—here's what I used: Leaves rescued before the city's spring cleanup trucks could take them away—about 50 bags; half composted leaves from last year—from my original 8' high piles; a seemingly endless number of bags of grass saved from the incinerator, hauled home in my Civic Hatchback, (imagine burning grass clippings??); carrot pulp from the health food store juice bar, and the leftover vegetables from Montclair's weekly farmers market.

I gather ingredients during the week and then layer or mix them all together into a big new pile, about 4' x 6' x 3' high. This is often a Saturday afternoon project when the farmers market is over. My gleanings usually contain some edibles, like corn, tomatoes, squash, melons or peaches, which go to neighbors or to my drier and freezer before I compost the remainder. If the food were organic I would feel even better about this side harvest.

Microbes

Humans don't make compost; microorganisms do. What we can do is optimize the rate of their activity by organizing the ingredients intelligently. Leaves and soil bring in microbes, but some important advisors recommend making sure the good ones are there in abundance. Inspired by Iowa farmer Rita Engelken, author of *The Art of Natural Farming*, I often use a BioDynamic compost starter from the Pfeiffer Institute in Spring Valley, NY. I can't prove it helps, but the Engelken testimony is compelling. They have been composting on a large scale with a Wildcat compost turner for decades, and using the compost as the sole farm fertilizer. "If you are going to bother composting, you might as well do it right, and use the BD starter," Rita would say. When they first got into natural farming, she and her husband compared the results of crops grown with composts made with and without the BD starter. The difference made them true believers.

So when people ask me about adding inoculants, I tell them the Engelken story. It may not be essential, indeed one way or another compost happens, but I use the BD starter when I can. I don't know about other brands and claims, but this one seems authentic. I twice visited the lab where it is produced and saw the test tubes with the 56 composting microorganisms in the refrigerator. I also admire the loving attention with which Margaret Selke, now 95, harvests this concentration of beneficial microbes. With such excellent opinion behind the practice, I try to have enough BD starter on hand to use most of the time. More difficult is thinking a day ahead, since the starter needs to be moistened and sit 12 hours to activate the microbes. The Biodynamic approach is controversial for some, but I have seen such abundant production using its techniques that I sense it is deeply true and want to learn more.

Waiting through winter

Snow covered everything in New Jersey from Christmas through March. The microbes were still working in the pile but only in the core and slowly. Besides the slow down of the process which cold weather brought, there wasn't much grass or other natural nitrogen-rich material available during the leaf fall. Ordinarily, I wouldn't care and would just treat the fall drop as a leaf storage pile. In Spring I would mix the old leaves with the new grass and weeds; the microbes would heat things up and

compost would happen soon enough. But this year was different; I wanted finished compost quickly. When the first warmth of spring called trillions of composting microbes to speed up their activity, it was already late for my agenda. But a watched compost pile doesn't cook and nature has her own timeline. By mid-April I was more honest with myself. I would either have to allow the microbes enough time to finish working where they were, or move the piles and let them finish elsewhere. My neighbors' tolerance would likely finish in mid-May; the compost would take longer. What to do?

The Problem is the solution

Once I stopped wishful thinking and faced the fact that living in the kingdom of Chemlawn made it necessary to reduce quickly or drastically alter the appearance of all this compost, the solution evolved. The mini-crisis cleared into an energizing challenge. What happened proved to be elegant and simple—the defining success of the garden to come.



photo credit Alice Paulus

Author amidst the "garden that compost built."

At the point of this shift in my thinking, Phil was using hundreds of our best red stones in a low wall to define the new garden area and driveway. The wall was casual and of varied height, with comfortable seating for people waiting for the bus. The whole property took on a new look and feel.

The framework of the new wall set limits I needed in order to be free to create. The first step was obvious—fill behind the wall into the garden area. It was a large area 15' x 6' (only in the center) and 2' high. What a perfect place for the semi-rubble we had collected to be put on the bottom. Next came soil of dubious pedigree, then mounds of the unfinished compost and soil. Finally some finished compost and the first plantings—four rose-of-sharon, some impatiens and marigolds for quick color, and a broadcast of mixed flower seeds.

Sculptured Compost

Like the dialogue with material which the artist experiences, this first act suggested the next—a path so one could reach into the new, much higher level without compacting it by stepping on it. The shape of the wall and planting bed determined the curve. A second bed now suggested itself. I sculpted away. At first, I took time to loosen the compacted soil base in each bed before mounding on the compost. But as May days became fewer, I simply moved the mounds directly onto undug earth.

The initial curved beds were becoming a continuous half-spiral. The design was growing "organically," but I didn't see how to bring it to closure. I observed a lot, trying to imagine

different shapes or directions until one day it clicked. Everything was in place to become a double spiral if I would only make a few changes. I narrowed a curve here, widened it there, changed the direction slightly—and the pattern was complete. It was finally so easy and so satisfying that it seemed to have been designed this way from the beginning. It was the same unfinished compost, but when intentionally arranged in a satisfying sculpture it no longer appeared unfinished. It felt like a miniature Indian mound site. The 2 ft. high and 2 to 3 ft. wide beds were pleasing and acceptable even without plants. Here was an instant permaculture garden—sheet composting in a new form.

Summer: plants, insects, butterflies

"Build it and they will come." And they did. First the plants. Since my main food supply was in the backyard, more protected from street pollution, I thought I would focus on butterfly attracting plants up front. From the temporary back nursery I brought the anise hyssop and columbine that Cynthia Edwards had given me the year before. Local friends brought phlox, astilbe, alyssum, hostas, and nameless wonders. I bought foxglove and other herbs. A trip to my mother's home in Cleveland returned yellow four-o'clocks, yarrows, calendula, and more. Everywhere there were volunteers of the tomato and squash type. My own transplanted standbys, comfrey, iris, daylilies, and my one rose helped fill the spirals quickly.

Paulette, a remarkable friend who fills her office in Manhattan's World Trade Center with plants, lives in an apartment with no yard. Specializing in butterfly attractants, she nurtures plants from seeds, and gives the seedlings free to those with space to grow them. My garden flourished from her generosity.

Summer splendor

Cosmos leaned over the sidewalk. Multicolored zinnias and other flowers were there for picking. Serious looking people smiled and sometimes talked when passing by. One sentinel sunflower harbored a sole bumblebee that for days went round and round drinking and fertilizing. Our only garden vandalism occurred when someone pulled out this sunflower, broke its stem, and threw it in the street. This happened the morning after we took its picture.

I harvested sweet yellow tomatoes daily and pulled all but a few of the hundreds of volunteer tomato and squash seedlings. Bless the squash. All alone they created lushness with their daily growth and 20-inch leaves. Two bus commuters studied the progress of a small green and yellow gourd every morning at 7:05. A new compost section was full and this summer I didn't have to fetch grass clippings. They were brought to my piles by Granger, a neighbor's nephew who had a lawn service. The arrangement made us both happy, though I had to be on the ball to handle the grass before it went smelly. Insects of all types were at home and I saw many swallowtails and other butterflies—not as many as I wanted, but I hope more will come as I better provide for them.

Harvest

The editor of the *Montclair Times* first published the sunflower picture, then came herself for a front-page article titled, "Her Senseless Act of Beauty." My umbrella organization for environmental work, The Cornucopia Network of New Jersey, scheduled their annual meeting with an open garden at the site. The New York Times garden editor, Anne Raver, visited for three hours and wrote us up in her Sunday column, bringing almost 400 people to the open garden October 2. It was Cornucopia's grandest event.

Three apple trees from a front yard orchard up the street

furthered the permaculture design, and 60 people came for the planting with help from city arborist and the county extension agent. Last March a Permaculture weekend with Jerome Osentowski and David Jacke introduced 25 more people to the garden and its unfolding wisdom. Guilds formed around the apple trees: Siberian pea shrubs and plants I had already started were betrothed to the apples. Jerome grafted. Participants designed. We tripped by slides to Nicaragua and the Rocky Mountains.

June 1995

The second-year garden is already so full of daily wonders that it may become more stunning than last year. The spring bulbs were followed by iris, daylilies, columbine, and bright orange butterfly weed. Two apple trees blossomed and have small apples forming. Four blueberries are blossoming now. The herbs have amazed me with their size and speed of growth. echinacea (purpurea and angustifolia), anise hyssop, motherwort, yarrows, pyrethrum, lady's bedstraw, woad, dyer's coreopsis, and the wonder of the biennial foxglove, soapwort, borage, dill, thyme, fennel, bergamot, and three other mints joined this partial list. I harvest German chamomile every other day. Paulette's spindly little babies have become 5-ft. powderpuff hollyhocks, colorful wallflowers, and milkweed to feed the monarch butterfly larvae.



photo credit Lilly Elsis

Trina with fifth-grader, Jonathan Elsis, with his live worm box at Liberty Science Center, New Jersey

This is truly "the garden compost built." It happened through desire, planning, hard physical work, but mostly through a kind of grace. A final joy: Granger this year is not only bringing grass, he is also composting it. By July we figure he can add this skill to his landscaping resume and help his customers save their own brown gold.

Work with a permaculture vision gives hope and inspiration to all of us who attempt it. Sometimes this is catching. It seems essential activism. △

Trina Paulus is most of all a networker. Sometimes she is an author; her book Hope for the Flowers has sold a million and a half copies in its 23 years. Sometimes she is an artist. Sometimes she works in her garden. Trina is the mother of Jihad, she is the Vice-President of both Cornucopia Network of New Jersey and the Central Rocky Mountain Permaculture Institute in Basalt, Colorado, and is a long-time member of The Grail, an international women's movement active in 20 countries.

Micro-Enterprise Lending

A Strategy for Home-Grown Prosperity

Mollie Curry

Perhaps you are toying with the possibility of starting a small business that will lead you towards income self-sufficiency. It could be marketing a craft, consulting of some sort, establishing a native plant nursery, or some other endeavor. Whatever it is, the idea is small but viable. Unfortunately, you do not have the necessary start-up cash. You need a loan, but banks care about collateral, credit records, and a proven track record in business, not about good ideas. And they consider small business loan as starting around \$25,000—way more than you need or want to be indebted to them for. As far as a bank is concerned, your tiny loan request is hardly worth the cost of them telling you “no,” much less what it would cost them to administer it for such a low return.

Thankfully, you may now have another option besides loan sharks and personal benefactors: your local microenterprise program. They are popping up all over. There are at least 300 groups in the U.S. and Canada (up from a handful in 1989) that are dealing with the very small loans a lot of potential entrepreneurs need and cannot seem to get anywhere else. They focus on micro-loans: usually under \$8-10,000, often much smaller. They often lend to people who seem too high-risk to bankers. Interest rates can be a little higher than at banks, at least to start with, but many find the small extra expense well worth it.

More funds becoming available

For years, the focus of governments (local, state, and federal) has been to encourage and subsidize large businesses. Even the US Small Business Administration (SBA) has until recently ignored what have come to be known as microenterprises. Now at least three government agencies, SBA, Housing and Urban Development (HUD), and Health and Human Services (HHS), make loans and give assistance to micro-businesses. None of them did just six years ago. Established community aid groups that are not exclusively interested in micro-programs are also starting to jump on the bandwagon. Finally, owners of very small businesses are getting the recognition and support they need and deserve.

“The field is growing so fast it’s kind of scary,” reports Chris Just, the director of the Asheville, North Carolina-based Mountain Microenterprise Fund (MMF). The MMF, founded in 1989 under the auspices of the NC Rural Economic Development Center (Rural Center) as a “demonstration” site, was one of the first US funds that focused on extending small loans (\$500-\$8000) to people who wanted to start or expand locally owned small businesses. Like most micro-lenders, the MMF does more than just loan money to low- and moderate-income people having a hard time getting it elsewhere. They also provide business education, technical assistance, and peer group support.

The MMF utilizes both private and public (State of North Carolina) funds. In general, non-profits such as the MMF have attracted operating and loan pool funds from either private foundations or public coffers. The private-public partnership of the MMF represents an unusual, but attractive, model.

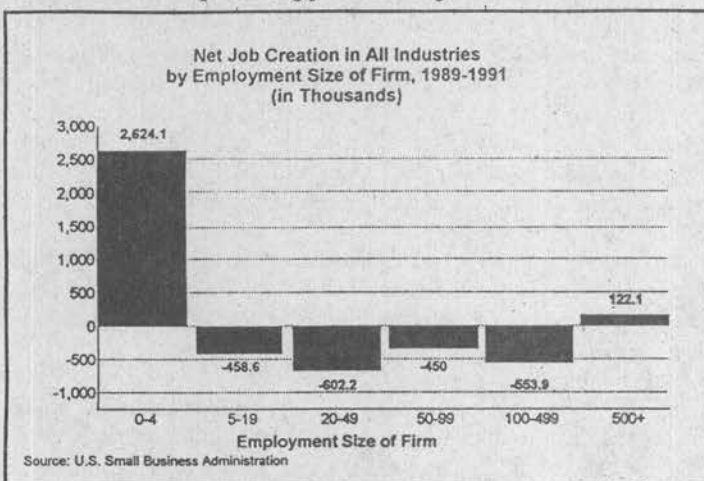
Just worries that the unique approach of local microenterprise lenders like MMF may be lost as more powerful and better known organizations enter the field. Government agencies with their centralizing tendencies may be less responsive to local

needs and conditions. At the same time, older, established charities, better positioned to attract funds, may not have the focus on self-reliance required to facilitate grassroots economic renewal.

Politically, President Clinton’s administration has been very enthusiastic about microenterprise schemes. In fact, while serving as Governor of Arkansas, he supported the formation of another of the early players on the US scene: The Good Faith Fund.

The appeal of these programs, however, crosses party lines. Liberals see women, minorities, and the downtrodden empowering themselves. Conservatives are encouraged by the easing of the burden on the state when people enter the “mainstream” economy and are able to rely more on themselves than on public support. Permaculturists should like the programs because they help develop and diversify local economies, countering the trend towards centralization.

Though most governments are still stuck in attempts to boost the local economy and create jobs by giving tax breaks and other incentives to attract large companies (often polluting or socially regressive), this is beginning to change as the importance of small business in providing jobs is recognized.



Small business creates lion's share of jobs

The figures are very convincing: The U.S. SBA found that net job creation from 1989-1991 in all industries by size of the firm in terms of employees was much higher for firms employing 0-4 people than for any other size category. In fact, all firms employing 5-499 people generated a net loss of over 20 million jobs (20,647,000). On the other hand, firms employing 0-4 people had an incredible net increase in the number of jobs (26.24 million) in the same time period. Firms employing over 500 people created only 1.22 million jobs. (1)

Microenterprise funds have a record of success in helping launch the kinds of businesses that do the most for the economy. To take the MMF as an example, in just six years it has served a total of 325 businesses, extended 80 loans totalling \$210,350, and operates with a default rate of 3-5%. Most banks, which systematically avoid the type of high-risk borrower that the micros serve, have a default rate of 2-4%. MMF's loans went primarily to low-income individuals (62%), while women (54%) and minorities (16%) were well-represented.

