

# THE PERMACULTURE ACTIVIST

Vol II, No. 4 Newsletter of the Permaculture Institute of North America (PINA) December, 1986

## From the Editor

As you probably know, this past August the Permaculture Institute hosted two International Conferences - The 2nd International Permaculture Conference held at The Evergreen State College in Olympia, Washington and The 2nd International Permaculture Designers Convergence held at Breitenbush, Oregon. Both conferences were overwhelming successes, attended by almost 600 and 125 people respectively from over 12 countries.

This issue of *The Permaculture Activist* is primarily a post-conference wrap-up. We have selected several papers and articles submitted by workshop presenters at the Conferences. The papers published here have been selected for the quality of practical information contained and because they show inspiring examples of the work done by permaculture activists involved in their own communities.

At least one further issue of *The Permaculture Activist* will contain more papers, articles, and transcribed talks from the Olympia Conference. In addition to the *Activist*, we suggest that an important resource for further information on the conference proceedings would be the tapes of produced by Audio Productions (see tape list on page 22).

The International Permaculture Conferences served a very useful purpose - to bring together a large number of people with a great diversity of ideas and skills and a common purpose of creating a sustainable culture with sustainable land-use patterns.

Permaculture design has always been an attempt to integrate many different disciplines, design methods, and practical techniques. Permaculture design and land-use systems are not static, dogmatic or limited to ideas developed by any single individual or group, rather they are gleaned from a great multitude of sources.



Masanobu Fukuoka, Bill Mollison & Wes Jackson at the 2nd International Permaculture Conference. Photo: Steven Borns, copyright © Steven Borns, 1986

At the very least, a permacultural approach to sustainable land use includes a sensitive appreciation for the complexity of the ecological role that humans play in the landscape. The important shared attribute of all permaculture practitioners is their *intent* - to regenerate and restore the threatened capacity of our planet to

support life (not just to provide food for humans). To this end I believe the conferences were a success - in providing an opportunity for these activists to get together, compare notes and go back into the "field" to continue their efforts.

*Guy Bakewell*



See no evil, hear no evil, speak no evil. photo: Steven Borns, copyright ©, 1986



## Permaculture Institute of North America (PINA)

## Table of Contents

**Honorary Executive Director**

\*Bill Mollison  
Permaculture Institute (Australia)

**Board of Advisors**

Dr. Miguel Altieri  
Division of Biological Control,  
University of California, Berkeley

Pam Crocker-Davis  
National Audubon Society,  
Olympia, WA

Terry Gips  
Executive Director, International  
Alliance for Sustainable  
Agriculture, MN

Dr. Stephen Gliessman  
Agroecology Program,  
Univ. of California, Santa Cruz

Dana Jackson  
Co-Director,  
The Land Institute, Salina, KS

\*Andrew Jeeves  
Director, Permaculture Institute  
(Australia)

\*Samuel Kaymen  
Co-Director, The Rural Education  
Center, Massachusetts

\*Margrit & \*Declan Kennedy  
Directors, Permaculture Institute  
(Europe)

Robert Kourik  
Edible Landscape Designer and  
Author, California

**Staff**

\*Guy Baldwin  
Publications Director  
\*Marianne Edain  
Office Coordination  
\*Steve Erickson  
Computer Services  
Cleveland Hall  
Bookkeeper

\*Sego Jackson  
Program Director  
\*Lea Kouba  
Administrator  
\*Joyce Moulton  
Consultant  
\*Bev Reed  
Permaculture Resources &  
Weeder Geese Project  
\*Star White  
Fundraiser

**Board of Directors**

Ken Brown  
\*Sego Jackson  
\*Lea Kouba

\*Shery Litwin  
\*Joyce Van Moulton  
\*Nancy Waddell  
\*Carl Woestendiek

**Steering Committee**

\*Doug Bullock  
\*Joe Bullock  
\*Susan Davidson  
\*Marianne Edain  
\*Steve Erickson  
\*Sego Jackson  
\*Kristan Johnson  
\*Lea Kouba

\*Shery Litwin  
\*Joyce Moulton  
\*Bev Reed  
\*Boyd Shirley  
Anne Schwartz (Tilth  
Producers Co-op)  
\*Nancy Waddell  
\*Carl Woestendiek

**Founding Patrons**

Dr. Peter Bennett  
Janet Day  
Bruce & Stephanie Dearborn  
\*Lea Kouba  
Kirstie Lewis  
\*Joyce Moulton  
Doug & Elise Potter  
Dr. Ed Severinghaus  
Carl Winge

Note: \* denotes Permaculture  
Design Course graduates

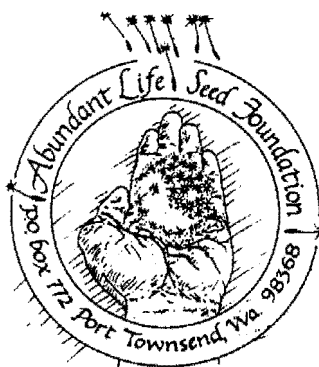
Permaculture Programs	3
Fukuoka-san's Vision <i>David Bainbridge</i>	4
Fukuoka-san Speaks at the Permaculture Designers Convergence	4
Keyline Soil Fertility <i>Beth &amp; Eric Ardapple-Kindberg</i>	6
People's Efforts to Conserve & Breed Local Plants <i>Michel Pimbert</i>	8
City Farms in England <i>Sandra Hatton</i>	10
High Seas Polyculture <i>Barbara Daniels</i>	12
Letters	13
Permaculture Resources	14
Bulletin Board	18
Chestnuts <i>Earl Douglass</i>	20
International Permaculture Fund <i>Minot Weld</i>	21
A Poem from Fukuoka-san	22
Conference Audio Tapes	22
Classified Ads	23
Membership Form	23
Calendar of Events	24

The *Permaculture Activist* is published quarterly by the Permaculture Institute of North America (PINA), a 501(c)(3) nonprofit, tax-exempt organization. PINA is supported by donations, grants, educational program revenues, special projects and membership dues. Donations to PINA are tax deductible. Offices are located at 6488 Maxwellton Road, Clinton, WA 98236. Second-class postage rate is paid at Clinton, WA. Copyright, 1986, the Permaculture Institute of North America. Written material and drawings may be reprinted only with written permission from the publisher.

Members of PINA receive a subscription to *The Permaculture Activist*. Membership categories and annual dues are: Regular member - \$25/year; Sustaining Member - \$50/year; Contributing Member - \$100/year; Patron - \$250-\$500; Lifetime Member - \$1000. All of these member categories also receive a subscription to *Permaculture, Journal of the International Permaculture Association*, which is co-published by PINA. A special low-income membership is also available - \$16/year, however, this only includes a subscription to *The Permaculture Activist*. Publications Director of PINA and Editor of *The Permaculture Activist*: Guy Baldwin.

The Institute assumes no responsibility for unsolicited materials. Manuscripts or artwork not accompanied by stamped, self-addressed envelopes will not be returned. Ad rate card is available upon request from: Publications Director, PINA 6488 Maxwellton Road, Clinton WA 98236. Publication dates and copy deadlines for all materials and advertisements are as follows:

ISSUE NUMBER	PUBLICATION DATE	COPY DEADLINE
Vol.III, No.1	Feb. 15, 1987	Jan. 15, 1987
Vol.III, No.2	May 1, 1987	Apr. 1, 1987
Vol.III, No.3	Aug. 1, 1987	July 1, 1987
Vol.III, No.4	Oct. 1, 1987	Sept. 1, 1987



ABUNDANT LIFE SEED FOUNDATION  
offers 600 varieties of non-  
hybrid, untreated seed including:  
heirloom vegetables, medicinal &  
culinary herbs, old-fashioned  
flowers, native trees and wild-  
flowers. Most listings are home-  
grown and handcrafted within the  
Northwest. For a current catalog  
which includes 200 mail-order book  
selections, send \$1.00 to:

P.O. Box 772  
Port Townsend WA 98368  
tel. (206) 385-5660

A nonprofit, tax-exempt, educational foundation  
since 1975, with nearly 10,000 members.