Loans extended to good folks

Charlie Wilkins is one of MMF's typical borrowers. Like many people on the fringes of the current economic system, he knew he had a snowball's chance in hell of getting a loan at the bank. He is a big guy in overalls, a fourth-generation mountain man. His skills lie in woodworking and in making specialty tools. He didn't have any capital; he didn't have any collateral; he didn't own a suit. But he had heard about the MMF, and they helped him fulfill his urge to be self-reliant and to work for himself. They gave him an alternative to the bank.

Through the MMF, Wilkins formed a peer support group of other would-be entrepreneurs, got free technical training in planning and running a business, and obtained a very small loan to start his new catalog-based tool-making business. In 1994, his sales exceeded \$130,000. He employs two full-time helpers at \$8-\$10 per hour in one of the poorest counties in the state.

B. J. McFalls, a former textile mill worker, also now employs two people besides herself. She runs a seamstress shop, keeping her own records and managing the finances and all the other aspects of her business. Her ability to do this represents not only a lot of new learning, but also a fundamental change in her attitude about herself. When she first made contact with the MMF, she was extremely shy and intimidated. But she came. She and four other women formed a support group. She was very anxious about finances, and planned to skip the orientation on that subject, avoiding it out of fear. But her group encouraged her and calmed her fears. She came; she learned. With the help of her group, she formulated a plan for her business and got the necessary loan to buy her own sewing machine and go into business for herself (doing alterations and custom clothing).

Jean Cochran lost her factory job when the company she had worked for closed up and left town on very short notice. She had always dreamed of running a daycare center for children, but needed more education and moral support which she wasn't getting from her immediate network. Though she got a loan elsewhere, she got the support she needed through an MMF group. She feels she never would have made it without the MMF group. She started out serving seven children and now is the biggest daycare provider in the area with around 70 kids.

Social collateral and peer support

In MMF's program, as well as many other micro-enterprise funds, the peer support group is very important. Inspiration comes largely from the example of the Grameen ("Rural") Bank of Bangladesh. In the Grameen Bank model, borrowers form groups, approve, and guarantee each others' loans. If someone defaults, the others bear the burden of payback.

The main difference in the MMF program is that group members do not actually guarantee each others' loans. However, they do wield the power of approval and disapproval of loan proposals, and they all suffer some consequences if a member of their group defaults.

Here's how it works

Interested folks come to one of the MMF monthly information meetings where they learn the basic details of the program and meet other entrepreneurs. These people form their own borrowing groups and notify the Fund. Together, the group members go through six weeks of orientation and training. After this, the groups of five operate pretty independently, meeting bi-monthly.

The orientation includes instruction in budgeting, cash flow, business plans, marketing, and how to work effectively as a group. The groups make their own by-laws and their own decisions about loans. Only one person in each group may

borrow from MMF at a time. Once the first borrower has paid all or most of the loan back, the next member may apply. If one of the group's members defaults, then the others must wait several months before any of their loans are considered. Since each of the members has a vested interest in all the loans getting repaid, they approve loans with great care. Group members are tough on each other—they routinely turn people down when they have reservations about the business plan or the character of the would-be borrower. As a consequence, in this system, as in the Grameen Bank system, there is a very low default rate.

Besides functioning as loan-approval entities, the groups serve as sounding boards, test markets, and sources of knowledge, advice, and moral support. Belonging to a group reduces the common sense of isolation that disheartens many people. Many of the groups go beyond networking to form tight communities. **Nurturing positive attitudes**

The value of these programs goes beyond capitalizing people who would normally never get a loan. The impetus, the ideas, and the work are all from "below." As Chris Just, the director of MMF says of his clients, "They didn't succeed because of us. But we did create an on-ramp to the (business) highway where once there was none. We facilitate empowerment. And the group members end up empowering each other—because they are a team out to help each other, to learn from each other. Because they stand and fall together instead of alone, success is contagious." In fact, Just considers that most of the people who get involved with MMF succeed in some way, even if they never get a loan. Success stems from a change in attitude. When does change take place in a person? "I think just coming to the second meeting. That's a big decision for a lot of people,"—the decision to give it a try, a commitment to believe that you can do it.

Though the people at MMF and most other microenterprise funds have never heard of permaculture, their goals mesh neatly with its values. Facilitating the achievement of financial self-reliance is their primary function. Though most have no requirements as to the nature of their member's endeavors, the businesses usually reflect the needs and conditions of their communities, providing quality goods and services that contribute to the diversity, health, and decentralization of the local economy. (Just the kind of businesses permaculturists are likely to start.)

Microenterprise groups across the continent work under formats similar to that of the MMF. To locate the one nearest to you, contact the Association for Enterprise Opportunity (AEO), 320 North Michigan Ave., Suite 804, Chicago, IL 60601, or call (312) 357-0177. The AEO functions as an advocacy and trade organization for microenterprise-oriented groups and individuals. Besides attempting to influence public policy, they provide information to people interested in forming new microenterprise programs as well as networking and up-to-date information about established organizations.

Whether you are interested in starting your own small business or promoting local businesses on a larger scale, microenterprise organizations may provide the help or example you need.

References

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Mollie Curry is a staff writer for The Permaculture Activist.

Patterns of Settlement

All references except that on page 19 are to "A Pattern Language" by Christopher Alexander et al, Oxford Univ. Press, New York, 1977. For a complete review see PCA vol.VI, #4.

Permaculture Books

- Introduction to Permaculture** 22.00
Bill Mollison w/Rene Mia Slay. 2d ed. (1994) 216pp. paper. illus. The basic argument for permanent agriculture: how to feed and house yourself in any climate with least use of land, energy, and repetitive labor. New material on patterns, cold climate. Supersedes *Pc I & II*.
- Introduccion a la Permacultura** 25.00
Bill Mollison w/Rene Mia Slay. 1a ed. (1994) 192pp. paper. illus. American translation into Spanish of the first Australian edition of *Introduction to Permaculture*. Includes glossary of terms.
- Permaculture in a Nutshell** 8.00
Patrick Whitefield. (1993) 75pp. paper. illus. A back pocket gem, this book draws on the best examples in Britain and elsewhere to show how and why permaculture works. Excellent primer for introducing to friends and family.
- The Permaculture Designers' Manual** 55.00
Bill Mollison. (1990) 576pp. cloth. 450 illus. + 130 color photos. Global treatment of cultivated ecosystems. A resource for all landscapes and climates. Lucid illustrations by Andrew Jeeves bring Mollison's concepts to life. Essential, in-depth treatment of earth repair and practical design.
- Earth User's Guide to Permaculture** 16.00
Rosemary Morrow (1994) 152 pp. paper. Abundantly and charmingly illus. An informative and practical guide to permaculture, with exercises and real-life examples. Learn how to design a permaculture system on your own land, whether city balcony, suburban garden, or country farm.
- The Best of Permaculture: A Collection** 18.00
Max O. Lindegger & Robert Tap, eds. (1986) 136 pp. paper. illus. Original essays in building biology, urban forestry, land restoration, health, nutrition, energy. Examples from the field.
- Living Communities:**
A Permaculture Case Study at Sol y Sombra 13.00
Ben Haggard. (1993) 152 pp. paper. illus. Permaculture through the eyes of a master gardener and the design of a particular place, the Miller estate at Santa Fe, NM. Valuable for its insights into the observation process. Haggard's prose is lyrical and his conclusions reach beyond his desert home.
- Restoration Forestry:**
A Guide to Sustainable Forestry Practices Worldwide 27.00
Michael Pilarski, ed. (1994) 526pp. paper. illus. A combination resource guide to organizations and collection of essays on all aspects of sustainable forestry. Undoubtedly the most complete collection of material on the subject to date. Indexed by books, periodicals, articles, and general subjects.
- Tree Crops: A Permanent Agriculture** 20.00
J. Russell Smith (1987) 408pp. paper. illus. Reprint of the 1950 ed. with a new intro. by Wendell Berry. First published 1929, and still radical more than 60 years on, Smith's seminal work remains too little heeded. His proposal for "two-story agriculture" is both lively and well researched.
- Forest Gardening** 15.00
Robert A. de J. Hart. (1991) 212pp + 8 color plates. paper. illus. Seven-story permaculture for temperate climates lovingly described by the grand old man of agroforestry. Hart's tales of tree life and forest cultures thrill to the root. A gardener's ecology: water, energy, craft, herbs & health.
- The Flywire House:**
A Case Study in Permaculture Design for Fire 10.00
David Holmgren. (1993) 15pp. paper. illus. spiral-bound. Succinct and illustrated with professional drawings of both building details and landscape plans, this slim volume covers a much-neglected aspect of property design with grace and clarity. Like good insurance, it's worth more than you pay.
- The Independent Home:** 20.00
Living Well with Power from the Sun, Wind, and Water
Michael Potts. (1993) 300pp. paper. illus. Weaves 27 inspiring stories of the new energy pioneers and how they did it—nuts and bolts, diagrams & photos. Chapters on siting and building the home, repair & maintenance, economics of permanence, biologic energy, and community cooperation.
- The Straw-Bale House** 30.00
Bill and Athena Swentzell Steen, David Bainbridge, David Eisenberg. (1994) 297pp + xxii. paper. Extensively illustrated, with hundreds of b/w and 26 color photos. Straw-bale construction is sweeping the country. This book explains why in thorough detail. The best reference we've seen.
- Chicken Tractor:**
The Gardener's Guide to Happy Hens and Healthy Soil 16.00
Andy Lee. (1994) 230pp. paper. illus. Chicken tractors are mobile coops, a clever way of using domestic poultry (or other animals) for pest control and garden fertility with very little work on your part. Lee is thorough, witty, and consistently upbeat about the permaculture value of chickens.
- Cornucopia: A Sourcebook of Edible Plants** 35.00
Stephen Facciola. (1990) 678 pp. paper. Lists over 3,000 species with all commercially available named cultivars, sources of seed, plants, descriptions, uses, cultural notes, food products; indexed by food product, plant common name, family, and genus. A monumental work useful to every garden designer.
- Seed to Seed:**
Seed Saving Techniques for the Vegetable Gardener 20.00
Suzanne Ashworth. (1991) 222pp. paper. illus. The best single-volume guide to saving our vegetable heritage. Discusses techniques and references botanical classification, pollination, crossing and isolation, seed production, harvest, processing, and viability for more than 150 vegetables and herbs.
- Kiwifruit Enthusiasts Journal Vol. 6** 15.00
Michael Pilarski, ed. (1992) 192pp. paper. illus. A good cross-section of everything known about fuzzy and fuzzless kiwifruit including research, sources of genetic material, plant societies, periodicals, commercial growing, economics, propagation, botany, and enthusiasm!
- The Permaculture Garden** 16.00
Graham Bell. (1993) 170 pp. paper. illus. An elegant tour of the home system, treating water, soils, perennials, trellises and greenhouse, children in the garden, forest and community gardening, and design. With delightful quotations from Jung, D.H. Lawrence, Alice Walker, others. (Books cont'd next page)

**Designing and Maintaining
Your Edible Landscape Naturally**

25.00

Robert Kourik. (1986) 370 pp. paper. illus. + 19 color photos. Permaculture in the home garden: mulch gardens, double digging, root zones, pruning, companion crops, natural pest control. Excellent diagrams, charts, species lists.

**The Permaculture Book of
Ferment & Human Nutrition**

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Bill Mollison. (1993) 288pp. paper. illus. 35 color photos. Comprehensive global survey of methods extending the author's life-long concern with core human survival issues. Treats food storage, preservation, cooking, fungi, yeasts, grain, legumes, roots/bulbs, fruits, flowers, nuts, oils, aguamiels, fish, algae, meats, birds, insects, dairy, beer, wine & beverages, condiments, agricultural ferments, hygiene, food toxins, vitamins, enzymes, trace minerals & nutrient sources, use of earths to enhance food value.

The Humanure Handbook:

A Guide to Composting Human Manure

15.00

Jos. C. Jenkins (1994) 198 pp. paper. illus. Delves deeply into the ever-present subject of human waste. Examines the various systems for disposal and treatment, and recommends thermophilic (hot) composting as the simplest, cheapest, most ecological method. Writing from personal experience and extensive research, Jenkins answers all the questions you never dared ask!

The Earth Manual:

How to Work on Wild Land Without Taming it

16.00

Malcolm Margolin. (1985) 238pp. paper. illus. A friendly guide to earth repair in the wild, with chapters on wildlife, tree-planting, felling, pruning and repair, mulch, erosion control, seeding, transplanting, trailmaking, ponds, and doing it all with children. Filled with good common sense.

The Man Who Planted Trees

7.00

Jean Giono. (1985) 56pp. paper. This timeless and inspiring tale of one man's dedicated efforts to reverse desolation has been beautifully illustrated with 20 woodcuts by Michael McCurdy. A story for all ages.

Directory of Intentional Communities

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Reclaiming Our Cities and Towns

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David Engwicht. (1993) 190pp. paper. illus. Insightful critique of auto traffic: how it destroys the fabric of urban life. An eco-city design primer linking the built environment with social life.

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Crystal Waters Village:

Conceptual Permaculture Report

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Max O. Lindegger & Robert Tap. (1989) 80pp. pap. illus. Advanced proposal for an agricultural economy at the first permaculture village in Australia. Pioneering work.

Crystal Waters Village Owner's Manual

11.00

2nd ed. Nascimanere. (1990) 54pp. paper. illus. Nuts and bolts for the owner/builder. Passive solar design; hard-to-find information on rammed earth, sod roofs, pole construction, building biology.

Boundaries of Home:

Mapping for Local Empowerment

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Doug Aberley, ed. 138 pp. paper. illus. Mapping is the first step toward reclaiming the territory. How to envision the landscape of home: 19 passionate essays on bioregional mapping, theory & examples from city and country, USA, Canada, Britain. Info on using GIS, resource assessments, review of cartographic sources, many and varied example maps.

New Money for Healthy Communities

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Margrit Kennedy. (1995) 144pp. paper. illus. Pinpoints interest and compound interest as the fatally flawed assumption which both drives the global economic system and wrecks the earth. Proposes sweeping tax, land, and monetary reforms.

Sacred Land, Sacred Sex: Rapture of the Deep

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Dolores LaChapelle. (1988) 386pp. paper. illus. "How do we begin moving toward a real culture? All we have to do is raise one generation of children right—according to the pattern laid down by hundreds of thousands of years of our mammalian ancestors." A manual of deep ecology, a guide to ritual, an essential history of our species.

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Permaculture Videos

Please include \$3.00 shipping for one or both films

The Global Gardener

50.00

120 min. VHS. (1991) Bill Mollison's review of permaculture's accomplishments around the world. Made for Australian Broadcasting Corp. and aired to national acclaim. Four half-hour segments highlight subtropical, drylands, temperate, and urban systems with footage from developed sites in India, Southern Africa, Australia, the US Southwest, Pacific NW, Europe, U.K., and New York.

In Grave Danger of Falling Food

40.00

60 min. VHS. (1989) A wacky romp through Mollison's life as an outlaw. Cartoon cutaways and bizarre sound effects seem no stranger than Bill loping along the street in front of Aussie suburban sleaze, guerrilla planting hazelnuts. A campy period piece, this film tells the permaculture story with verve and imagination.

"Right In My Back Yard..."

A Survey of Useful Wild Plants

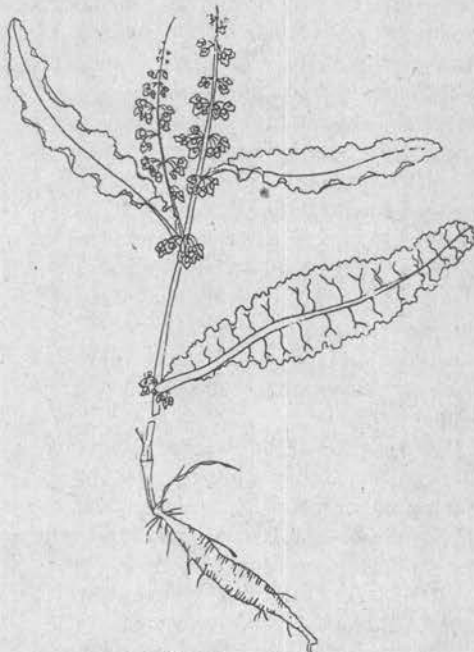
Elizabeth R. Winston

Someday I'm going to do a neighborhood survey of useful plants found in the cracks of sidewalks. For now I'm satisfied with plants "right in my back yard." I've heard that phrase (expressed with surprise that anything growing there except lawn grass could be useful) so many times that, given a buck for each, I could have a dandy dinner at some exotic restaurant. On this fine late spring day, however, I am more in the mood for a fresh salad at home. A sense of well-being enlivens the enterprise for, during early spring, I have made use of those excellent traditional tonics, dock and dandelion. Now I can wander through my (pesticide free) yard and gather the bounty of edibles that I've earned by not maintaining the lawn with military precision. If, like me, you are an observant rather than an over-active yard care provider, most of the following toothsome plants are probably visible from your lawn chair.

Dock (*Rumex crispus*), like so many naturalized plants found commonly in the U.S., was probably introduced either intentionally by early settlers or inadvertently in grain stores and ships' ballasts. In appearance dock looks like a coarser form of its near relative, French sorrel, and it has a similar sour flavor because of the oxalic acid content. It was used in the 1600's to treat "loathsomeness of the stomach"—an irresistible phrase for an ailment common to all of us upon occasion. Eaten in moderation, dock stimulates bile flow, helping to clear out toxins from the sluggish winter. It contains 12,900 international units per hundred grams (12,900 IU/100g) of vitamin A and 119 grams of vitamin C. Native Americans used it for many purposes, including making bread meal from the ground seeds and as a dye plant. One mature dock plant can have 30,000 seeds. These can remain dormant and viable for 50 years—great if you want to cultivate it, scary if you're trying to weed it out.

Dandelion (*Taraxacum officinale*), another introduction from the Old World, is also a medicinal and edible plant with many uses. The tap root transfers minerals, especially calcium, to the soil surface where other plants may profit

from them. It's used medicinally to stimulate bile flow, as a liver and digestive tonic, a diuretic and anti-rheumatic. The plant has 14,000 IU/100g vitamin A, and 35 mg vitamins C, B, and D. On Maundy Thursday, the Pennsylvania Dutch traditionally eat dandelion to ensure health for the rest of the year. It is grown commercially for salad and as a coffee substitute—and if you make sensible use of the dandelion plants in your yard, you may learn to see them as the valuable resource they are rather than as weeds. Dandelion leaves are high on my own salad list.



Dock: *Rumex crispus*

Violets (*Viola odorata*) bloom early in spring and again, with shorter stems bearing more seeds, in the fall. The fragrant purple variety is an all-time favorite, cultivated in gardens for 2000 years and escaping happily into the surrounding lawn. The leaves contain vitamins A and C and salicylates (akin to aspirin), and are anti-inflammatory, diuretic, and expectorant. The leaves may also have a mild laxative property (stronger in yellow-flowered varieties). The purple flowers represent fidelity in the language of flowers—they were worn by loyal supporters of Napoleon when he went into exile. Traditionally, the flowers are candied, but they can also be used fresh, along with the leaves, in salad. Note: African violets are not related and

are not edible!

Spring Beauty (*Claytonia virginica*) is a very early bloomer from the purslane family that is pictured in almost every wildflower book. Endemic to N. America, it has edible corms (enlargements like little water chestnuts) at the roots. Native Americans used these as a food source, both boiled and raw. I dug up and peeled a Spring Beauty corm recently—it tasted like a turnip which was imperfectly washed (no great surprise, as I didn't wash it!). The corms, washed and chilled, impart a nice crunch to a mixed salad.

Regular purslane (*Portulaca oleracea*) forms its spreading mat and blooms a little later in the season. Purslanes and portulacas are favorite wild (or domestic, for that matter) herbs: they've been cultivated for 2000 years in India and Persia and are grown in Europe as a vegetable. Thoreau made a full meal of them at Walden. There is a controversy over their origins; they certainly came over to America this century in ships, being good travelers at some 52,000 viable seeds per plant. Recent evidence from Canada, however, shows they were probably native in North America at one time and were wiped out by glaciation. As a tasty, healthy herb, it excels, containing 8,000 IU/100g vitamin A, iron, vitamin C, and alpha-linoleic acid. It also contains the omega-3 fatty acid which strengthens the heart and cell membranes in the eyes and brain. Purslanes and portulacas are great pickled, as a tart addition in salad, and as a thickening for flavorful soup.

Chickweed (*Stellaria media*), although much despised by weederers of gardens, is a perfectly good edible yard plant whose slender succulent strands can be found anywhere in late winter and early spring. When the weather gets hot, it will still be possible to collect fresh chickweed lurking under shady leaves. It's a native of Europe and Asia, but (as irritated gardeners know) has naturalized in much of the U.S. Because of its mild vitamin C content, chickweed has been used successfully to treat scurvy. It also contains small amounts of iron. Throw a handful, roots removed, into the blender to improve your smoothies, or use the fresh chopped stems and leaves as a pleasant addition to salad.

Lamb's quarters (*Chenopodium album*) has as much vitamin A as carrots, plus a significant amount of vitamin C, to boot. It can be found growing as a weed in many disturbed areas, being one of the most common plants on the planet. Lamb's quarters has also been grown as a

crop for centuries. The Blackfoot Indians used the seeds of lamb's quarters by 1500 AD, according to archeologists, and in South America the closely related *Chenopodium quinoa* has been used since pre-Colombian times. Quinoa has 15% protein and 55% carbohydrate, more food value than corn! The seed was a flour staple for Napoleon's armies when stores were short. This is a plant that really deserves to move from the bare ditch to the kitchen. The tender new leaves and shoots are good in salad, but even the most mature leaves make a good pot of greens. (Avoid the species with aromatic leaves—they contain an irritant oil.)

Plantain (*Plantago spp.*) has neatly ribbed, delicious leaves, useful both fresh and cooked while young. This group includes both the native species and the varieties brought by European settlers as a favorite potherb and medicinal. The seeds may be used for cereal—a dear friend and international scoutmaster says stripping plantain stalks for this purpose is a dandy way to keep boy scouts busy in the morning when you want to sleep late. The seed husk is hydrophilic and used to regulate bowels when they are disturbed in either extreme. Mashed leaves of plantain are also a soothing field poultice for bug bites, poison ivy and scratches. Plantain leaves have 11,000 IU/100g of vitamin A (close to carrot) and a nice amount of calcium.

Virginia peppergrass (*Lepidium virginicum*) is a member of the mustard family found in most disturbed ground—also sidewalk cracks and city parking lots. It is almost certain to crop up in any backyard that is slightly and healthily unkempt. The seeds are attached to the top of the plant like little lentils on individual stems. They can be nibbled for fun on a country ramble, or added to salads for a gustatory hot pop. The very young leaves of the basal rosette may be eaten raw. The leaves of peppergrass are well-endowed with vitamin C and iron, and they have a distinctive flavor that spices up milder greens.

Wood sorrel (*Oxalis dillenii*) appears both as cultivated escapees and as native lawn invaders. Either way, its fresh leaves and green seed pods are tart and tasty. Leaves can be picked any time, and the pods can be collected just after flowering—toss into salads, soups and quiches for a touch of zing. Pretty little clover-like wood sorrel contains oxalic acid (as do spinach and purslane), which binds calcium and is toxic in large

amounts, so it should not be taken in excess. Small amounts are quite beneficial, as wood sorrel also contains a high quantity of vitamin C and has been used to prevent and cure scurvy.

Wild onions (*Allium spp.*) are an indispensable ingredient to top off our salad. These are the tubular grass-like plants that smell so richly of onion or garlic when mowed, pulled or stepped upon. Wild onion flowers look very much like a non-edible plant, the crow poison (*Nothoscordum bivalve*). The latter lacks the characteristic scent, however, so you can't confuse them if you stop to smell them. The whole wild onion plant may be used, flower, bulb and foliage—just be sure it has a strong onion flavor.

For a touch of bright color in your yard salad, add the tasty petals of dandelion and redbud (*Cercis canadensis*) flowers in early spring. Later add wine red winecups (*Callirhoe spp.*), if they show up in good numbers in your yard, and bright yellow coreopsis (*Coreopsis spp.*) petals from the wildflower edge.

Fresh wild salad is a strong culinary statement which should be dressed very lightly with an herbal vinaigrette and freshly baked croutons. Served with, perhaps, dandelion wine, and accompanied by sorrel soup you'll have a fine meal from your own backyard. Bon appetit!

CAUTION: Our civilized stomachs are not necessarily accustomed to the strength in minerals, vitamins, oxalates, tannins, etc. found in wild plants. Eat them in small amounts until you know what your tolerance is, and try to research thoroughly every variety you plan to eat. Sometimes look-alike species have very different properties!

Do not wildcraft native plants for edible or medicinal purposes from traveled roads where toxic fumes will contaminate them, from waterways which may be polluted, sites where you know pesticides and herbicides have been used, or places which have been heavily fertilized or sprayed, including feedlots. The rule of thumb is that you get one third, the animals get one third, and the plant is left one third to continue procreation. Unless you need the root, do not pull up plants. Δ

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REVIEWS

From Source to Sink ...and Back Again

Review by Matthew Arnsberger

ART LUDWIG

*Create an Oasis with Greywater:
Your Complete Guide to Managing
Greywater in the Landscape*
1995. \$7.00 ppd. 43 pages. paper

Much of the literature on home greywater systems comes out of California, where water conservation is of dire consequence. This newly revised and expanded bulletin is distributed by Oasis Biocompatible Products, 5 San Marcos Trout Club, Santa Barbara, CA 93105-9726.

Of all the various articles, bulletins, and publications I've examined on greywater, this one appears to be the best source for home-scale, reader-constructable systems. *Create an Oasis* describes greywater sources, qualities, and quantities, system design considerations, design elements in detail, and health and legal concerns. Nicely illustrated, the hand-drawn pictures assist in getting the information across, supplementing a well-written text.

Included in the publication is a selection chart with 19 systems from simple to elaborate. The chart considers over a dozen variables in choosing the appropriateness of each system. These variables include ease of construction and use, energy requirements, filtration rates, costs, and legal approval. It also lists commercially available devices and useful plumbing parts, as well as the scrounge possibilities for various homeowner-developed greywater recycling systems.

Create an Oasis also describes the household water cascade, an appropriate sequence of water usage which proceeds from pure water for drinking and cooking through various other uses such as bathing, laundry, and flushing toilets. After being used in these ways, water can be treated biologically and returned to the natural water cycle.

In addition to publishing *Create an Oasis*, Art Ludwig, ecological designer and creator of Oasis Products, has developed a line of detergents which break down into plant food rather than plant toxins. He distinguishes between his products, which he calls "biocompatible," and the multitude of "biodegradable" products which may still be harmful to plants. Most of the organic matter that goes down the drain—small food particles, grime, and skin cells—are plant nutrients, so why contaminate a useful resource with soaps that render greywater useless? And why mix unusable toilet-flush water with valuable greywater?

Sodium, boron, and chlorine are some of the ingredients of standard household cleaning products that can build up in your soil and be toxic to plants. When recycling any household greywater for use in the landscape, it is

important to select for cleaners that won't leave any toxic residues. Greywater is not recommended for lawns or foliar spraying of vegetables, but is useful for fruit trees and shrubs, and ornamentals. Subsurface irrigation, where human contact with pathogens is practically eliminated, is useful in many situations.

I recommend this bulletin to anybody who already tosses out their dishpan water rather than wastes it down the drain; anybody who aspires to an owner-designed and/or built home; anybody who wants to be more ecologically responsible; and to the rest of us who strive for better days when clean water, our most precious resource, is not squandered insensitively. Δ

How to Become the Bank

Review by Mollie Curry

THOMAS H. GRECO

New Money for Healthy Communities

Tucson, 1994. 201 pages. \$15.95

For anyone interested in positively transforming society, *New Money for Healthy Communities* is a valuable how-to-do-it resource for creating community-based systems of exchange. In this USA-focused book, Greco writes from the perspective that healthy communities form the economic as well as social bases for a sustainable and humane world, and that the current monetary system prevents the development of healthy community economies.

Fundamental to Greco's argument is the belief that serious flaws are inherent in the way money works at the moment. He contends that new equitable, non-political systems of exchange must be created on the community level in order for people to have a future of "freedom, dignity, health, and realization of human potential." He goes on to tell how to create democratic, locally-controlled, community-based exchange systems that would complement (not replace) the current money system.

The book gives insightful and for the most part easy-to-understand explanations of the functioning and malfunctioning of the global monetary system. It gives historical and working examples (drawn from all over the world) of localized currencies and cashless exchanges, with numerous illustrations of real bonds, notes, and coupons. This information provides a basis for understanding how to create a new exchange system in your own community (or how existing ones you could get involved with might operate). Greco devotes ample space to detailing the important elements for success and the possible pitfalls involved in creating a variety of alternative exchange systems, such as LETS (Local Employment and Trading Systems), mutual credit systems, or commodity-based currencies. Throughout the book, he references a variety of

useful texts and uses simple diagrams to clarify complex points.