**FROSTY HOLLOW NURSERY**

Box 53 Langley, Wash. 98260  
Steve Erickson Marianne Edain

Multi-Purpose Trees & Shrubs  
Environmental Design & Consultation

- \* Edible Landscaping
- \* Agroforestry
- \* Permaculture

Send SASE for Catalog

*Seeds, Plants, & Designs for a Sustainable Future*

### 3<sup>rd</sup> International Permaculture Conference -

The 3rd International Permaculture Conference will be held in New Zealand about early February 1989. It will be comprised of three main events: an in-house Permaculture Designers Convergence, for graduates of the permaculture design course and representatives of related organizations; the public Permaculture Conference; and organized tours of New Zealand scenery, research centers and demonstration projects. We are planning for as many as 1000 participants at the Conference, which will have a decidedly international and 3rd world flavor.

Topics covered will include: agroforestry, livestock management, genetic erosion, reversing desertification, homestead design, urban strategies, communities and new economics. The Conference will last about a week and the tours will go for about two weeks. Bulk air travel reductions and sailboat passage is anticipated. Conference costs will probably be on a sliding scale. For further information write: Michael Crofoot, Tui Community, Wainui Bay, R.D. 1, Takaka, Golden Bay, New Zealand.

### Two-Week Permaculture Design Course & weekend workshops

Subtitled "Planning the 21st Century Sustainable Community - The Urban/Rural Interface", this program will take place May 29 - June 13 at the Ojai Foundation. Strategies for specific bioregions will be suggested that emphasize ecological regeneration and sustainability. An emphasis will be placed on Southern California's arid, Mediterranean climate with its post-industrial city structure and surrounding agricultural land with year-round growing conditions. Resource people for this course include Margrit Kennedy, architect and Permaculture Planner from Berlin, Michael Litton, originator of the L.E.T.S. system, Rick Ryan from TreePeople, Bill Roley, Julia Russell, Guy Baldwin, Jim Bell from the Ceter for Appropriate Technology, David Bainbridge from the Drylands Research Institute, and numerous others. Inquiries to: Ojai Foundation, P.O. Box 1620, Ojai, CA 93023, attn: Bill Roley. phone: (805) 646-8343.

### Two Intensive Courses offered in Permaculture for the Third World

In response to the great surge of interest in Third World Permaculture, and the success of courses in 1985 and 1986, Aprovecho Institute and the Permaculture Institute of North America (PINA) will jointly sponsor a 2-part sequence in 1987; two courses of two weeks each, one in Oregon, June 15-29, and one in Latin America, July 5-19.

Permaculture is the design of land use systems that are sustainable and environmentally sound, with culturally appropriate systems which lead to social stability. Third World societies have special problems which cause the loss of productive land, firewood scarcity, crop failures, food shortages, and the spread of deserts. Permaculture solutions are now being applied all over the world, through sustainable production, restoration of degraded lands and resurrecting local economies.

Each course will bring together a team of experienced teachers from many disciplines. Course 1, held at Aprovecho Research Center in Oregon, is a preparatory course which will focus on analyzing existing conditions of land tenure and culture, teach permaculture techniques, and prepare people for Third World work. Course 2, to be held at a rural location in Central America, will expose participants to real problems first-hand and provide training in applying solutions, with

special emphasis on working within the norms of local societies. It will provide an opportunity to see live examples of the techniques discussed in Course 1.

Both courses will focus on providing for basic human needs in an integrated, ecologically-based way. Topics will include: principles of permaculture design; small-scale agriculture; agroforestry; reading the landscape; food and fuel production; strategies for high altitudes, arid and tropical areas; erosion control and soil fertility; water conservation and soil improvement. Special emphasis will be on transcultural communication, socio-political systems, social geography, and tools and techniques for implementation. Examples of project successes and failures will be analyzed. There will be hands-on experience in cookstove construction, simple house building, food production, and special techniques for tree-planting.

These are professional-level courses for land and resource planners, development workers, extension agents, agricultural missionaries, community organizers, students and teachers of Third World conditions, foresters, international networkers, researchers in alternative agriculture, and volunteers joining the Peace Corps, etc. We encourage a wide range of abilities, experience and skills, and especially people from the Third World. Courses will be taught in both Spanish and English.

Tuition including all meals, accommodation, curriculum materials and field trips is US\$600 for each half of the series; \$1100 for both parts. Transportation costs to the Central America site are not included. A non-refundable deposit of \$100 assures a reservation in each part on a first-come basis. The balance is due May 15 with a 10% discount for private individuals only for full payment by April 15. Partial scholarships are possible. Enrollment is limited. Third World residents can often find bursaries through international agencies, but should start searching immediately.

Inquiries to: Director, Aprovecho Institute, 80574 Hazelton Rd., Cottage Grove, OR, 97424, (503) 942-9434 mornings and evenings. Jointly sponsored with the Permaculture Institute of North America.

### 3-Weekend Short Course on Permaculture Topics

Feb. 21 - 22, 1987. Location: Merritt College, Oakland, CA. "The Need for Permaculture" and "Urban Permaculture Applications".

Feb. 28 - Mar. 1. Location: Merritt College, Oakland, CA. "Permaculture Design Techniques and Rural Permaculture Applications".

Mar. 7 - 8. Location: Clear Lake, CA. "Permaculture Economics and Communities."

Cost per weekend seminar is \$50, or \$125 for all three weekends. Inquiries and payment should be sent to: Davis Permaculture Consultants, J-6 Orchard Park, Davis, CA 95616, (916) 758-5221. Resource people for the seminars include: Gretchen Will, Tom Ward, Barbara Daniels, David Kaplow, Guy Baldwin and Gray Shaw.

*"They shall beat their  
swords into plowshares, and  
their spears into pruning  
hooks: nation shall not lift up  
against nation, neither shall  
they learn war anymore."  
Isaiah 2:4*

## Fukuoka-san's Vision

David Bainbridge

As a keynote speaker at the 6th International Conference on Organic Agriculture (the IFOAM Conference held in Santa Cruz, CA, August 18-20, 1986), Masanobu Fukuoka made an eloquent concluding speech on the Earth's behalf. Extending his vision from his small, marvelously intricate and balanced farm in Japan to the desertified lands of Africa (visited in 1984), he emphasized the vital need for replanting forests to halt the advancing deserts.

Reaching to the very heart of the matter, he proposed that the armed forces now practising and preparing for annihilation should and could be used for this vital work. Following his lead, we can consider what this might mean.

The challenge in much of Africa and elsewhere in the developing countries is twofold; getting seeds to where they are needed-when they are needed. The modern war machine is well equipped to do this. Satellite imaging and long-range weather

forecasting can predict when favorable precipitation patterns will develop. Just before or as the rains begin to fall, jet cargo planes or bombers could deliver seed by aerial broadcasting. Each C-5A, for example, can carry 200 tons of seed - enough to plant more than 20,000 acres.

Aerial delivery of pregerminated, inoculated seed for locally adapted multi-use trees, shrubs, and plants could do much to halt the degradation of these lands and allow restoration specialists, working with local residents, to begin the longer path toward ecological health and sustained production.

The biggest obstacle to Fukuoka-san's visions is not the technical question of delivery by air or prediction of favorable moisture patterns, but the agronomic and ecological problem of identifying and producing seed for native species that are desirable and will be effective. This problem should be addressed in any case, because even if the weapons of war are never turned to the war against the deserts; the ecological wisdom to use these plants is needed, not only in African, but throughout the World where the deserts are on the march.

An important element in this work will be the detailed study of microbial inoculants, pelletizing methods to protect seeds, and selection of plant material and species mixes for synergistic rather than allelopathic effects. Much of this work can be gleaned from the literature of

ecological, forestry, and agriculture publications, and from Fukuoka-san himself, whose decades of research provide a model for all of us. Additional research is urgently needed. Foregoing only one jet fighter (\$30-40 Million) would fund a major research center for a decade and provide a more lasting basis for peace.

In honoring Fukuoka-san, I would conclude with a Japanese translation of the Chinese philosopher, Lao Tsu: *Senri no michi mo ippon yori su* - A voyage of a thousand miles begins with a single step.

## Fukuoka-san speaks at the Permaculture Designers Convergence

*Editor's note: the following talk was given by Masanobu Fukuoka at the International Permaculture Designers Convergence in Breitenbush, Oregon, August, 1986. Katsu Shibata, Larry Korn and Hizuru Aoyama translated the talk and this was condensed from notes taken by PINA staffer Marianne Edain.*

"Farming techniques are only a visible manifestation of spiritual values. Though small, I have the world's biggest dream. At 25, I saw god and it was wonderful. My foolishness was brought home to me. God is an ephemeral concept experienced as a child. Humans invent nothing and place no value on what is truly important. The more you study, the less you understand. At 25 I quit being a scientist and chose to become a simple fool. I quit my studies and intellectual efforts. I moved away from bigger = better.

Do you see values in fast cars? Electric light? My book? Such values reflect your knowledge of slow/fast, light/dark. To listen to my foolish tale, the microphone has value. My book declares that nothing has value, as my book has no value. After 50 years, I've finally come to do nothing. You are busy "doing". It is best to "do nothing." I want you to do a big job right now - to take a nap.

Throw away the plow, which is the source of culture. Civilization and cities are also based on culture. I looked around this forest [old growth trees near the conference site] and saw stumps of 400



Masanobu Fukuoka with Larry Korn translating

copyright (c), Steven Barnes, 1986





Masanobu Fukuoka describes "do-nothing" farming at a talk given to the Sustainable Agriculture Program, University of California, Davis.

would reveal a pattern. Here [in Fukuoka's book *Natural Farming*]) is a chart of cycles, successions and crops. To study books scientifically would take 20 years. Read the book, then spend 20 to 30 years learning by working.

I started 50 years ago farming with no cultivation, no fertilizer, no chemicals. All these fine photos show the results. Japanese farmers laugh at this and wonder what I'm doing. This year I have 8 acres of daikon under peaches, oranges, persimmons and sand pear. The yield is comparable to anywhere in Japan. Fruit shape and size vary, so it is not very saleable.

Living is easy, making money is work. The issue is what people work for. Modern farmers are totally money oriented. No one in Japan is willing to try my method. A few people, catholics, are trying seriously. I

year old trees. Culture was beginning about that time, and it was civilizations greatest mistake.

It is your task to get rid of "culture" and western philosophy, beginning with Descartes who separated people from nature and declared nature to exist for the benefit of humans. God does not separate humans from nature. There is no distinction among small & big, pest and beneficial. Even in agriculture these distinctions are meaningless. Descartes started the idea of growing "crops". This is not an appropriate task for humans. The "crop" i.e., food, is everywhere on earth. Even Jesus said the birds reap but do not sow. The animals use no tools. Only humans work. Adam and Eve ate the apple of wisdom.

Katsu [one of the translators] planted many seeds of many kinds last year. Then he neglected it for one year and felt he had failed. Fukuoka felt it was a fine start.

When Katsu was gone, God took care of the garden, and knows each particular spot which is best for each plant. Next year, with human and god cooperating, the garden will be beautiful. In the second year it may be a confusion, but in the 3rd year it will be beautiful. Human eyes see only confusion, but scientific analysis

envy that permaculture is happening all over the world. There is no group working to perfect natural farming and many groups against.

Government agriculture agents test at the farm, but do nothing. The government has finally approved the words "Natural Farming". These government people use long complicated terms to describe this system, so people can't understand. But it looks like no cultivation is spreading a bit. Two professors came to visit before I left. At one University they've eliminated the separation between agriculture and forestry. They want to plant fruit trees in 800 acres of forest. I said they should plant all kinds of seeds. The professors said, "I'd like to get lots of expensive equipment for my year's research project", after the research they'll decide what will grow best. I said that would be too late - I can tell you the results from my experience.

Scholars say if we lose 3% more green (on a global scale) we'll suffer oxygen shortage. Washington and Oregon are full of green. You ought to see Africa. Then you'll see how quickly we'll lose that 3%. It's not just desertification, it's a cancer. Look at some photos I brought. Here (in Somalia) there was a forest 80 years ago

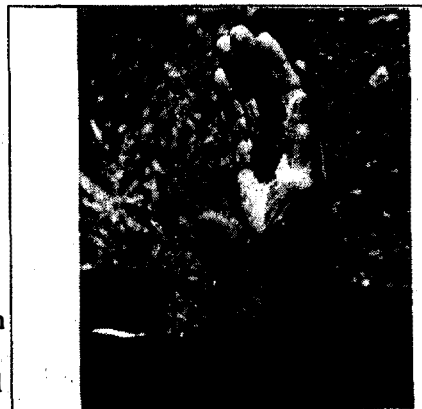
and now it looks like the Grand Canyon. 80% cover has been reduced to 3%.

You've seen reports of suffering in Ethiopia. I went to Somalia where Ethiopian refugees have escaped. No edible greens. There are some small shacks, maybe a cup, some families don't even own a knife. It's more than a mile to firewood. Surprisingly, water is directly available from a river in the desert. They're eating flour and macaroni from the U.S. & old rice from Japan. They go six months with no greens. I decided to go there because *Natural Farming* can turn deserts green. I brought 100 varieties of seed and seedlings. Most germinated after 3 days' watering. The earth in Somalia is too young - sleeping - compared to soil in the U.S.

On his last visit to California Fukuoka felt that the soil had died. The African soil merely sleeps. With a good Natural farmer it could be a breadbasket. 4 months to fruiting of guava, 6 month to harvest. In 18 months bananas and huge daikons. These people didn't recognize root crops as food. In Japan they're very important. I keep telling these professors to discover the economy of nothingness.

I went to Somalia a few weeks ago. They finally realized the state of the economy - not good. Likely your biggest concern is about the land, in your garden. The time has come that that's not the issue. There's plenty of green here [in the Cascade Mountains], but from a bigger perspective this is not so. A favor I ask of you: instead of dropping bombs and launching rockets into space, bomb

continued page 19



Fukuoka holding seeds of the nitrogen-fixing *Ceanothus* used to seed a burned hillside in southern Oregon. These seeds could prove valuable in revegetation of denuded lands.

## Keyline Soil Fertility Development Techniques

*Editor's note: This article was submitted by Beth & Eric Ardapple-Kindberg, who led a workshop on Keyline design techniques at the International Permaculture Conference.*

**Beth & Eric Ardapple-Kindberg**

P.A. Yeomans of Australia synthesized traditional agricultural techniques with close observation of the land's geography and water resources to design highly productive, self-sustaining (no off-farm inputs) "farmscapes". He also developed a set of criteria for use in farm planning that maximizes each farm's resources for bettering the soil. Yeomans utilized six basic techniques to improve soil structure and fertility:

1. Absorption-fertility cultivation
2. Seeding of legumes
3. Crop rotation
4. Grazing or mowing to promote "soil climaxes"
5. Planting of "strip forests"
6. Water storage for irrigation

"Absorption-fertility cultivation" means using a chisel plow or similar implement (Yeomans and John Ryan designed the very effective Bunyip Slipper Imp) to cut many thousands of small furrows 12" apart and parallel to a selected contour line, the "Keyline". As one continues to plow parallel further and further from the keyline, the land contour changes and now the furrows are not level, but heading slightly downhill. These downhill sloping furrows absorb and



The Wallace S.R.U. (Soil Reconditioning Unit) similar in design to chisel plows developed by P.A. Yeomans. photo: Guy Baldwin



Imps for the Wallace S.R.U. photo: Guy Baldwin

redirect rainwater or irrigation water, retaining and distributing moisture evenly across the land. They also bring warmth and air into the soil. Plant growth is stimulated, and as it reaches its maximum potential, the roots will penetrate to the full depth of the chiseled furrows, and slightly beyond.