A key premise is that our current monetary system is founded on unsound principles of money issuance, which result in social injustice, undermine democracy, and lead to unnecessary degradation of the planet. In his explanation of how money works throughout the world, Greco explains how much of today's money is created improperly, being based on nothing of value. As he says in the first section of the book, entitled "Monetary Realities and Official Illusions," "Real value comes from the efforts of producers... Money issued to finance goods, in or on the way to market, is legitimate... Money issued to finance government debt is valueless..." (pg 77). He goes on to explain how the improper issuance of money causes inflation and also why there is never enough money for all borrowers to pay off the interest on all loans: why necessarily, some people must default. He also explains how the current system inevitably concentrates money and power in the hands of an elite class of non-producers.

The section devoted to describing and analyzing local currencies and cashless exchange systems of the past and present is particularly interesting. These real-life examples, such as scrip of the Great Depression and present-day Ithaca HOURS, show how alternative systems have worked (and not worked) in the past and also how they are working in the present. Showing how community-based

money revalues local goods and services and forms the basis of local prosperity, the illustration of real alternatives to national currencies strips away the false veil of scarcity that accompanies centrally-regulated finance.

Knowledge is power, and most people are ignorant of the inner workings of the monetary system. In enumerating the proper bases for the issuance of money and details of how to go about it, Greco empowers people to reclaim control over their financial lives, and ultimately, the life and health of the communities in which they live. This book does not advocate some kind of tumultuous overthrow of the current money system. Instead, it describes and envisions complementary systems of exchange—ones that can exist side-by-side with the system as it stands (and which may then go on standing after it falls...).

Greco, a community economist, writer, editor, and consultant (formerly with the venerable Pennsylvania non-profit School of Living and now with the Tucson-based Community Information Resource Center), does an admirable job of elucidating complex economic principles and popular fallacies. As Greco himself says, this book "proposes specific methods for transforming the exchange process, methods which are rational, equitable, and empowering, and which can be easily implemented at the local level by small voluntary groups" (pg. xi). This book should be on every community organizer's shelf. Δ

A Place for People

Review by Peter Bane

DAVID ENGWICHT

Reclaiming Our Cities and Towns: Better Living with Less Traffic

New Society, Philadelphia, 1993.

190 pages, \$12.95.

"The amount of road space to be provided in a city is not an engineering question. It is first and foremost a question of social justice."

This is a book of ideas. It is about the assertion of particularity over homogenization, of the primacy of place over the tyranny of constant movement. How refreshing to come across a book which argues for technological choices from an ethical perspective.

Engwicht, a father, teacher, and neighborhood organizer from suburban Brisbane, Australia, backed into his role as an ecology theorist when his wife insisted that they go to a public meeting opposing a local road-widening project. That was 1987 and in the subsequent five years he dove into the study of what makes cities and towns successful. That journey took him across Australia and around the world; this book is the fruit of his learning.

Engwicht's select bibliography lists 144 books and journal articles including citations

from Saul Alinsky, Charles Birch, Matthew Fox, Lewis Mumford, Ivan Illich, James Gleick (*On Chaos*), Jacques Ellul, Jane Jacobs, and Sim van der Ryn. *Reclaiming Our Cities and Towns* discusses chaos theory and fractal mathematics, new urban villages, and car-free zones. On such a broad base of cultural awareness, the author asks the question, "What are cities for?" It is an obvious and timely inquiry at a point in history when urban dwellers are about to become the majority of humans, and when cities' demand for resources is threatening the balance of life on earth.

In reminding us that cities are places of exchange, Engwicht returns us to the fundamental purpose for which humans gathered together from the beginning of history and why we will continue to do so. He also names the automobile and the growth of traffic as the main culprits destroying cities today. This is not a new conclusion, but one which the world's decision makers are still loathe to hear. Too much profit for the present economic powers is at stake. More important to the reader however, Engwicht explains—in lucid prose and graphic diagrams illustrating the fragmentation of city space by roads—exactly how the automobile destroys human community. In ecological terms, the auto is a parasite, literally displacing human habitat (housing and shops converted to roadways).

In the past, cities succeeded as a human enterprise because they maximized exchange and mini-mized travel. Since the end of World

REVIEWS, continued

War II, this structural and locational advantage of cities has been eroded by the steady increase in area, resources, and residents' time devoted to automobile traffic. Unlike more social forms of transport (trams, cycling, buses, subways), cars radically isolate people from each other. Thus, auto traffic creates a zone, dedicated solely to movement, which is devoid of the exchange-rich possibilities of all other urban space. And like a cancer, that zone of movement grows, eating away the life of the city.

Engwicht reveals the developmental process of traffic growth: at first, increases in mobility and exchange are possible when traffic is light. This leads to further increases in traffic as more individuals seek to become "auto-mobile" to take advantage of the increased opportunities which auto transport initially affords. However, this very process leads to congestion which becomes self-reinforcing: more cars demand more roads, displacing shops and homes, reducing the city's exchange capacity, requiring longer trips for services and contacts, leading to more time spent in cars, and on and on... In the end-game of auto domination, "people destroy their destinations in going to them."

Engwicht explores the meaning and the function of "place" and finds ten key ingredients, qualities such as making us more present to other people and to the environment, encouraging a sense of fantasy and play, and connecting to the past. A sense of place, he asserts, is essential to encourage ecstatic exuberance, preserve a sense of mystery and adventure, and affirm our identities. Absent these critical bulwarks of cultural stability and personal sanity, our cities become social deserts, ridden by crime, and our lives become impoverished and alienated.

The author begins a discussion of solutions by describing what he calls "Eco-relational thinking." This is big-picture or holistic thinking, something we as a society are learning again to do after a generation or more of mechanically induced amnesia. To know a place we must be *in* it. The notion of objective observation is false. It doesn't work in particle physics and it doesn't work in urban planning. So Engwicht recommends role play, self awareness, and interaction with others on the scene as starting points for describing the healthy functioning of cities: how does it feel to be in this place? What is going on? What are the relationships between the place and its occupants? Of course, this level of participation and awareness can only be upheld by people close to the action. Decentralizing government is necessary to changing the way cities are created and maintained. And above all, he urges, "go for a walk around your neighborhood!"

Engwicht proposes a seven-year moratorium on the widening of roads in built-up areas and a reinvestment of funds into community infrastructure. Citing Fresno,

California's program from the late 1970s, he points out that \$60 million spent on only six miles of freeway could have instead created a million dollar community center with new pools, gyms, club rooms, and libraries in existing schools in each of the city's 60 neighborhoods, eliminating much of the need for auto transit.

Giving suggestions for building healthy neighborhoods, strengthening the city center, and offering exchange-friendly transport, Engwicht supports his proposals with observations from his travels in Europe, Australia, and America. I found this book fresh, well organized, full of bright hope, and recommend it to the reader as a good synthesis

of new paradigm thinking for urban reform. It is a short and accessible text which goes to the heart of the problem facing our urban civilization. It leaves unanswered many questions about relations between cities and the larger ecosystems upon which they depend for water, food, and other concentrated resources. For a discussion of those issues, the writings of Richard Register, Arthur Getz and others have been more useful. And for specific design solutions to the challenge of urban agriculture, there is still too little in print. Following Engwicht's ideas, however, would begin to rehumanize our auto-damaged urban areas and so perhaps open a space for the healing of our auto-damaged culture. Δ

from the Regions...

Nicaraguan Permaculture Demonstration Begun

This past winter and spring (1995), a new permaculture demonstration site was founded in the small town of Teotecacinte, near the northeastern border of Nicaragua. After nearly two years of planning and preparation, Jerome Osentowski, director of the Central Rocky Mountain Permaculture Institute (CRMPI), and a host of other permaculturists, including Michael Moore and Dan Howell, broke ground in an intensive six-week effort.

The objective of the project is to create a one-acre demonstration site to serve as a model of sustainable agriculture for local farmers. The project focuses on a few simple soil-creating strategies, including mulching, green manuring, alley cropping, composting, and polycultural plantings.

These techniques are both ecologically sound and economically accessible to the local population. These factors are very important, for as much as 70% of the agricultural land around Teotecacinte is currently out of production due to the inaccessibility of credit and the high cost of commercial inputs (such as seeds, chemical fertilizers, and pesticides). These high prices, coupled with the relatively low prices of corn and beans (the traditional cash crops), have severely crippled the local economy.

The initial work on the site included fencing, plowing, and mulching. The area was fenced with barbed wire, but set up in such a way as to leave room for a living fence system to be established later. In this fencing system, three or four different varieties of living fence posts will be planted in conjunction with vines to create a barrier to animals while adding to the biological diversity of the site.

A house of 40 sq. m. with an attached patio is also being constructed on the site. The structure will be adobe with a tile roof and will serve as living quarters for the promoters and workers on the farm. The patio will serve as a classroom for future workshops. All the work has been contracted out to local builders.

In an effort to ensure the continuation of the project, Osentowski, Moore, and Howell have enlisted the help of local farmers. Angelito, a local promoter for the Dutch Agroforestry group Pie de Monte, has been contracted to do nursery work on the demonstration farm. He is growing 3,500 nitrogen-fixing trees, composed of about 20 different varieties. Angelito's experience with composting also enables him to teach composting classes at the farm.

Byron, a student from an agricultural college in Managua, has been contracted to grow 20 varieties of nitrogen-fixing cover crops for the initial seed bank at the demonstration site. He is growing these crops at his father's farm in Teotecacinte. The intentional reliance on local resources reflects CRMPI's belief that successful development is contingent upon the involvement and enthusiasm of the local people. Δ

If you are interested in receiving CRMPI's newsletter or supporting the Teotecacinte project, please contact CRMPI at PO Box 631, Basalt, CO 81621, tel: 303-927-4158. Major sponsorship for the project's first year came from Wendy Emrich of the Threshold Fdn. Financial support for the second year is being sought. The project also needs volunteers.

Pc Group Spawns in No. California

Inspired by this summer's West Coast Permaculture Convergence at Sandy Bar Ranch in Orleans, California, a new permaculture group formed in coastal Humboldt County, a rugged redwood forested region twice the size of Rhode Island. Members of the Humboldt Permaculture Guild have already sponsored an information booth at the North Country Fair in Arcata. They plan to do more educational outreach along the North Coast and to produce a newsletter. Contact Dave Dickinson at P.O. Box 231, Garberville, CA 95542-0231, or E-mail him at: ddick95@aol.com.

from the Regions...

Mangos in Egypt

Michael Howden

In March and April of 1995, I went to Egypt on a project sponsored by the U.S. Agency for International Development (U.S.A.I.D.) with Dr. Robert Faust, an agro-ecologist/agronomist from Honaunau, Hawaii. We were to consult on mango culture there, especially floral malformation, disease and insect problems, etc. From the first invitation, I looked forward to immersion in an Islamic culture and hoped the project could fulfill some of my spiritual duty toward the commonality.

From the very first farm visit, it became clear that both the choice of mangos as a major crop (more than 50,000 acres in Egypt) and the methods of production were faulty. I don't think I saw one truly healthy mango tree in the nearly 40 farm visits we made.

Mango is primarily a tropical crop, and when grown in a Mediterranean or desert climate, especially where temperatures during flowering are less than 10° C, it is subject to floral malformation and other problems. In Egypt, furrow/flood irrigation in the orchards keeps the tree roots damp, leading to root rot (phytophthora). We found mangos often interplanted with mandarin oranges, which need even more water, compounding the problems of soil dampness. Also, water tables were often less than a meter below the surface because the major irrigation canals were higher than the fields.

Most of the mangos we saw were too closely planted, with little light reaching the lower branches. Trees were allowed to grow well beyond hand-harvesting height, and fruit was harvested after falling to the ground. Pruning was very crude, looking as if it had been done with a machete or *bolo*, leaving jagged cuts not sealed, and inviting disease and weakness into the trees.

Everyone seemed to be looking for the chemical solution. In response to concern about rapid decline (often simply root rot), we were asked "what can we drench the tree with?" Barefoot young men in shorts and short-sleeved shirts applied fungicides without any safety equipment, spraying 30-40 feet up into the tree while the poison mist settled on them. Needless to say, labor is cheap, and though Islamic law mandates the care of workers, safety measures were almost completely absent. In commenting on these conditions, it was helpful to know the religious law, (the Shariat), which urges supervisors to treat workers like family, with kind intention. Employers are supposed to see to their workers' immediate needs, not to their harm. References to the future of the race and the nation struck home.

A major problem is the Aswan High Dam, which controls the flow of the Nile. The dam prevents the annual flooding which once re-mineralized the soils of the Nile basin and delta and added much-needed humus and other organic matter to the desert soils. Without the input of organic matter from flooding, soil structure and fertility have suffered. Faced with this and the usual U.S.A.I.D.-inspired propaganda, traditional farmers have embraced chemical methods, which, when applied to weakened monocultures, simply do not work. The tremendous mineral deficiency and the issue of nutrient tie-up from the use of chemical fertilizers and amendments both remain un-addressed. In addition, soil compaction and salting are affecting the health of the plantings.

With 70 to 80% of their food imported and the population growing rapidly, the situation in Egypt is grim. Great changes must be implemented for the survival of the people. Nearly the entire population lives on less than 2% of the land, in a narrow strip along the Nile, almost the only source of water in the region. Care of the land and the great river are fundamental to the Egyptians' survival as a nation.

Unfortunately, most of the monies coming into the country are held by the top echelons of society, and are often expatriated to private accounts in Switzerland. Business as usual, and farmers' fears of losing whatever small incomes are available to them, freeze innovation, leading to tremendous stagnation and inability to change in the face of almost overwhelming need.

Our aid programs seem designed to feed the bureaucracy, not the nation. The Cairo office of the U.S. agricultural aid program was top-heavy, and the staff not particularly knowledgeable about agriculture. Part of our

project mandate was to discuss biological agriculture, though, as it turned out, no effort was made to allow us to visit biological (what we would call organic) farms there, or to connect with the Egyptian Ministry of Agriculture.

Our experience seems to indicate that the money coming into Egypt through U.S.A.I.D. barely reaches people in the economic middle and well-nigh evaporates before it reaches peasant farmers, the *felahhin*. Nearly every farm we visited was owned by a wealthy person, with the exception of those few owned by farm extension agents. During the era of former President Nasser, land was redistributed from the large estate owners to the peasants. Over the past decade or more, land ownership has reverted once again to the wealthy. People often cite better management as the reason for the re-emergence of large estates. However, co-operative effort among community farmers, large and small, would seem more likely to bear fruit and promote social justice.