Farmers need to use a spade to determine depth of the topsoil and set the chisel plow to penetrate 1/2 to 1 inch into the subsoil. At the time of maximum root growth, which is usually just before the plant flowers, the pasture is mowed or grazed. The resulting shock to the plants causes a portion of the root system to die back. The now dead and rotting roots are a



Three water storage ponds on a farm developed by P.A. Yeomans in Richmond, N.S.W., Australia. photo: Guy Baldwin



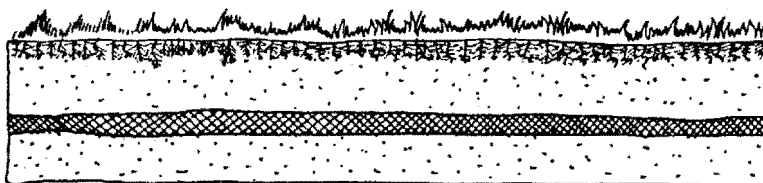
tremendous stimulant to microbial growth, and hence to the next cycle of plant growth. If a pattern of chisel plowing alternated with soil climaxes is followed, the chisels penetrating another half inch into the subsoil each time, the ever-increasing root growth will penetrate deeper and deeper into the subsoil, rendering its formerly unavailable minerals into available minerals. Meanwhile the deep-rooted legumes (technique #2) that are part of the hayland/ pasture mix are bringing nitrogen from the air down into the soil and subsoil via root nodulation. The chiseled furrows are adding air and water. The increased organic matter (dead roots) are retaining more water. The topsoil is becoming more fertile, and the subsoil is becoming topsoil.

Crop rotation and well managed livestock are two of the most important and least expensive tools for building soil fertility. This year's most fertile pasture or hayland should be the site of next year's row cropping, thus eliminating or greatly reducing the need for expensive off-farm inputs, or compost. The less fertile pasture should continue on the soil development program for another year, with most responsive, fertile portion of it being targeted as the next row crop site.

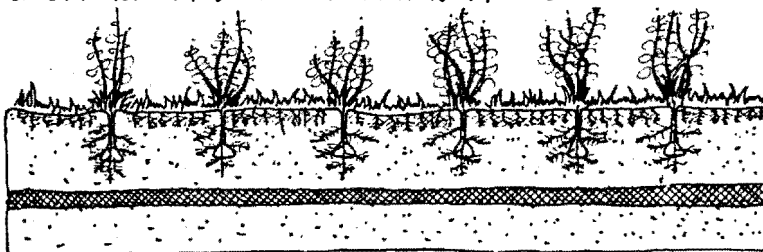
"Strip forests", located on the farm where they will catch any runoff, should be planted in strips broad enough to resemble forest conditions, 33 - 66 feet. These trees grow rapidly and diversify a farmer's income. They sustain and protect the topsoil and newly converted subsoil. Deep down minerals are brought up and deposited on the surface of the soil through leaf fall. In wet weather, cattle will spend most of their time standing on the firm ground of the timber belt, venturing out onto the soft pasture soil only long enough to feed. Trees modify the influence of weather, cooling the land in summer and warming it in winter.

Irrigation during dry times accelerates the soil building process by allowing more soil climaxes to be achieved per growing season. Storing excess rainwater for future use means that all the farm's water resources are being conserved and used to their utmost. Yeomans' dam and irrigation designs are unsurpassed for their low cost and efficiency. All phases of the system from collection to distribution are in the hands of the farmer. Large volumes of water released from the farm storage ponds are absorbed and distributed across the fields by the chiseled furrows (technique #1). Yeomans designed the "Flood-flow" water storage and irrigation system for

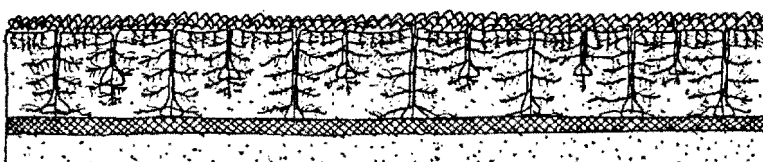
GRASS  
ROOTS  
SOIL  
CLAY PAN  
(A)



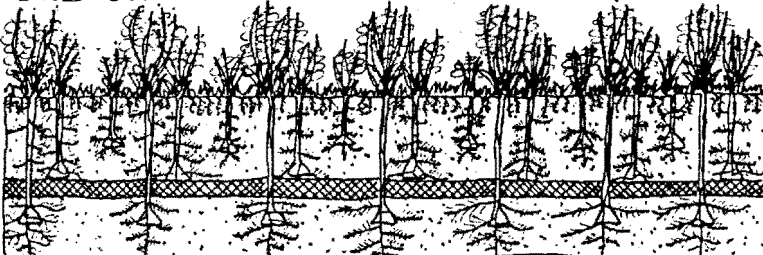
1 COMPACTED OR OVERGRAZED SOIL LACKS AIR, POSSIBLY HAS PLOUGH PAN (A) OF COMPACTED CLAY BELOW TOPSOIL. ROOTS WEAKLY DEVELOPED



2 FIRST RIP TO 75 OR 100 MM. ROOTS FOLLOW DOWN TO AERATED SECTION. WATER ABSORBS THERE INSTEAD OF RUNNING OFF



3 NOW, NEW GROWTH IS CLOSE-MOWN OR GRAZED OFF SHORT. ROOTS (SHOVED) DIE AND SOON AFTER SOIL IS RIPPED TO 150-225 MM AND NEXT GROWTH CYCLE BEGINS. SOIL SOMEWHAT CRACKED BY CHISEL PLOUGH AND DEAD ROOTS FORM ORGANIC MULCH AS DOES MOWN GRASS ABOVE GROUND. THE SECOND GROWTH IS MOWN, SECOND ROOT SETS DEEPER



4 THIRD RIP TO 500 MM BREAKS UP PLOUGH PAN AND ALLOWS FREE DRAINAGE TO SUBSOIL. DEAD ROOTS FORM ABSORBENT MATS, SOIL TEMPERATURES ARE MORE EVEN, MULCH ABOVE GROUND ALSO HELPS. WORMS MOVE IN TO EAT DECAYED MATERIAL AND FURTHER AERATE SOIL, CARBONIC ACID AND HUMIC ACIDS RELEASE SOIL NUTRIENTS.

Soil Rehabilitation by Chisel Plough. From Permaculture II, by Bill Mollison, copyright © 1979.

lands ranging from apparently flat, to a 1 in 40 slope. His "pattern" system is for slopes steeper than 1 in 40. In both systems, the chiseled furrows eliminate the need for water distributing apparatus.

Yeomans' book *Water for Every Farm* is available from PINA, 6488 Maxwellton Rd., Clinton, WA 98236. *The City Forest*, also by Yeomans, explains soil climaxes very well. Available from Vern Lawrence, Environ Management Systems Australia, 126 Russell St., Melbourne 3000, Australia, for \$8.00 plus postage.

*Additional note: we will print additional articles by Beth and Eric in future issues of The Permaculture Activist. They may be contacted at the following address: Beth & Eric Ardapple-Kindberg, Bass, Arkansas 72612.*

## Peoples' Efforts to Conserve and Breed Local Plants: The State of the Art in France

*Editor's note: This article is condensed from a paper presented by Michel Pimbert to the International Permaculture Conference.*

Michel Pimbert, Tours, France.

**Summary:** Prompted by the rapid disappearance of many plants (landraces and wild relatives) a number of peoples' initiatives in France are working to save this precious plant heritage. There are also attempts to continue using the saved plant diversity by means of locally appropriate plant breeding programs.

### Introduction: Reasons for Concern.

With the demise of French rural life, many different plant varieties are disappearing forever, along with their wild or semi-wild relatives. Yet these are precisely the plants which offer the kind of genetic variability which farmers, gardeners, permaculturists, medicine etc. may need in the future.

**The peoples' response to the problem - Opportunities for local control over plant genetic resources:**

### A. The conservation of local plant genetic resources

A potentially promising approach to the conservation of threatened plants stems from the peoples' local initiatives. Indeed, several grass roots organizations, food growers' cooperatives, public interest groups are setting up community seed banks and in-situ conservation projects in different parts of France. In-situ conservation efforts attempt to save the plant varieties under ecological, agricultural, and climatic conditions as close as possible to those which gave rise to the varieties' unique features. Working independently or in collaboration with national parks, ethnobotanists, official research institutes and sympathetic agricultural extension services; these groups of people are maintaining many different plant types: fruit trees, cereals, vegetables, forage plants, medicinal and tinctorial plant varieties.

Usually, these decentralized efforts involve three stages:



Michel Pimbert. photo: Steven Borns copyright ©, 1986.

- 1) Making an inventory of the disappearing plants. Local folk knowledge is actively sought and is highly valuable at this stage.
- 2) Plant collecting.
- 3) Setting up and maintaining the plant conservation project.

Lack of financial support and appropriate information on how to carry out locally controlled conservation projects have limited the growth of these decentralized efforts so far. However, some progress is being made on both fronts.

**Money:** Government organizations such as the recently created Bureau of Genetic Resources increasingly recognise the importance of local plant varieties for the maintenance of genetic diversity. They are also publicly stating that many different strategies (not just the classic gene bank approach) should be employed simultaneously to save the national plant heritage.

**Relevant information:** Accessible information on how to set up local, small-scale conservation projects has become available over the last year. (See references by Marchenay, 1986 and Rural Advancement Fund Int'l, 1986). These highly practical manuals explain in detail how to go through the different steps listed above (1 to 3). The information for setting up seed banks run by a community of people is given in simple and readable language.

### B. Local attempts to use the saved plants.

Hand in hand with the dispersed effort to identify and save threatened plants, there are also attempts to continue using this plant diversity. The plants are either used as such or after some appropriate plant breeding. They then help revitalize local economic life and, in some instances, local ecologies too. Examples are given in Box 2.

The groups involved in these local development projects are, however, still a loosely knit minority in France. But many have recently come together on a regional basis to coordinate and strengthen the political clout of what could well become a national federation in the next few years. Gradually, the people involved are becoming aware and are acting on the following idea: decentralized plant conservation efforts can only be sustainable in the long run if they favor some form of economic development (1) that's defined and controlled by local people.

### C. Some obstacles to local control over plant genetic resources.

Apart from the difficulty of obtaining money for projects in which popular control over plant genetic resources is an explicit aim and unifying element, there are two other important obstacles in France.

I. EEC and French seed regulations. The European Economic government and the French government have established lists of plant varieties for which certified seeds and young plants can be legally purchased. In effect, these lists reduce the number of plant types which can be bought on the market. Under such authoritarian seed regulations, it is strictly forbidden to commercialize seed and plantules of unlisted varieties, transport them for transaction purposes, advertise them for sale through the press or sell them in market stalls and fairs!! Anyone peddling unlisted seeds can thus be fined. It's of course possible to overcome this legislative hurdle by devising ingenious strategies to exchange seeds of unlisted plant varieties or by ignoring the law (civil disobedience). However, these regulations could impede the progress of regional development projects based on the use of plants that don't conform with bureaucratic regula-



tions. One political struggle ahead of us in Europe is to modify the law so that grass-root initiatives to conserve and use local plant genetic resources can't be blocked on petty legal grounds. Recently, fruit tree growers have succeeded in changing the regulations; they can now multiply and sell their rare plant stock. the same now has to be done for cereals, fodder plants, oilseed cultivars and many different vegetables which represent a major market for the multinational companies moving in to the genetic supply industry.

## II. The present bias of plant breeding work.

Traditionally cultivated and semi-wild plants which are successfully conserved in a local context can be used as such, without resorting to plant breeding. In many instances though, this saved plant diversity could better benefit the land and the people with the help of some form of appropriate breeding work.

People involved in local economic and ecological regeneration projects should therefore seek to control the direction and uses of the plant breeding work undertaken to suit their needs. They could do this by conducting the plant breeding research themselves or by modifying the terms of reference of public plant breeder's work. In industrialized countries like France most public plant breeding work is determined by the needs of the various industries on the input and output sides of food production proper. The social context of public plant breeders' work is such that

the direction and uses of plant breeding research are more and more specified by those who hold power in the food system.

There is considerable opposition to any form of democratic origination of scientific work in France (or elsewhere). However, I believe that a greater degree of social control over public plant breeding work and access to the fruits of publicly funded research can help us develop plant varieties which: 1. are compatible with local tastes and culinary traditions; 2. are designed to be long lived, easy to reproduce and multiply locally. Open pollinated varieties are preferred over hybrids; 3. have the minimum possible environmental impact commensurate with their use value (eg. locally adapted plants, no obligatory link between the use of pesticides and the growing of the selected varieties; 4. make minimum use of finite fuel resources, in terms of both energy conversion and utilization (eg. plant varieties requiring little or no energy inputs in the form of industrial nitrogen fertilizers and other petrochemicals); 5. do not harm the health of food producers and consumer;

6. are compatible with non-alienating, healthy work and democratic control over the production process (there are examples of plant varieties which have been designed to help further subordinate farm workers to managerial power and control - see Vandermeer, 1981); 7. help reduce inequalities in society, directing public plant breeding to meet social needs, with special emphasis on technologically deprived people eg., women, ethnic minorities; 8. generally stimulate the growth of local democratic power, self-determination and social equity.

## References

Marchenay, P. et Lagarde, R. (1986) - "A la recherche des variétés locales des plantes cultivées". Editeur, PAGE-PACA, 2 volumes.

Rural Advancement Fund International (1986) - The Community Seed Bank Kit. Available from P.O. Box 1029, Pittsboro, NC 27312.

SOLAGRAL-Seed's Group (1985) - Special genetic resources issue of "La Lettre de SOLAGRAL". No. 37, France.

Vandermeer, J. (1981) - "Agricultural Research and Social Conflict", Science for the People 13(1):5-8 and 25-30.

## Box 2. Some examples of how saved plant diversity is used to revive local economies and ecologies in different parts of France.

1. A project to save disappearing cider-apple trees in lower Normandie (see Box 1) has led to a rebirth of the traditional farm based cider industry. The committee for development of cider production is run by the apple tree growers themselves. They decide on how and where to commercialize their tasty, refreshing beverages.

2. Lime and acacia trees bear flowers that are particularly good for the production of honey. Several bee keepers from the Languedoc-Roussillon region are now planning to use the many rare tree varieties that have been maintained in a local arboretum for several years. The phenologies of these different trees are such that it would be possible to extend the flower blossom period favorable to the honey bees' activity. 26 Different lime varieties would thus allow a continuous flowering from May till October. Local bee keepers intend to use this genetic diversity and hope to breathe some life into the rural economy of this poor French region.

3. In the dry mountain areas of the French Oriental Pyrennees, a group of farmers are basing part of their production on a re-discovered specialty plant: the pepper of Espelette, an old local tasty cultivar that had been discarded. The farmers and local administrators have made moves to obtain an official quality label for their produce.

4. As part of their plan to develop local agricultural, tourist and cultural wealth, a group of inhabitants of the village of Roquebrun are setting up Mediterranean gardens. The gardens serve several functions: a) Cultivate a number of indigenous plants, save local fruit tree varieties and acclimatize subtropical plants (jujube, fig, feijoa, quince, almond, apricot, pistachio...); b) Use this genetic diversity to create, in time and space, original and productive food production systems with many perennial plants.

The gardens and techniques used exert many beneficial effects on the environment (soil erosion control, micro-climate improvement, wildlife enhancement). Thus, neglected plant genetic resources become the building blocks of a new, gentler agriculture designed for and by the local people.

## Box 1. Examples of in situ conservation projects set up by food producers and public interest groups in France.

1. The organization "Les Croqueurs de Pommes" (literally "The Apple Eaters") with members all over France has set up local conservation projects which collectively maintain 250 different apple varieties.