The strength of the country is, of course, in its people. For all the pressures of contemporary life, Egyptians are, by and large, a most gracious and caring folk. Traffic snarls, especially those in Cairo, would lead to massacres in most of the United States, but the Egyptians face them with equanimity.

Our best hope may well be person-to-person diplomacy and aid, based on mutual concern and caring. As usual, though, even the best-intentioned programs recruit persons who show a fundamental disdain for Islamic culture and society. It is important to understand and form real and sympathetic links to the peoples with whom we are working. Whether in the "Third World" or in the United States, the situation of many persons is somewhat desperate. The work in sustainable agriculture, especially permaculture, the basis of which is not simply technique, but ethics, gives us a rare opportunity to help build a society in which truly "Thy Will Be Done." Δ

Michael Howden operates Kanahena Farm & Nursery at Ulupalakua on the island of Maui.

Comments on the Two-Thirds World

Mike Feingold, Chris Evans
and Michael Crofoot

Permaculture gains many lessons from the wisdom of traditional and indigenous systems. Societies based on subsistence agriculture are rich in such systems. They have developed and sustained themselves with minimum need for or use of external resources. Instead they use highly appropriate technologies developed locally, and follow closely the patterns of nature and the principles of ecology. Such areas, typically in the tropics and sub-tropics, are also a rich bank of biodiversity which has enabled many sectors of the "richer" world to develop economically and agriculturally. Because these older cultures do not conform to Western ideals of high consumption and

maximum economic growth and do not subscribe to the scientific viewpoint, we often term them backward and under-developed, but we do so only through our ignorance (and at our peril).

The concept of "aid" to the "under-developed," "developing," or "third," world can create fundamental misconceptions. The phrase "Two-Thirds World" has come into usage because it more accurately describes the nations and sectors of society, comprising approximately two-thirds of humanity, who live in resource-poor conditions. "Resource" here can mean money, land, education, skills, or any form of wealth needed to create and maintain a standard of living which fulfills basic needs. Further, these standards should be sustainable, i.e. ecologically sound,

economically viable, socially just, and considering the needs of the individual, community, and future generations. Development, if it means anything at all, must address the creation and distribution of resources with these ends in mind.

From this view of "development," we can see that there are elements of the Two-Thirds World in every nation where people do not have access to the various forms of wealth they need. Strategies to create or secure these resources are therefore needed in the north, south, east, and west, and underlie the principles of permaculture work in the Two-Thirds World. We have made a conscious decision to apply permaculture to the poorest sections of society (and land) because that is where the need is greatest. We also believe that there is

much the over-consuming world has to learn from those who traditionally conserve the resources upon which they depend.

Permaculture in Nepal

The strategies for development in each area vary with the climate, culture, and availability of natural resources. Nepal, with its wide range of cultural and geographic conditions, calls for many different approaches to development. Throughout the Jajarkot district for example, there are still relatively healthy forests close to villages, though these are declining fast. Therefore, local farmers are generally not motivated to implement agroforestry systems. In the town of Gumi (Surkhet district), however, the nearby forest has disappeared, and agroforestry systems are in greater demand. Most farms in the

Kathmandu valley are within an hour of the city center, and many of these farmers have waged jobs in addition to their farm income. Cash crops such as vegetables, and the marketing of produce are at the top of their priorities. In Jajarkot there are few if any markets. Therefore, if cash crops are grown, they need to be storable and transportable. Products such as ginger, chilies, and processed, high-value goods such as honey, seeds, or ayurvedic medicines can survive the often arduous trip to urban markets where they bring a good price. △

This piece excerpted from the Grihashthram Newsletter: Progress Report for the Jajarkot Permaculture Program, c/o NECOS, P.O. Box 3724, Kathmandu, Nepal. Fax: 977 1 225277.

Permaculture and Development in Guatemala

Susana Lein

I came to Guatemala via the Peace Corps. In the beginning I worked for the government agricultural agency, DIGESEPE, which, unfortunately, provided services almost exclusively to the privileged and landed *finqueros*, not the needy *campesinos* with whom I wanted to work. In order to reach the peasant farmers in the *aldeas* (settlements), I began collaborating with Altertec, then a new non-governmental organization. Altertec had attracted the interest of my *Cuerpo de Paz* (Peace Corps) program director, Flavio Linares, a respected Guatemalan agronomist specializing in integrated pest management. Under his direction and with Altertec's agreement, Peace Corps in Guatemala developed its first working relationship with a non-governmental, non-profit organization in an agricultural program.

In February '95, ten new Peace Corps Volunteers began working as IPM extension agents—each with an Altertec counterpart—and were trained in the principals of permaculture. One of Altertec's founders, David Hammond, directed an intensive 3-1/2 month training of these volunteers; I assisted him in the field training. This is a positive step forward for the Peace Corps in this country. While confronting the realities of poverty in Guatemala, these volunteers are also learning a truly sustainable means for living and for the survival of planet Earth.

Permaculture finds ready integration with the still-intact cultural practices of much of Guatemala's large indigenous population of subsistence farmers—such as fallowing, green manuring, honoring and utilizing biodiversity, and recycling of wastes. At the same time, strong social and political forces work against the *campesino* traditions; we must recognize these in order to be effective locally.

The pressures of population growth and the fact that the vast majority of good agricultural lands are owned by a privileged few have resulted in grave deforestation and soil erosion: the majority of the people have been pushed into an unsustainable cycle of slashing and

burning forests—often on steep mountain slopes—to grow their staple corn and beans. A continuing legacy of the Spanish Conquest, 80% of Guatemala's arable land is owned by 2% of the population. (1) What incentive is there to improve or conserve the land, or even one's own house, if tomorrow it can be taken away by someone much more powerful? Here in Alta Verapaz I've witnessed this happen—suddenly, even after a *campesino* has been decades on a piece of land. Today 83% of the people do not have sufficient land to feed their families, forcing them to work on the plantations of the privileged—producing coffee, bananas, cattle, cotton and increasingly, non-traditional vegetables for export. (2)

Since the early 1980's, nontraditional vegetable crop production for export (much of it to the USA) has been the hallmark of agricultural development in Guatemala. In fact, it has been largely unsustainable and destructive to the environmental and economic base of the poor, many of whom have ended up poorer as a result. (3)

Chemical-Dependent Monocultures

Export crop production has meant intensive, unregulated application of chemical fertilizers and toxic poisons in annually increasing amounts—by unprotected, often barefoot *campesinos* who cannot read chemical labels or warnings. Unregulated chemical companies and agricultural suppliers promote pesticide over-use, recommending inflated and continuous chemical applications—often without regard to the level or even existence of pest problems.

Intensive monocultures lack the diversity, environmental balance, and natural pest control of the traditional *milpa* field (described in *BOX*). With traditional crops, land was left fallow for several months each year to regenerate with green manures. The land now sustains several densely-planted vegetable crops per year with little opportunity for regeneration. The results have been increasing soil sterilization and decreasing soil fertility. Not unlike drug addiction, the soil loses its natural

resistance and requires increasing amounts of "magic powders" to continue producing.

Guatemala's peasant farmers often face the rejection of their export crops because of minor imperfections, insect damage, or chemical residues—external market standards they do not comprehend. The export broker gives no guarantees of acceptance nor of price. The *campesino* must often accept a fraction of the market price, ending up with more debt—to the export shipper and to the suppliers of chemicals, seeds, and equipment. (3) In Alta Verapaz I have seen market prices on some vegetables fluctuate 1200% during the past 4 years.

Sustainable Means Locally Appropriate

Obviously, conditions of the global market greatly affect ordinary people everywhere. It has become popular to talk about "sustainable development" without acknowledging that true sustainability is unattainable within the current system of unlimited growth and development. Sustainable agriculture promotes local self-reliance and self-sufficiency while building soil fertility, biodiversity, and ecological balance. Adaptation of technique to the local conditions, culture, economic realities, and materials of a place is of utmost importance. To be sustainable and appropriate, any new technology must be within reach of the poor—not just financially, but also educationally and culturally: it must be locally understandable, maintainable, and repairable. Appropriate technologies use local inputs, energy, and materials. They decrease dependence on outside imports such as agro-chemicals, imported equipment, seeds, and completely foreign standards and knowledge.

Altertec in Guatemala

In response to the need for a truly sustainable agriculture, a non-governmental, non-profit organization called Altertec ("alternative technology") was started with an Inter-American Foundation grant in 1988 and is now almost entirely staffed by local Guatemalans. Using simple, non-formal education techniques such as analogies from common *campesino* experience, Altertec has

Guatemala, cont'd

successfully trained hundreds of small farmers across the country in organic and sustainable agricultural practices. The training program requires participating farmers to attend 18 courses over a three-year period. Each 3- or 4-day intensive covers a specific component of permaculture using on-farm demonstrations and *practicums*. Participating farmers soon begin to adopt sustainable practices on their farms. Many of these people have developed model permaculture farms and have in turn become promoters for the grassroots growth of the project. In October '94 Altertec hosted an exciting *Encuentro Nacional* where more than 100 of Altertec-trained organic farmers from all over Guatemala laid the groundwork for national organic produce certification.

To aid in Altertec's transition and growth into Alta Verapaz, a cool, humid highland region, I am managing and working on an applied permaculture farm which trains local farmers. In January '95 we began a three-year series of permaculture courses with small farmers of this region. Some of the things we are teaching and demonstrating at the farm are:

•**Organic soil fertility:** Maintained through use of green manure cover crops, Nitrogen-fixing trees (NFTs), liquid fertilizers (including plant extracts and human urine), mulches, addition of organic matter, manures, and composting—including dry latrines and earthworm compost with the red wiggler worm.

•**Soil conservation:** Instruction in the use of the simple "A-frame level" to find contour lines and degree of slope, terracing, and live barriers along the contour using NFTs (like *Cajanus*, *Tephrosia*, and *Crotalaria*) and local understory plants which help trap and hold the soil. With regular prunings, these barriers also provide organic matter for soil improvement or forage for livestock.

•**Site biodiversity:** Topics covered include reforestation, NFTs, fruit trees, perennial and flowering plants, intercropping, crop associations and rotations, alley cropping, edible-leaved plants and medicinal herbs, integration of sustainable livestock production, seed selection, imitating natural ecological cycles, etc.

•Integrated Pest Management

techniques: Insect identification and balance, discouraging pests and attracting beneficials, natural homemade pesticides, cultural practices, timed plantings, etc. are all demonstrated or discussed.

•**Appropriate technologies:** We teach the ins and outs of dry composting latrines, solar box cookers, fruit dryers, water heaters, and small seedling greenhouses, as well as nutrition and food preservation and canning techniques. In surrounding *aldeas* (settlements) we've built numerous brick *Chefina Mejorada* stoves, which use half the firewood of the open ground fire on which most families cook.

•**Sustainable livestock integration/ homemade chicken feed mix:** An important component of the permaculture farm program has been to augment nutrition and thereby

production of household poultry from locally available resources. Most household poultry get left-over tortillas and corn, and are unproductive from the lack of a balanced protein diet. A good protein balance for poultry ranges from 15-20% (layer hens-broilers). Families in remote *aldeas* cannot afford to buy the agro-company's feed nor carry it across mountain trails on their backs.

Over the past few years, I've developed a homemade chicken feed mix which utilizes locally-adapted or "wild" sources of protein, carbohydrates, vitamins, and minerals. Many "wild" *monte* sources are plants (often yellow-flowering) utilized by wild birds; the seeds and/or leaves simply need to be harvested or made accessible to household poultry. Of course, in any plant the seed/bean has the highest concentration of protein. The large seedheads of domestic sunflowers are an excellent source of protein and do not need large areas for cross-pollination like corn, but can go along fence-rows and unused spaces around houses. Certain leguminous nitrogen-fixing trees provide a source of high-protein feed and can help stabilize the soil when planted as live barriers on cropped mountain slopes. The *Gandul* (*Cajanus*, pigeon pea) tree has become especially popular with peasant farmers in this area; they've noted the abundant harvests of the trees here on the farm which produce a dependable supply of beans twice a year. Seedlings we planted in several *aldeas* are now producing seeds—providing chicken (or human) feed as well as a permanent seed source to plant more trees.

Inexpensive chicken houses and moveable corral areas (made from the local bamboo-like *carizo*) allow chickens to run and supplement

their diet with high-protein insects and *monte* plants without damaging the gardens. After a year or so the chicken corral can be moved and the old area cropped. *Cajanus* trees and sunflowers planted around the edges of these corrals provide great sources of protein with a minimum of labor.

The Alta Verapaz permaculture farm inspires local people to adopt sustainable practices. Abandoning the old and familiar for new, locally unproven techniques is risky. Seeing something work on the demonstration farm gives people confidence that it can make their life better, not worse. Δ

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From her origins on a sheep and vegetable farm, Susana Lein went on to study land planning and architecture. She began her community garden work reclaiming undeveloped city lots for the South End Garden Project (Boston Urban Gardeners), while learning about permaculture through the New Alchemy Institute on Cape Cod. To learn to live simply and sustainably, she left the U.S. Since 1991 she has been working with peasant farmers in the Alta Verapaz highlands of Guatemala. She may be contacted at Valle Patal, Tactic, Alta Verapaz, GUATEMALA.

A Cautionary Checklist for International Agricultural "Development" Workers

Do we aim to replace or to improve upon indigenous agricultural traditions and knowledge? We can work from and improve upon a wealth of local expertise—by respecting the values upon which it is based. After all, green manures, fallowing, and biodiversity were not newly developed to repair the spoils of the green revolution.

The indigenous Guatemalan *milpa* cornfield has an incredible diversity of plants—beans, squash, coffee, *maguay*, chilies, trees, medicinal herbs, and edible *monte*—"weeds" with more vitamin and iron content than our coveted spinach. Development workers would do well to study indigenous food sources.

Indigenous seed selecting/saving has focused on diversity, adaptation to local conditions, and natural resistance, not solely increased production. The peasant farmer's seeming resistance to "progress" is often traditional wisdom: what good is a "super-producer" hybrid if it depends on chemicals or the whole harvest fails against nature's elements, or if its seed can't be saved, hooking the *campesino* into buying from the agro-companies?

Who will really benefit from the new innovation—in whose interest is it ultimately? The presumption of a country's overall gain from injecting new technology (as in the "trickle-down" theory) often benefits the minority while causing more hunger and poverty for the majority. As E.F. Schumacher said 20 years ago, time and labor-saving innovations or mechanizations are incongruous in a terribly under-employed country; they do not mean increased production for the people but increased production requiring less people. (4) Is our goal increased production or less poverty? Who controls the market and consumption? Increased production may help the "nation" (government, minority elites) by increasing exports to pay foreign debts, but will it help Don Alfonzo feed his family?