2. In the region of lower Normandie and North Maine, efforts by fruit tree growers and staff of the regional natural park have culminated in the creation of 4 orchards which house 66 local cider apple and 72 pear tree varieties. Two of the orchards are maintained by local farmers who signed an agreement with the park.

## City Farms In England

*Editor's note: This article on England's unique City Farm projects was submitted by Sandra Hatton who attended the workshop presented by John Bond from England at the International Permaculture Conference.*

Sandra Hatton

Gardening and caring for farm animals on community sites for local benefit are the central themes of City Farms. They give children and adults, the able-bodied and the differently-abled, a chance to experience rural activities in their own neighborhood each and every day. City Farms provide education and recreation for people of all ages. They also respond to local needs for work and training for adults and teenagers, for children's play and out-of-school activities.

Running the Farm allows people to gain experience in managing and financing a project and in taking advice from local specialists. City Farms are uniquely placed to encourage integration of otherwise separate sections of the community.

Developing the program creates a greater understanding of rural activities and how they can be applied within urban communities. City Farms provide a basis for understanding the local environment as well as introducing the countryside beyond.

Most City Farms are registered charities. They aim to be self-financing through the services they offer. They remain cost-effective by involving volunteers, receiving donations in cash and kind, and raising and managing money by their own efforts.

The National Federation of City Farms is a mutual support and development organization. It has a membership body comprising City Farms and other interested individuals and groups. A full-time Development Team provides services to the members, new groups and the general public. Meetings of the Federation are held regularly at City Farms throughout the UK and its affairs are managed by an elected Executive Committee.

**Aims of the Federation:** to promote City Farms and Community Gardens and similar projects like market gardens of farm-type projects attached to institutions in the interest of social welfare.

- to encourage their use by the public.
- to develop awareness, especially in young people, by enabling them to participate in rural activities.
- to provide facilities which will integrate people with mental and physical disabilities into everyday life.

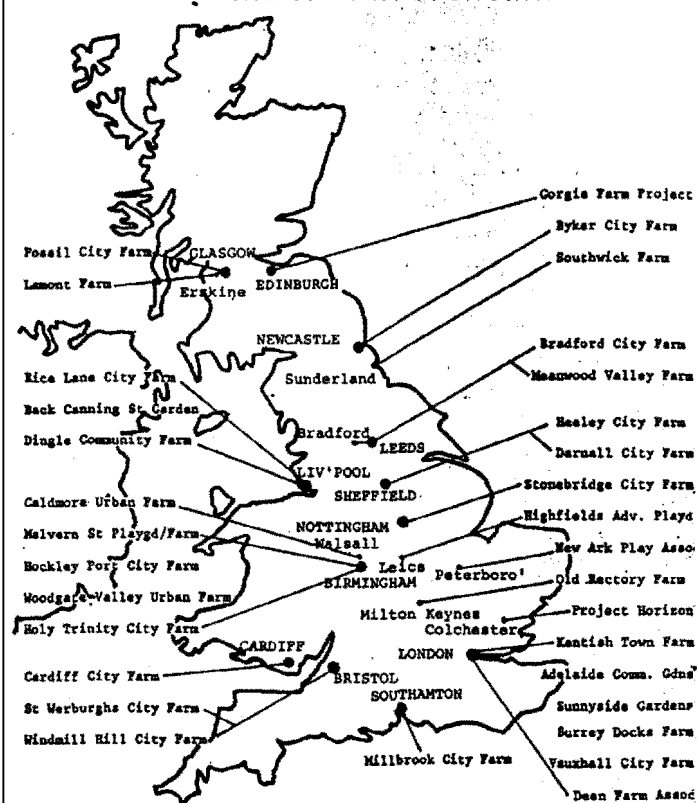
### What can the Federation do?

- coordinate the requirements of the national network and provide the means for communication and exchange of ideas, information and skills.
- work in partnership and liaise with national bodies to pilot new projects and to encourage mutual help and practical results.
- develop educational materials and arrange training courses.

**In helping new groups, the Development Team assists in:**

- drawing together development proposals and ideas.
- publicizing the ideas of the group.
- negotiating with Landowners and Authorities.

SOME CITY FARMS AND COMMUNITY GARDENS JANUARY 1982



- providing contact with specialist advisors.
- arranging tailor-made training courses.
- providing grant-aid and help with preparing applications.

City Farming can be a sound use of spare land. It adds to the stock of amenities within the community it serves and offers unique facilities. Where land is only temporarily available, the simple construction work required means that the land can be returned to the freeholders without fear of loss on their part. People starting and running a City Farm master new skills in working with people, negotiating agreements, organizing, and financial management; all of which are relevant to starting up any small business.

One of the key features of City Farms is that adults as well as children can use them for their own activities, from gardening to pigeon keeping to woodwork. Thus, a number of community activities can take place side by side.

City Farms provide a base for employment and training projects. These take many forms, from learning the economics of egg and goat milk production, to building, to running the Farm, to dealing with people. Young people develop and take responsibilities in a supportive environment.

Children particularly are encouraged to take part in the daily running of the Farm. School parties visit the animals. They might also participate in outdoor activities related to the animals or take part in games or see films. Learning facilities for the very young and opportunities for them to mix with older children are often lacking in the inner city. Farms can create a stimulating environment, especially for those under five.

Gardening, pony riding and helping in the farmyard give an ideal opportunity for the differently-abled to join in the work.



Picnics, fairs and festivals on the Farm enable them to enjoy fun, drama and music activities along with able-bodied children.

Elderly people can join in communal activities like gardening or spinning, and enjoy working together with others. Elderly people play a valuable part in keeping an eye on the animals and passing on their experience to people of all ages.

The resources of City Farms can be used elsewhere in the neighborhood. Animals, equipment and people can be made available to local schools or made use of at local fairs and festivals. By organizing seasonal events at times like Halloween, Thanksgiving and Springtime, the Farm helps to keep traditions and customs alive.

City Farms are developing and may have all or some of the following:

### Community Gardens

- small plots for the elderly, worked on a sharing basis.
- gardens for school classes and youth clubs who can experiment in growing food.
- plots for families without gardens of their own.
- gardening activities as a therapy for people with mental or physical disabilities
- communal greenhouses and mini-market gardens for training young people in horticulture.
- nursery gardens where people can learn about growing cereals, fruit, trees, herbs, wild flowers, fodder and vegetables.
- wildlife gardens, nature trails with play and picnic areas.

### Farmyard

- pigs, sheep, rabbits, goats; sometimes cows and the rarer breeds of farm animals are reared.
- ducks, chickens, and geese are kept mainly for the eggs they produce.
- stables, hay-barns, animal houses, pens and duckponds are designed to encourage visitors to get close up to farm animals.
- children and adults learn the processes involved in milking, butter and cheese making, and the cycle necessary for the production of meat. Composting the manure from the animals can show the importance of recycling natural waste.
- fish farming, riding and stable management, bee keeping and pigeon clubs encourage specialized study.
- workshop space for household repairs as well as farm associated crafts like spinning, leatherwork, metalwork and woodwork.

### Farm and Garden Visits

- classrooms for school visits and study areas for local children after school and weekends.
- tea rooms and club rooms for the farm users to meet when the work is done.
- drop-in facilities for local mothers with young children, the elderly and the unemployed.

The Farm is a base from which trips to the countryside can be made to see real farms, garden centers, country shows and animal breeders. Through City Farming, town and country people begin to share mutual interests.

### Financing of City Farms

City Farms registered as charities can raise money from a variety of sources:

- selling produce and services.
- receiving grants from statutory bodies.
- receiving donations in cash and kind.
- fundraising locally.
- obtaining sponsorship from local firms.
- receiving grants from charities.

### Help with building the Farm comes from:

- local residents, adults and children.
- college, commercial and industrial secondments.
- volunteers from national organizations.
- community service orders placements.
- trainees in central government employment schemes.