"If you came only to 'help' me then you can go back home; but if you consider my struggle as part of your own survival, then perhaps we can work together."

—an Aborigine woman from Australia

EVENTS

Permaculture Design Course Northwestern Pennsylvannia

Date: August 2-18, 1996

Location: Three Sisters Farm,
NW Pennsylvania

Description: Located in the Allegheny bioregion of PA, Three Sisters Farm (TSF) is a year-round market garden centered around an innovative structure called a bioshelter. Begun in the early '80s, permaculture principles continue to guide the evolution of the farm. The study site includes TSF as well as a nearby woodland area. Successful participants will earn their Permaculture Design Certificates through a combination of course work, hands-on projects, and design work.

Instructors: Darrell Frey and another, to be announced.

Contact: Three Sisters Design
134 Obitz Rd.
Sandy Lake, PA 16145
412-376-2797



Students at Fundamentals of Permaculture Course help create a solar shower for the EcoVillage Training Center. Learn hands-on skills for ecological living: EVTC and Farm staff offer 25 years of experience in low-impact, high-satisfaction lifestyles.

Member, Global EcoVillage Network

Community Co-Design A Permaculture Practicum

March 1-9, 1996

Earthaven Village at Black Mountain NC
Chuck March, Peter Bane, Andrew Brown & guests
\$325 includes tuition and materials

The Earthaven Center for Cultural Transformation offers a unique opportunity to practice applied permaculture design in the creation of a site plan for Earthaven Village. Bringing together more than a half century of experience in landscape ecology, community dynamics, and permaculture education, the teaching team will mentor a select group of motivated participants as they walk through the actual site planning and community development process for North America's first planned permaculture village. The course will emphasize field work on the 320-acre village site, combined with presentation of global examples and conceptual and practical tools for eco-village and community design. Completion of this course and the prerequisite Fundamentals of Permaculture course meets the requirements for a Permaculture Design Certificate.

Course limited to 12 students. Registrants will be assisted to make their own arrangements for accommodation and board. Lodging is available in the Asheville-Black Mountain area, some of it with Earthaven community members or as camping at the village site. To register and receive detailed information, please send a \$50 deposit (non-refundable) with name, address and telephone to: Permaculture Activist, attn: Practicum, 205 Jones Rd, Leicester NC 28748. For further information, call or fax Chuck or Peter at 704-683-4946.

EcoVillage Training Center at The Farm, Middle Tennessee Permaculture, Strawbale, and Ecovillage Design 1996 Courses

All four of these events will be held at The Farm's Ecovillage Training Center in Summertown, TN. They all combine hands-on activities, lectures, and discussions. For more information, write or call: Permaculture Course, Attn: Libby Fox, PO Box 90, Summertown, TN 38483-0090. Tel: 615-964-4324, /-2200 fax.

E-mail: thefarm@gaia.org. OR <http://www.gaia.org/farm>.

Fundamentals of Permaculture

Date: April 6-14, 1996

Instructors: Peter Bane, Chuck Marsh,
Patricia Allison,
Andrew Brown, and guests

Cost: \$575 includes meals, dormitory lodging, tuition, and materials. \$100 non-refundable deposit reserves a place. \$50 discount for registering early or with a friend.

This is the fourth Fundamentals course offered at the EcoVillage Training Center. Join us for eight days of fun-filled learning, community building and Middle Tennessee spring splendor!

Permaculture Design Practicum

Date: October 12-20, 1996

Instructors: Chuck Marsh and
Peter Bane

Cost: \$575 includes meals, dormitory lodging, tuition, and materials. \$100 non-refundable deposit reserves a place. \$50 discount for registering early or with a friend.

The Southeast's foremost permaculture designers will lead an experiential-based program in integrated landscape and community design. Completion of the fundamentals and practicum courses fulfills the requirements for the permaculture design certificate.



An Ecovillage Design Workshop

Date: April 15-17

Instructors: Max O. Lindegger and
Declan Kennedy

Cost: \$200

Description: Max Lindegger, trained in Switzerland as a mechanical engineer, is co-designer of Crystal Waters, the world's first permaculture planned village. He has worked in more than a dozen countries, has taught permaculture since 1980 and has been at the leading edge of global sustainability for nearly two decades. Declan Kennedy, an Irish architect, is co-founder of the Permaculture Institute of Europe and co-designer of Steyerberg, a permaculture village in northern Germany. This is an event not to be missed!

A Strawbale Buildshop

Date: May 3-5

Instructors: Joanne DeHavilan and
David Eisenberg

Cost: \$225

Permaculture Design Course with Bill Mollison North Central Texas

Date: April 13-26, 1996

Location: Fossil Rim Wildlife Center
near Glen Rose, Texas

Description: For the third year in a row, Mollison and Pittman will be offering a two-week design course atop the beautiful bluffs of the Fossil Rim Wildlife Center. Participants will study the ethics and principles of permaculture, learn of specific design systems for various environments, and earn their Permaculture Design Course Certificates! The course is a great opportunity to meet other people on similar journeys and to develop a network of friends and information that will help make sustainable living a reality.

Instructors: Bill Mollison, Scott Pittman

Cost: \$795 plus lodging. \$750 if paid before March 21. Cabins (\$175/person) and camping (\$75/person) are available.

Contact: Cross Timbers
Permaculture Institute
Route 1, Box 210-A
Glen Rose, TX 76043
817-897-9402, Fx 1-3785
E-mail:

72530.1353@compuserve.com

Permaculture Design Course Northern Arizona

Date: May 25-June 2, 1996

Location: Navajo/Hopi Reservation
northern Arizona

Description: Students in this intensive design course, sponsored by the Black Mesa Permaculture Project (BMPP), will design and begin implementation of a project at a remote family homestead. BMPP is a project of and by Native Americans with support from permaculturists dedicated to assisting native people in their struggle to restore their lands and improve self-sufficiency. At least half of the course will be taught by local Native instructors.

Cost: Free to Native Americans.
Non-Indians pay \$250. Lodging and living conditions are primitive.

Contact: BMPP
PO Box 26195
Tucson, AZ 85726
520-629-9122, 745-7888 fx

Permaculture Design Course Western Oregon

Date: December 3-17, 1995

Location: Lost Valley Center,
Dexter, OR

Description: This intensive course will allow participants to obtain a working knowledge of permaculture design and implementation. The course will include hands-on projects, lectures, discussions, slide shows, field trips, and design projects. Participants will earn a Permaculture Design Certificate, which entitles them to use the term "Permaculture" in pursuit of livelihood and for educational purposes.

Instructors: Tom Ward, Jude Hobbs,
Rick Valley, and Guests

Cost: \$650-800 sliding scale.
This includes tuition, meals, shared dorm rooms, field trips, some curriculum materials, and a subscription to *The Permaculture Activist*.

Contact: Jude Hobbs
c/o Lost Valley Center
81868 Lost Valley Rd.
Dexter, OR 97431
Jude Hobbs: 503-342-1160

Advanced Design Course with Bill Mollison in Texas

Date: May 3-5, 1996

Location: Glen Rose, TX

Description: Master permaculturists Bill Mollison and Scott Pittman will elaborate on water catchment, livestock, and many other topics in this course. A great opportunity to reunite with previous design course grads.

Instructors: Bill Mollison and
Scott Pittman

Cost: \$350 includes tuition and
whole food meals. Tent sites: \$10/night.
Bunkhouses: \$16/night.

Contact: Cross Timbers
Permaculture Institute
Route 1, Box 210-A
Glen Rose, TX 76043
817-897-9402, 1-3785 fax
E-mail:

72530.1353@compuserve.com

Four Weekends Design Course Seattle, Washington

Date: March 15-18; 22-24;
April 5-7; 12-14

Location: Seattle, WA

Instructors: Michael Pilarski

Contact: Brent Naylor
Seattle Permaculture Guild
2719 Nob Hill North
Seattle, WA 98109
206-284-0794

Patterning Intensive

taught by
Tim Murphy

Observation

Practice

**February 10-13
1996**

*"Patterning is
the application
of the dynamics
of flow in nature
to the design
of homes, farms,
and communities."*

A basic permaculture design course is prerequisite for this course.
For more information contact Karen Brooks, P.O. Box 1479, Tijeras,
NM 87059. Phone 505-281-8425, fax 281-6480.

More Permaculture **EVENTS**

Practical Permaculture Courses Crystal Waters, Australia

Date: January, May, and
September, 1996

Location: Crystal Waters

Permaculture Village, Queensland, Australia

Description: The courses will emphasize
strategies and techniques for self-sufficiency.

Eco-Village Design Workshop Crystal Waters, Australia

Date: Sept 15-23

Location: Crystal Waters

Permaculture Village, Queensland, Australia

Description: Designers and residents
from eco-villages all over the world will share
their knowledge and experiences.

Contact: For either event, send an
International Reply Coupon to:

Jeff Michaels
Green Harvest
52 Crystal Waters
Permaculture Village
MS 16, Maleny,
Queensland 4552, Australia
+61-74-944-676, /-578 fax

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\$2.95 per tape for 6 or more.
California residents, pay 8.5% sales tax.
Allow 4-6 weeks.

4th European Permaculture Conference and Preceding Bus Tour Southern France/Scandinavia to Eastern Europe

Date: May 16-19, 1996

Location: "Les Courmettes," Alpes
Maritimes, 06140 Tourettes sur Loup, France

Description: The conference will focus
on Southern European ideas and projects. The
bus tour will visit projects in Russia, Slovakia,
Hungary, etc.

Contact: Conference:
Les Courmettes
Alpes Maritimes
06140 Tourettes sur Loup
France
+33 9324-1700,
fx 9359-2634

Bus Tour:
Permaculture Institute of Europe
Istedgade 79
1650 København V
Denmark
+45 3131-5694,
fax 3325-7179

The Canadian Environmental Education Catalogue

To meet the growing demand for easy
access to environmental learning resources,
The Pembina Institute has developed a
comprehensive cataloguing service for
environmental education resources and
materials.

The catalogue service provides an
extensive, easy-to-use cross-index that lets you
quickly find the most suitable resources. In
addition to complete bibliographic, price and
ordering information, each listing includes a
descriptive review, prepared by educators, to
help you decide how and where it might be
used in your program.

The Pembina Institute, PO Box 7558,
Drayton Valley, Alberta, Canada T0E 0M0.
403-542-6272.

Permaculture Design Course in Mexico

Date: April 21-May 5

Location: San Miguel de Allende, Guanajuato, Mexico

Description: Earthcare education has developed remarkable learning methodologies and
will apply them to arid area permaculture design. This learning experience will take place in an
Otomi Indian pueblo about 10 minutes from San Miguel de Allende, a 16th century architectural
gem. The instructors, Robyn and Skye, have lived for many years at Crystal Waters, the world's
first eco-village. Participants will receive an Australian Permaculture Institute Design Certificate.
The fee includes accommodation, meals, a course manual, and extensive notes.

Contact: Keith Burnett, fax 52-415-26878

The Permaculture Activist is now soliciting pen and ink drawings (black and
white) for publication with articles or as cover art. Small drawings not connected
with articles but which illustrate permaculture subjects: joy in life, plants, animals,
patterns, etc. are also welcome. Small sums may be paid to artists on publication.
Unsolicited materials will not be returned unless accompanied by SASE.

Plants for Food and Medicine Conference London, England

Date: July 1-6, 1996

Location: London, England

Description: The conference, a joint
meeting of the Society for Economic Botany
and the International Society for
Ethnopharmacology, will be held at Imperial
College, The Natural History Museum, the
Royal Botanical Gardens at Kew, and various
field trip sites in and around London. In
addition to the reading of papers, lecture
subjects will include "Cross-Cultural Plant
Exchange" and "Botany—What's in It for
Drylands Development?"

Cost: Registration: £110 (£130
after May 15); Student: £5/day (£10 after May
15); Conference dinner: £20-30; Field trips:
£10-40. Accommodation available for about £25
in a student residence at Imperial College, at
local hotels for £60-150/night, or possibly in
members' homes.

Contact: The Linnean Society
Burlington House
Piccadilly
London W1V 0LQ
United Kingdom
+44 171-434-4479,
287-9364 fax

E-mail: marquita@linnean.demon.co.uk

6th International Permaculture Conference Perth, Western Australia

Date: Sept. 28-October 7, 1996

Location: Perth, Australia

Description: The theme is "Designing
for a Sustainable Future."

Contact: Linda Riccio
3 Central TCE
Beckenham
Western Australia 6107
+61 9 451-1061 (home),
353-1437 (work fax)

Permaculture Seed and Plant Exchange

Contributor Listing

Name: _____

Address:

Phone (optional):

Garden open to visitors?

Biogeographic Province:

Elevation:

Rainfall:

Hardiness Zone:

Comments:

Instructions

Contributor Listing

Hardiness Zone - USDA, or list average minimum annual temp.

Biogeographic Province - eg. So. Appalachian Mtns./Katúah.

Comments - Use this space to communicate with catalog users, ongoing projects, special interests, etc. Comments regarding the operation of the exchange, design of listing form, etc. are most welcome - please write them on a separate piece of paper.

Plant Listing

Use this form or duplicate; or, follow this format on your paper. We are requesting quite a lot of information. Please supply what you can. The only essentials are a name (*Latin* or common) and details of what is being offered (item, price, availability.) The form is rather cramped for space. Please print small but legibly. A list of abbreviations appears on the back of this sheet. Use several lines per item when necessary.

Plant Listings

[illegible]

Additional Comments:

Abbreviations for Plant Listings

- Name** - Genus and species (if known), common name, cultivar or variety.
- Use** - Ed= edible; M= medicinal; F= fiber; D= dye; Fr= fragrance; B= basketry; C= other crafts (paper, brooms, etc.); T= Timber; NF= nitrogen-fixer; O= ornamental.
- Part Used** - Pl= the whole plant; Hb= herb: the aboveground portion; St= stem; Lv= leaves; Fl= flowers; Fr= fruit; Sd= seeds; Rt= roots (incl. bulbs, tubers, etc.); Bk= bark; Yg= young; Sh= shoots. Many plants will have too many uses or parts used to list them all. Please focus on the uses important to you.
- Habit** and duration - T= tree; S= shrub; V= vine; H= herb; A= annual; B= biennial; P= Perennial; WA= winter annual (germinates in autumn, flowers in spring); SS= self-sows in your garden.
- Size** - Ultimate or relative to time, eg. 3/5yrs. or 40cm/5yrs.
- !!! (Caution)** - W= weedy (excessive seedlings); I= invasive (spreading by roots or runners); P= poisonous, toxic in some way or part.

—The next three columns concern growing conditions. If the plant grows well under "average garden conditions" (full sun to light shade, moist, well-drained and slightly acid-neutral soil), you can write, "A.G.C." here; otherwise, indicate the plant's requirements as follows in the spaces provided.
- Light** - 10= full sun, 0= full shade (under evergreens); give an approximate number, or a range.
- Moisture** - A= aquatic; W= wet; M= moist; X= xeric (dry); D= well-drained.
- Soil pH** - Give pH number or range.

10. **Performance** in your garden or area - += easy, reliable; 0= intermediate; - = difficult, demanding.

11. **Resistance** to pests and diseases - += trouble-free; 0= intermediate; - = susceptible.

12. **Source** of material offered - G= your garden; N= natural population in your area; G (specify place) = another cultivated source; N (specify place) = another natural source.

13. **Item** offered - S= small seeds; LS= large seeds; FS= fresh seeds; R= dormant roots, bulbs, tubers, etc.; RC= rooted cuttings; C= cuttings, scions; P= plant(s).

14. **Price and quantity** - A "standard sample" of small seeds is 25 seeds. The standard price for this is \$1.00 to other contributors, \$2.00 to all others, \$0.50 more for overseas shipping. If this is what you are offering, write ST in this column, otherwise, please indicate the price (to other contributors), shipping cost, and quantity per sample of the item offered. The price to non-contributors will be twice the listed price.

15. **Status** - Leave blank if you have enough of the item to fill all orders; otherwise: CO= available to other contributors only; CP= contributors' priority: item available only to other contributors until April 1 (or other specified date) after which remaining stock will be available to anyone.

16. **Date available** - If the item is available for a limited time, list the date range (eg. 2/1 - 4/1). If one date is given, it will be assumed to be a cut-off date (6/1 = order before June 1).

17. **Comments** - Any additional information concerning germination, culture, uses, specific characteristics of the variety or clone being offered, etc.

Please practice ecologically sustainable seed collecting. All plants and roots offered should be nursery grown. Please return forms by February 29, 1996. Annual membership dues \$7.00.

Sample Plant Listings

Name (Latin / Common)	Use	Part	Habit	Size	!!!	Light	Moist.	pH	Perform.	Resist.	Source	Item	\$\$	Status	Date	Comments
DANAX QUINQUEFOLIUS American Ginseng	M	Rt	PH	6-18"		3-6	M	5-6	+	0	N	95 sd 10/1- 94 sd 5/1-	C.O.			seeds
require 18 mos. for germination (cold/warm/cold) and must be kept moist. 94 seed has been stratified, for germination spring '96.																
APIOS AMERICANA Groundnut	E	Rt	PV	6'+		4-8	M	5-6	+	+	N	Tubers	5/3-		5/1	streamside thickets + meadows
Rosa gallica officin. Apothecary's Rose	M	Fr	S	4'		A.G.C.					Cleveland Bot. Gdn	ST.		C.P.		germination difficult stratify

Permaculture Seed and Plant Exchange

Attn: Joe Hollis, Mountain Gardens
3020 White Oak, Burnsville NC 28714 USA

The \$7.00 membership fee will be reduced or waived for Permaculture Activist subscribers. The catalog will be sent free to all contributing members who are also Activist subscribers and will be available at a reduced rate to non-contributing subscribers.

Letters

Video of Permaculture in Hawaii

Dear Peter:

As you'll see in the enclosed video, I did take up Bill's challenge to produce two episodes of video on Permaculture in Hawaii. The project took a great deal of time and energy, and was meagerly funded (as they usually are), but we do have something to show for the effort.

Since its completion in 1994, I have shown it on public access TV (where I work full time) in Honolulu, as well as on Maui and, more recently, on Kauai. The response has been sporadic, but good, for a subject still obscure to most people. There are also several copies of the video in California and other venues.

Now I would like to enter it in the national Permaculture network, if possible, through the *Activist*.

The videos give an overall view of Kanahena nursery/orchard, a six-acre property located in Ulupalakua, one of the driest areas on Maui. They were designed to answer basic questions on Permaculture and other aspects of sustainable living. More specifically, episode one topics are: defining permaculture; the use of trees on the

property; building ponds as a resource as well as water reservoir; biological pest control; the many uses of chickens and ducks.

Episode two deals with permaculture as an educational system; young children and home schooling in the community; planning and keeping a vegetable garden; growing food for a healthy diet. The video includes interviews with Bill Mollison.

If you can help to promote it in your or any related publications, it will be greatly appreciated. Copies of the video are \$26.00 plus \$4.00 postage.

Sincerely,

Kam Y. Sung
1629 Apt C Lusitania Street
Honolulu 96813
ph (808) 834-0007 x1746 (days)

Schumacher and Permaculture

Peter,

I had the pleasure of meeting Susan Witt and Bob Swann at the Eastern Permaculture Conference in New Hampshire in 1992, as you probably did. I recently had a chance to see their library (E.F. Schumacher Society) in Great Barrington, Massachusetts. Permaculture fits right in with their proposals as well as their projects at Great Barrington and at Lake Baikal in Russia - they are seeking PC interns.

John Irwin
104 Gaywood Dr.
St. Clairsville OH 43950

IMITATE YOUR ANCESTORS

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Hand-Forged Axes

These hefty handmade axes have stout oak handles that slide in like a pick handle. They are thicker at the neck where axe handles often wear out. These rugged axes are used in many places where there are no chainsaws. 7 and 6 lbs. (36" oak handle) and 4 lbs. (30" oak handle). \$35, \$32 and \$28.

Three-Pronged Cultivator

This cultivator, of Japanese design, is excellent for breaking and aerating soil, removing running grasses, and forming raised beds. Comes in 36" or 42" oak handles and 6" or 7.5" tines. 3.5 and 4 lbs. \$30 and \$34. Specify handle length. Only here in the Land of Freedom.

Roman Hoe

This rugged tool, discovered in Guanajato, is hand forged and much heavier than others of thin plate, making it more durable and versatile. It is perfect for hoeing, chopping and cultivating, and the prongs are ideal for removing clumps of grass, and furrowing for seeds. Also looks exceptional hanging next to a chain mail jerkin. 48" oak handle. 4 lbs. \$30.

Triangle Hoe

A well balanced hand cultivator of Japanese design, useful for weeding, cultivating, transplanting and wildcrafting. 14" oak handle. 2 lbs. \$16.

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The Permaculture Activist

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| #28 | Feb. '93 | Structures: Comm'n Dsgn; LETS; Industry; Strawbale/Timber-frame Bldgs. |
| #29-30 | July '93 | Networks: Special Media Rvw; Rural Reconstr'n; Leaf Conc.; Comm'n Food Initiatives; PC in Palestine; Do-Nothing Ed'n; Feng Shui; Companion Gdng; Nature Spirits; Wilderness; Biogeog.; Network Theory; P: Acad. |
| #31 | May '94 | Forest Gdng: Energy & P; Mushroom Cultn; Robt Hart's F.G.; Spp for N. CA; Alders; Agroforestry in Belize, China; Honeylocust; N-fixers |
| #32 | April '95 | Animals & Aquaculture: Rare Breeds; Animal Polyculture; Small-scale Cattle; Goat Dairy; Keyline; Ramial Woodchips; Feral Chickens; Bee Plants; Constructed Wetlands; Reed Bed Sewage Treatment |

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West Coast Permaculture News & Gossip and Sustainable Living Newsletter, the quarterly newsletter and network for PC on the West coast. \$8 for four issues. PO Box 45472 Seattle WA 98145.

Portable Dwelling Info-letter: about living in tents, yurts, domes, trailers, boats, remote cabins, other mobile or quickly-made shelters plus plans for simple low-cost, low-impact comforts and conveniences. Sample \$1. Box 190-pa, Philomath OR 97370.

Continued on Next Page→

— more — CLASSIFIEDS

Straw bale construction. "How To" 90 min. video with 80 pg manual. Excellent step-by-step guide. \$64 includes postage: Sustainable Systems Support, PO Box 318, Bisbee AZ 85603

EcoCity Journal is published by the Institute for Sustainable Cities, a non-profit organization for research and development in ecological city planning and policy. *EcoCity Journal* reports on projects and programs which are innovating ways for our communities to be environmentally responsible and responsive to human needs. \$25/yr. *EcoCity Journal*, 485 Leatherfern, Sanibel FL 33957.

SYNERGISTIC AGRICULTURE: Emilia Hazelip's 30 minutes hands-on video (VHS). International money order for 180 French francs payable to: Las Encantadas. Permaculture Pyrénées, 11300 Bouriege, France.

Subscribe to the *Root Quarterly*, a newsletter concerning roots - edible to herbal. How to grow, store, prepare extracts, seed saving, and where to find the unusuals. One year \$17.00. *Root Quarterly*, 3016 Botanical Drive, Claremont NC 28610.

Miscellaneous

Intern on CSA farm interested in writing and sharing ideas with other interns. Ken Bezilla, PO Box 1106, Canby OR 97013.

Information sharing requested: all topics-permaculture, naturalization, design, ecology, experiences, etc. Jason Saunders, 1168 Marentette Ave, Windsor, ONT. Canada N9A 2A5.

Beloved Jeanie: 30 will feel good soon. I promise you. Happy Birthday. Love, Mary Jo, Leah, Victor.

Wanted: Information on natural/herbal medicine used in Central America. 34 Holbert Cove, Saluda NC 28773.

Interested in growing tropicals? Join Rare Fruit Growers c/o A. Yerger, 1201 N. Galvin Parkway, Phoenix AZ 85008.

Green Goods

Drums for the Archaic Revival: hand-made cherry or cedar ashikos with goatskin heads. Gregory Martin, 9963 Skeenah Highlands Rd, Blairsville GA 30512.

OWNER-BUILT GREENHOUSES: Multi-skin Polycarbonate sheet, Fans, Heaters, Shading. Catalog \$2. Sundance Supply, 1678 Shattuck #173, Berkeley CA 94709.

SEEDS™ Sustainable Edible Eco-Design System - Pc software for your PC. DOS & Windows compatible. Full satisfaction or full refund. \$35 ppd. from Appropriate Systems Design,

1081 Milky Way, Cupertino CA 95014. [Apple version if enough request it.]

Feed and Seed

Spawn, growing supplies, how-to books and videotapes, detailed instruction for cultivation of shiitake (*Lentinula edodes*), maitake (*Grifola frondosa*), oyster (*Pleurotus ostreatus*), morel (*Morchella angusticeps*), lion's mane (*Herichium erinaceus*), wine-red stropharia (*Stropharia rugoso-annulata*), chicken of the woods (*Polyphorus sulphureus*), and reishi (*Ganoderma lucidum*). Food, medicine, and healthy forests. Call for free catalog. Mushroompeople, Box 220-pca, Summertown TN 38483, USA, phone 800-692-6329 or (Int'l. code) +615-964-2200.

Looking to swap info/seeds about permaculture in northern/boreal/maritime climes. Steph Squires, Box 30, Site 2, RR1, Paradise NF, Canada A1L 1C1. (709) 895-3832.

Seed List - 200+ spp useful plants. Send SASE and \$2 to Joe Hollis, Mountain Gardens, 3020 White Oak, Burnsville NC 28714.

Fruit, nut, and berry plants. Many unusual and disease-resistant varieties including pawpaw, persimmon, autumn olive, and hardy kiwi. Send \$1.00 for catalog. Hidden Springs Nursery, 170 Hidden Spgs. Lane, Box PA, Cookeville TN 38501.

Edible Chinese artichokes, Jerusalem artichokes - 100 cultivars, Groundnuts (*Apios americana*, *fortunei*, *priceana*), 50 varieties; Yacon, misc plants. \$1 for list. Grinnell Botanical Conservatory, 3016 Botanical Drive, Claremont NC 28610.

Internships

Hidden Springs Nursery. We propagate, grow, and sell edible landscape plants, 8-acre orchard and solar greenhouse. Room, board, and stipend in exchange for hard work. 170 Hidden Springs Ln, Cookeville TN 38501. (615) 268-2592.

Maui, Hawai'i dryland permaculture, open to interns, apprentices, co-workers. More than 70 species fruit- and nut-bearing trees and shrubs, agroforestry, nitrogen-fixers, native plants, poultry, and aquaculture. Feel free to write or phone: Kanahena Farm & Nursery, PO Box 667, Kula, Maui, HI 96790. tel: (808) 878-3922.

Internships available at Three Sisters Bioshelter Farm. Permaculture farm 7+ years into development. Intensive market gardens, direct sales to restaurants & markets of lettuces, herbs, salad mix, flowers, misc. produce. Housing available May-Oct. Internships, study programs, advanced Pc training in market gardening and bio-shelter design/management can be arranged. Three Sisters Farm, 134 Obitz Rd. Sandy Lake PA 16145.

La'akea Gardens, Big Island Hawai'i, offers 6- & 12-week permaculture internships. We are a 25-acre farm with diversified orchards, aquaculture, integrated animal systems, market gardens, and developing healing/retreat center. Write c/o Don May, RR 2, Box 4529, Pahoa HI 96778.

Interns needed at ongoing demo farm in Nicaragua, June 5. Contact Michael Moore & Jerome, PO Box 631, Basalt CO 81621, (303) 927-4158.

Intern to perform experimental methods of organics. Have several "new" potential root crops. Rare herbs, seed saving, greenhouse, propagation. Could provide additional part-time employment if desired. Room. Year around projects. Grinnell Botanical Conservatory, 3016 Botanical Drive, Claremont NC 28610. (704) 459-7069.

Cross Timbers Permaculture Institute, open to interns, apprentices, co-workers; located among the beautiful limestone bluffs and oak savannas of north-central Texas. We are an educational institute committed to small-business enterprises, natural farming, green building, pasture enrichment, restoration forestry. Kirby Fry, RR1, Box 210-A, Glen Rose TX 76043. (817) 897-9402.

Koinonia Partners is an inter-racial farm (1,500 acres), organization, and community that works towards eliminating rural poverty through programs in responsible land-use, food production, housing, education, and employment. Koinonia seeks interns for organic garden, farming, and forestry projects. 1324 Georgia Highway 49 South, Americus GA 31709. (912) 924-0391, e-mail: koinonia@habitat.org.

Apprenticeships

West Coast Permaculture teacher training guild forming. Looking for mentors and apprentices in the West to network with. Mike Lockman, PO Box 45472, Seattle WA 98145.