Costs are kept to a minimum because City Farms rely on the voluntary effort of local people and receive donations in cash and kind. Farms generally suffer very little vandalism so the cost of repairs is kept to a minimum. When local youngsters are actually involved in the project and the City Farms has been accepted into the neighborhood, vandalism is minimized. City Farms recognize their responsibilities in channelling the energy of youngsters into activities that are meaningful to them.

Building costs are kept low because material are recycled or donated. Voluntary labor and employment scheme are used to build the Farm. Windmill Hill City Farm in Bristol erected a preschool playcentre for £12,000 in comparison with the original budget figure of £50,000. The completed building is worth many times the initial investment in terms of the social benefits it has brought and has been so successful that an extension is needed to cope with the demand.

Day-to-day costs such as animal feed and electricity can be covered by earnings, the sale of produce, and fund-raising efforts by the group.

City Farms represent value for money in terms of their accessibility. Many established farms are open free to local people, 7 days a week, all day, evenings and weekends. Visitors are welcome, it is not unusual for established Farms to have over 50,000 visits a year. Individuals and institutions save on travel costs by having these farm type facilities nearby.

### WHAT DO YOU NEED TO SET UP A CITY FARM?

#### A Group

Enthusiastic local people can learn how to acquire land and set up the project. A group could be chosen from the adults and teenagers who live in the neighborhood and who will use the facilities. Usually the next step would be to set up a users' committee or club (with a constitution) to deal with the day-to-day running of the Farm.

#### A Site

A City Farm can be as small as 1/3 acre or as large as 30 acres. What is important is that there are no immediate plans for the land to be used for at least 3-5 years. It should be in a good location near to housing developments. It should be safe and easily fenced off.

#### A Lease or License

An agreement should be drawn up between the owners and the City Farm group which should clearly state the conditions of tenure. If the lease or license is for short-term use, the City Farm group must remind new members and children of this fact

## High Seas Polyculture

### A Proposal for an Integrated System for Commercial Culture of Seaweed and Shellfish on the High Seas

*Editor's note: This plan for deep sea aquaculture is one of two presentations made by Barbara Daniels at the International Permaculture Conference.*

#### Introduction

At a time when they are more needed than ever, world fisheries are declining due to overfishing, pollution and juvenile food and habitat loss as wetlands are destroyed.

Because traditional approaches to fisheries, random harvests, are proving insufficient to meet the world's need, it is clear that we must shift to some form of culture.

Present sea-farming practices, being tightly managed, however, have difficulties. If located far from shore, they find frequent maintenance trips are prohibitively expensive and ocean conditions too rigorous. Near shore, they encounter pollution and conflicts with other water front uses.

The proposed, flexible, floating, integrated culture of seaweed and shellfish, on the other hand, was shown, with a similarly-designed 250 cu. ft. pilot, to be inexpensively durable in rough seas, maintenance-free, high yielding and machine harvestable. Its products, edible seaweed and shellfish, have a growing market value. In addition, it may have significant breakwater capabilities.

More importantly, though, as profitability spreads its use, this device will augment commercial fin-fisheries by providing ample, accessible, food-growing surface and habitat needed by juveniles of these fish and by the species they consume.

This proposal suggests a plan to produce and study a 33,000 cu. ft. prototype of the culture to determine its mooring foci, durability, wave-abatement and productive capabilities (including plankton increase, egg-deposits, juvenile fish, commercial seaweed and shellfish and other biota). It can be manufactured, installed and monitored for a period of two years for a cost of \$10,000, with a first year's budget of \$7,500.

#### Future Outlook:

Future phases would depend on the outcome of this test. If it is seaworthy, while producing as hoped, then, at the proposed size, it can be the basis for a new industry, while enhancing fisheries.

If there is significant current deflection, however, a larger culture might not need much more anchorage, allowing the large scale needed for a machine-harvested seaweed, such as kelp. If, moreover, chop is also reduced, as it is in kelp beds, a floating wildlife area, sustained by the culture's food-producing environment and sheltering cabanas of rafts would be feasible for the center.

A possible next phase then, might modify and enlarge the culture, forming a central protected area. Into this an elasticized, floating network of small marsh/islands, encompassing two or three elliptical bamboo rafts, could be installed. This would provide a site in which important features of the marsh-complex; such as raft-stabilization, wildlife rest areas, compatible recreational uses and shellfish production, could be developed.

If the second phase should go as planned, then a third and final phase would enlarge the culture/marsh envelope, add two more rafts, put cabanas on all the rafts and develop an efficient, human support system, creating a small version of the complete idea.

Funding for these phases should be more available if tangible evidence is accrued with the first phase and possibly through sales of culture products. A full-scale model, perhaps 2,700 square feet, with ten, 16-foot cabana-rafts would seek funds from wildlife organizations or private investors. Funding might even come from art foundations as this is a participatory form of art, molded by ocean conditions.

Should a full-sized project become economically viable, any proceeds, after meeting contract agreements, would be applied to building more such systems. Stock in the company, if any, would be deeded to wildlife and other charitable organizations with stipulation that management remain with the founders of the company.

## Living Tree Journal is devoted to people, plants and life energy.

Including: Energizing plants and seeds.  
Becoming alive and fulsome in ourselves  
Earth currents and megalithic sites

## The Living Tree Journal is a catalog of 65 historic apple varieties.

Featuring: ● Reinette Simirenko from the Ukraine, proven precocious and high yielding hue.  
● Pink Pearl, a pink-fleshed apple.  
● Calville Blanc d'Hiver contains more Vitamin C than an orange  
● Warren Pear, better than Cornice and highly blight resistant  
● A step-by-step Planting Guide and Historic Apple Index and research papers.

Excellent prospects for diversified specialty orchards.

Send \$6.00 for your copy.

Price of journal refundable with purchase of a tree.

### Living Tree Centre

P.O. Box 797 Bollinas, Ca. 94924  
(415) 868-2224



## Letters

### A Proposal of Marriage

Michael Crofoot

The bioregional and permaculture movements have been evolving in tandem for ten years or more, each with its own distinctive flavor. Having attended both the North American Bioregional Congresses and the 1st and 2nd International Permaculture Conferences, I see confluences yet unspoken and divergences of which we should take heed.

Both movements spring from common concerns for a life of quality and empathy with the natural world. Bioregionalism speaks of 'knowing home' and staying put while the permaculture design process begins at the home and works outward. Each movement is decentralized and anarchistic in character, now seeking to strengthen its commitment and widen its influence.

Permaculture uses basic ecological concepts, like succession and the stability of species diversity, within a construct of design principles, such as stacking functions and creating edge effects, to develop sustainable agricultural and cultural systems. Based on natural systems, permaculture tends to be scientific and goal-oriented. It seeks to work natural systems into cultural ones.

Bioregionalism began as a cultural endeavor, finding ways to home the processes of culture in the dynamics of reinhabitation. Acknowledging the patterns which connect mind to matter, civilization to wilderness, bioregionalism works cultural systems into natural ones.

As both maturing movements 'come of age' and make plans for their 3rd biennial events, let us find our common grounds and meet the world together.

Bioregionalism and permaculture originally had their humanistic blindspots, but have since met and become broadened by the biocentricism of deep ecology. One of the criticisms of permaculture, that it ignores natural wisdom through the wholesale introduction of exotic species, is less and less deserved. Permaculture principles are now used for wilderness restoration and useful native species are increasingly utilized in human centered designs.

While bioregionalism has been refining ways of 'knowing home,' permaculture has busily gone about internationalizing.

At the recent conference at Evergreen State College in Washington, 600 participants from 10 or more countries heard keynote addresses from Masanobu Fukuoka of Japan, Wes Jackson from Kansas and, of course, the irrepressible Bill Mollison of Tasmania. Permaculture projects are underway in Papua New Guinea, Brazil, the Pyrenees, and India to name a few. The 3rd International Permaculture Conference, scheduled for New Zealand in 2 years, promises to be quite an affair.