Apprentices needed on 10-acre CSA farm near Foothill. Happy Heart Farm has grown from clay and rocks to become Colorado's first CSA in 1989. BD soil nourishes 300 people from its 3-acre garden. Much harvesting, weeding, and experiential learning within developing farm school. Housing, meals, and friendship in exchange for motivated work. Adrian Card, 2820 W. Elizabeth, Ft. Collins CO 80521. (920) 482-4092.

Work/camp opportunities in 20-year "Paradise Garden." Joe Hollis, Mountain Gardens, 3020 White Oak, Burnsville NC 28714.

Business Opportunities

Good Health and business opportunity. D.H.E.A. - hormone derived from the Mexican yam (*Dioscorea*). DHEA has significant anti-obesity, anti-aging, and

anti-cancer effects. Safe. Free information. Also, wanted: *Dioscorea* cuttings or tubers. Mow-Less Permaculture, 2216 SW Ranch Trail, Stuart FL 34997. (407) 288-2523.

Help Wanted

The Central Rocky Mountain Permaculture Institute is now accepting resumes for a full-time, live-in administrative assistant/capital campaign manager. Responsibilities include grant writing, filing, accounting, and organizing courses. One-year commitment and experience preferred. Salary negotiable. Please send a letter of intent and resume to CRMPI, Box 631, Basalt CO 81621.

Jamaica. Sustainable agriculture demonstration farm seeks person(s) to help start and manage a tree nursery located on 12 acres in Portland on the Rio Grande river. Propagation of many different trees including rare indigenous trees, fruit trees, agroforestry and nitrogen-fixing trees for demo plot, trees with economic value. Small house available with stipend. Ideal for couple or individual who doesn't mind rainy, buggy winters and some isolation; nearest village 3 miles downriver. One-year commitment preferred. Contact Janis Comb, RD 2, Box 3130, Enosburg VT 05450.

WWOOFing - Thailand. Small fruit farm. Sustainability - Permaculture - Simplicity. No skills needed, only right attitude. Forest garden design. Re-establish tiny island of diversity where once grand forest stood - Noah's Island. Write: Soo & Bob, Box 77, Chaiyaphum 36000 THAILAND.

Experienced tree planting/caring individuals and couple sought. House and stipend, organic permaculture, Southern France. Fax experience and views to Japan: 81-3-5484-3447.

WANTED: Person serious about sustainable agriculture as a career to be Farm Manager of a two-acre permaculture farm in Honanau Valley, 25 minutes south of Kona on the Big Island of Hawaii. Full-time planting, maintaining, harvesting, processing, and marketing of tropical fruits and vegetables. Must be willing to work under the guidance of a Permaculture consultant and participate in educational seminars given at the farm. A separate dwelling with living room, bedroom, kitchen, and bath is provided including utilities, use of truck and \$800 per month. Must complete two-week Permaculture certificate course before starting. Must have some tropical zone experience or education. Minimum three-year commitment. Send resume with statement of life purpose to: Source Ecosystems, PO Box 428, Holualoa HI 96725 or fax (808) 326-4670. Respondents who qualify will be sent a more detailed application.

Warren Wilson College in Swannanoa, NC seeks Farm Manager/Educator to manage 350 acre farm, direct student

work crews, and participate in educational programs. For more information contact Carla Sutherland at 704-298-3325, extn. 217, or email mcraiga@warren-wilson.edu.

Situations Wanted

Family of three with three equines seeking home in exchange for work. Ideal locations, Northwest states or energy vortex areas in Arizona. Looking for cozy home, large garden area, and fenced pasture for animals. Wife is massage therapist, organic gardener, and herbalist-in-training, interested in biodynamics, permaculture. Husband is self-employed trucker, has cattle ranch experience. Prefer long-term situation on ranch, estate, or ? Contact Lynn McNamara, 5751 S. Thurlow St., Hinsdale, IL 60521.

Seeking internship on organic farm or permaculture community in Appalachians. Want to learn about sustainable living methods. Sonia Abel & Renee Bowman, 12 Larchmont Road, Asheville NC 28804. (704) 252-7614.

Seeking progressive community in Rockies for professional lesbian couple to call home. We have extensive backgrounds in accounting, computers, and massage therapy. Very interested in permaculture and creating spiritual retreat. Sierra & Jesse, PO Box 980742, Houston TX 77098.

Seeking paid internship in permaculture. Career change from 20 years in dental hygiene. Complete PDC 10/95. Deborah Shaffer, 2010 Winrock #637, Houston TX 77057.

Hard-working couple seeks Permaculture internship for Spring-Summer 1996. Wendy & Chris, 1664 Westmoreland #8, Cincinnati OH 45223.

Design Certificate Holder working for diploma looking for internship with

designer. Interests in forest gardening, aquaculture, and dryland development. Degree in Biology and experience in organic smallholding. Nic Florey, 8 Cambustay Gdns., Broughty Ferry, Dundee, DD5 2SR, Scotland.

Services Offered

To stimulate environmental awareness and nurture a sense of community, Rose Erickson offers workshops uniquely adapted to the sacred resonance of "place" through ritual, song, theater, and creative play. (504) 267-8896.

Downunder Permaculture Experience. Enjoy a learning holiday at Crystal Waters, the world's first Permaculture Village. This Permaculture Certificate Course emphasizes practical solutions and techniques with strategies for all climate zones and examples from around the world. Tutors Frances Lang and Max Lindeger have taught over 2,500 people in 15 countries. Act now because your money goes further in Australia and we will help you make contacts to visit on your travels. 1995: Aug., Oct. For a course brochure: Green Harvest, 52 Crystal Waters, MS 16, Maleny, Queensland 4552, Australia. Tel.: 61-740-944676 or FAX: 61-74-944578.

Vivaterra Consultancy© Research and advice on Brazilian environmental and indigenous issues. Write to J.R. Borges: 577 Bellvue Ave., Daly City CA 94014.

Housing

Seeking one or two mature permaculture people interested in sharing a rugged permaculture lifestyle in So. Tennessee woodlands. No cats. No smokers. Kids OK. Kay 615-588-2188.

140 wild, beautiful, hilly, wooded acres, 2BR house, 1/2 basement, barn, horse shed, small creek, springs, and 7

caves: some huge. All for \$140,000 or will sell smaller parcel. (808) 946-6155. New Day Sanctuary, Rt 1, Box 265, St. Joe, AR 72675.

Find your home in the Sun! Permacultured home for sale at Land Trust at Gap Mountain, Jaffrey, southwestern NH. Greenhouse, constructed wetland, gardens, composting toilet, 2BR, 1.5 Baths, solar electric compatible, ±1400 sf, built 1988. Asking \$89,000. Call or write: Dave Jacke, 533 S. Main St., Great Barrington MA 01230, (413) 528-5677.

Communities

Permaculture Santa Cruz! -Help Design It- 12Ac in redwoods, 20 mi. to town. Soil, garden, shelter, building, etc. Solar/altn. power, off-grid. Workshops, healing, demonstration community. Trailer available. Vince Pastore (408) 459-9554. Resume & letter of interest, 2502 Charlene Ln, Santa Cruz CA 95062.

HELP CREATE A PERMACULTURE NEIGHBORHOOD! Asheville, NC: Energy-efficient townhouses with solar radiant floor heat for sale in Westwood CoHousing Community. Work studio options; large central common house for optional shared meals, child care, office equipment, more. Pedestrian friendly 4+ acres with woods, gardens, orchard, creek, in town. Approximately \$68,000-154,000 depending on house size. Welcome: all ages children and adults, all family types. Construction starting early 1996. Buyers select sites and house designs in order of reservation number. (704) 252-2118. PO Box 16116, Asheville, NC 28816; WWW at <http://www.automatrix.com/~bak/westwood.html>.

Permaculture land trust forming, looking for more members and for location west of the Rockies. David McFarlane, 5724 Fresno, Richmond

CA 94804. (510) 528-2109.

Cress Spring Farm. Organic vegetable garden, CSA and retreat center. Free brochure. 4035 Ryan Road, Blue Mounds WI 53517. (608) 767-3931.

EDGES - Lots of "edges" for variety in our permaculture program. 94-acre ridgetop, wind and solar energy, planned education center and children's camp. Interpersonal dynamics and conflict resolution valued. Call or write for brochure or to visit. Rt. 3, Box 452, Glouster OH 45732. (614) 448-2403.

Travellers

Australia, Hunter Valley Permaculture Teaching Farm and Resource Centre welcomes visitors and students. For brochure: June Andersen, Trevallyn Centre, PO Box 22, Paterson NSW 2421, Australia. 011+61-49-389-528.

Costa Rica. Interested in forest farms and friendly people? I want to share my small story in hopes people will visit, make friends, and learn. Write: Bruce Pahl, 1940 Howard, #271, Kalamazoo, MI 49008 USA.

subscribe to: Permaculture Magazine (U.K.)

Issue #10 features

- Broadscale Permaculture
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- David Holmgren Interview
- Pe in Rwanda
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Issue #33

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CALENDAR

December 3-17, Dexter, OR. Two-Week Intensive Design Course. Jude Hobbs, c/o Lost Valley Educational Ctr, 81868 Lost Valley Ln., Dexter, OR 97431. (503) 342-1160.

December 9, Hesperia, CA. Earth and Ceramic Architecture Workshop. Gelatfan Foundation, 10376 Shangri La Ave., Hesperia, CA 92345. (619) 244-0614 or 956-7533.

December 9-10, Temecula, CA. Geomancy and Feng Shui Workshop. EOS Institute, 580 Broadway, Suite 200, Laguna Beach, CA 92651. (714) 497-1896, /-7861 fax.

December 15, 1995-January 15, 1996. Maruata, Mexico. Bioregional New Year Gathering. Spiritual refreshment & ecological projects. Cress Spring Farm, 4035 Ryan Rd., Blue Mounds WI 53517. (608) 767-3931.

January, 1996. Crystal Waters Village, Queensland, Australia. Practical Permaculture Course. Jeff Michaels, Green Harvest, 52 Crystal Waters Permaculture Village, MS 16, Maleny, Qld 4552, Australia. +61 74-944-676, /-578 fax.

January 13-14, Sebastopol, CA. Growing an Income: The Promise of Perennial Abundance. Food, fiber, fuel, fodder, and fungus farming. (707) 829-5524 or 824-0342.

February 10-13, Pearce, AZ. Patterning Intensive for PDC Grads. Karen Brooks, PO Box 1479, Tijeras, NM 87008. (505) 281-8425.

March 4-6, Boston, MA. 1st Intl Solar Electric Buildings Conference. Northeast Sustainable Energy Assn., 50 Miles St., Greenfield, MA 01301. (413) 774-6051, /-6053 fax.

March 4-15, Harare, Zimbabwe. Permaculture Land Use Design Course. Fambidzanai Permaculture Centre, Dovedale Rd., Mt. Hampden, PO Bx CY301, Causeway, Harare, Zimbabwe. 397-037, 726-911 fax.

March 1-9, Black Mountain, NC. Community Co-Design: A Permaculture Practicum. Chuck Marsh, 205 Jones Rd. Leicester NC 28748. (704) 683-4946.

March 15-18; 22-24; April 5-7; 12-14. Seattle, WA. Weekend Permaculture Design Course. Seattle Permaculture Guild, 2719 Nob Hill Dr. North, Seattle, WA 98109. (206) 284-0794.

April 6-14, Summertown, TN. Fundamentals of Permaculture. Libby Fox, EcoVillage Training Center, POB 90, Summertown, TN 38483. (615) 964-4324, fx/-2200. email: thefarm@gaia.org • http://www.gaia.org/farm.

April 13-14, Sandy Lake, PA. Mapping as a Design Tool. Darrell Frey, Three Sisters Farm (TSF), 134 Obitz Rd., Sandy Lake, PA 16145. (412) 376-2797.

April 13-26, Glen Rose, TX. Mollison Permaculture Design Course. Cross Timbers Permaculture Institute, Route 1, Box 210-A, Glen Rose, TX 76043. (817) 897-9402, /-3785 fax. E-mail: 72530.1353@compuserve.com.

April 15-17, Summertown, TN. EcoVillage Design Workshop with Max Lindegger & Declan Kennedy. Libby Fox, EVTC, (615) 964-4324.

April 21-May 5, San Miguel de Allende, Guanajuato, Mexico. Permaculture Design Course. Keith Burnett, fax 52-415-26878.

May, Crystal Waters Village, Queensland, Australia. Practical Permaculture Course. Jeff Michaels, Green Harvest. +61-74-944-676, /-578 fax.

May 3-5, Summertown, TN. Strawbale Buildshop. Libby Fox, EVTC (615) 964-4324.

May 3-5, Glen Rose, TX. Advanced Design Course. Cross Timbers. (817) 897-9402.

May 16-19, Turrets sur Loup, France. 4th European Permaculture Conference. "Les Courmettes," Alpes Maritimes, 06140 Turrets sur Loup, France. +33 9324-1700, 9359-2634 fax.

Early-mid May, Eastern Europe. Pre-Conference Bus Tour. Permaculture Institute of Europe, Istegade 79, 1650 København V, Denmark. +45 3131-5694, 3325-7179 fax.

May 25-June 2, Navaho/Hopi Reservation, AZ. Intensive Design Course. Black Mesa Permaculture Project, PO Box 26195, Tuscon, AZ 85726. (520) 629-9122, 745-7888 fax.

July 1-6, London, England. Plants for Food and Medicine Conference. The Linnean Soc., Burlington House, Piccadilly, London W1V 0LQ, U.K. +44 (171) 434-4479, fax: 287-9364. E-mail: marquita@linnean.demon.co.uk.

August 2-18, Sandy Lake, PA. Permaculture Design Course. Darrell Frey, TSF. (412) 376-2797.

August 19-30, Harare, Zimbabwe. Permaculture Land Use Design Course. Fambidzanai Permaculture Centre.

September 4-9, Almonte, Ontario, Canada. Eastern Permaculture Convergence. Maureen McEown, Gaia's Fane, Almonte, Ontario K0A 1A0 Canada. (613) 256-1224.

September, Crystal Waters Village, Queensland, Australia. Practical Permaculture Course. Green Harvest.

September 15-23, Crystal Waters Village, Queensland, Australia. Eco-Village Design Workshop. Jeff Michaels, Green Harvest. +61 74-944-676, /-578 fax.

September 28-October 7, Perth, Western Australia. Sixth International Permaculture Conference. Linda Riccio, 3 Central TCE, Beckenham, Western Australia 6107, Aus. +61-9-451-1061. +61-9-353-1437 fax. E-mail: converg@eepo.com.au.

October 12-20, Summertown, TN. Permaculture Design Practicum. Libby Fox, EVTC, (615) 964-4324.

October 14-25, Harare, Zimbabwe. Permaculture Land Use Design Course. Fambidzanai Permaculture Centre.

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