Similarly, the kind of agriculture and local economy necessary for a sustainable reinhabitation could well be improved by the permaculture strategies garnered from age-old indigenous cultural patterns such as those found in Bali, Hawaii or the outback of Australia. Permaculture's collective experience with economic alternatives and cottage industry innovations would prove useful to any serious bioregional initiative. Bioregionalism is much more than just another back-to-the-land movement while permaculture is more than just another form of organic agriculture. They are qualitatively greater, I would submit, because they are intrinsically rooted in natural systems.

I am writing with a proposal of marriage, but not a smudgepot of two equals becoming One as in "permaregionalism." Rather, in the spirit of mutual respect and mutual aid. Perhaps it is best said in Kahlil Gibran's *Prophet*, where he speaks on marriage: "Give your hearts, but not into each other's keeping, even as the strings of a lute are alone though they quiver with the same music. And stand together yet not too near together; for the pillars of the temple stand apart and the oak tree and the cypress grow not in each other's shadow." In these volatile times where crisis becomes opportunity, it would strengthen us both to watch each other's dance closely and maybe even learn some of the movements.

As one of the organizers for IPC III, I am trying to introduce a bioregional sense throughout the proceedings, perhaps even arranging a bioregional speaking tour for participants of NABC II in New Zealand prior to the conference. And by all means, some of you folks come on down to our permaculture gathering. It'll be a wingding!

Kindredly, Michael



### Hello-

Back at home now, a couple days past attending the Permaculture Conference at The Evergreen State College.

First, my support to the organizational committee for directing a crowd through three days of workshops and panels. Your efforts were grand and successful.

I have one cause for concern though. I am referring to the congregation of "witches" on the stage at the closing ceremony. There is no doubt in my mind and heart and soul that witches and magic exist within our conscious and unconscious worlds. Some witches practice witchcraft, mixing potions of potent herbs and foods over stoves in kitchens, offering their potions to those who come to eat at their tables. Magic both...yes indeed.

Now I don't commend being called to perform in ceremonies which are unnatural to me, in the midst of public pressure. It forces me to make false actions, when it is honesty and truth that I seek to manifest in my actions.

I understand that there exists a world of symbols. And to make a call to a richly diverse crowd to stoop and touch the earth together can be read as a symbolic act. But to me, who touches the earth daily, and not through a tiled floor, it is meaningless. It is an empty action. I perform it only to meet the accepted form. Otherwise, it is void of content.

The world of magic is very powerful. It requires great consciousness to use it in its best way. It holds within itself the potential for instruction and destruction, and those who practice it must always remember this.

Sincerely,

Catherine Jacobs  
Entheos Gardens  
Seabeck, WA



## Bulletin Board

### TIPSY 86

Recently published by Yankee Permaculture of Orange, MA, **TIPSY** (The International Permaculture Species Yearbook) includes an extensive section on wetlands permaculture, editorials on the environmental crisis, a comprehensive index of 1000 useful plant species and where they live, articles on such issues as colony raising of rabbits, the farm debt, shipping tree seeds, philosophical considerations on a permaculture lifestyle, and how to grow hardy kiwi, reviews of more than 70 books and an enlarged and reorganized international "green pages" listing of approx. 100 organizations working for sustainability of human habitation on Earth.

Authors in this years' edition include Bill Mollison, founder of the permaculture movement; Don Weaver, co-author of the *Survival of Civilization*, James Duke, chief of Germplasm Resources for the US Department of Agriculture; Wes Jackson, founder and director of The Land Institute; Michael Pilarski, director of Friends of the Trees Society, Bill McLarney, renowned New Alchemist and author and researcher on Aquaculture; TIPSY's own managing editor Thelma Snell and TIPSY's editor Dan Hemenway.

Subscription price of TIPSY 1986 is \$12.50 through Dec. 1, 1986 and \$15 thereafter. For more information, contact Yankee Permaculture, PO Box 202 Orange, MA 01364. Yankee Permaculture has also recently published a listing of 700 suppliers of plant materials, available for \$6.00 in the U.S., \$7.50 foreign.

### New Alchemy Institute Semester - Sustainable Agriculture & Appropriate Technology

**DATES:** January 26 - May 15, 1987

**TUITION:** \$2,500

**CREDITS AVAILABLE:** 16

**APPLICATION DEADLINE:** December 11, 1986

The New Alchemy Semester is a cooperative effort between the New Alchemy Institute and the National Audubon Society Expedition Institute to provide an

experiential college program in sustainable agriculture and appropriate technology at New Alchemy each spring.

The Semester program integrates academic studies and hands-on work within the context of New Alchemy Institute's ongoing research and demonstration projects in ecological food production, energy-efficient design, and resource conservation. The Institute's twelve-acre site provides students with an excellent environment to investigate the practical applications of their classroom studies. The subject matter, structure, and setting of the Semester make it a unique opportunity for exploring some of the key environmental issues touching our lives today.

The semester is geared toward third-year college students, or individuals with equivalent experience. A background in basic biology and ecology and some familiarity with appropriate technology are recommended.

Past students consistently point to these attributes as the Semester's greatest strengths: the interdisciplinary perspective on up-to-date information; the emphasis on hands-on approach and on real, working alternatives; the good student/ teacher ratio; the closeness of the small group of students; the comfortable learning atmosphere; the friendliness and personality of the place; and the commitment of the Institute's staff.

All Semester students take the following four courses taught by New Alchemy Institute staff members: Biological Agriculture and Appropriate Technology; Ecosystem Design Seminar; Regional Resource Systems; Applied Studies in Ecological Design.

### Friends of the Trees Yearbook

An annual compendium of noteworthy deeds, projects, events, organizations, movements, periodicals, books and articles concerning Re-Greening the Earth - The worldwide "Green Front". Published March, 1986 - **ONLY \$4.00**. Without a doubt, the best value for addresses of organizations and information on Permaculture, agroforestry, seed exchanges, propagation, seed & nursery companies, native plants, tree planting, book sources, keyline and numerous other subjects. Available from Friends of the Trees, PO Box 1466, Chelan, WA 98816.

### Seventh Annual Ecological Farming Conference

The Seventh Annual Ecological Farming Conference will be January 30, 31, and February 1, 1987 in La Honda California, 40 southwest of San Francisco. The conference fee of \$75 includes all events, accommodations and meals. Contact the Steering Committee for Sustainable Agriculture (SCSA) for a registration packet at PO Box 1394, Davis, CA 95617, phone: (916) 753-1054.

SCSA is a non-profit organization dedicated to the promotion of organic, ecologically sound agriculture. Based in Davis, California and founded in 1981, the Committee promotes sustainable agriculture through public education and by fostering communication among people working within the ecological farming community.

### Permaculture Design Course - Video Tapes

Video tapes of the Drylands Permaculture Course taught by Bill Mollison at Pyramid Lake in Nevada are available. The sound quality is fairly low - these are not professional quality tapes, but capture the essence of the course. Additionally, we will include a full set of notes for the course, which will further enhance their educational value. We are planning to send these video tapes to a processor to have the soundtrack upgraded. The cost for this process is fairly high and we would like to find out how many people are interested in purchasing or renting the tapes - we will keep the tape cost as low as possible - cost will probably be \$600 to purchase and \$100 to rent. 30 tapes in all - approximately 60 hours. We will provide a sample for a small fee for any one who wants to purchase a set of tapes. We would appreciate pre-purchase orders. For more information contact: Gene & Dorothy Miller, 2724 Dundee Ct. Ft. Collins, CO 80525. (303) 223-3267.

A videotape of a weekend workshop given by Bill Mollison in New Mexico is also available from Charles Bensinger, 227 E. Coronado Rd., Santa Fe, NM 87501

## Bulletin Board

### A Source for Free, Appropriate Tech Advice

The National Appropriate Technology Assistance Service (NATAS), offered by the National Center for Appropriate Technology, offers information and technical assistance in energy related appropriate technologies. They offer *free*, specific advice in reply to specific questions.

NATAS, funded by the U.S. Dept. of Energy, has been in operation since 1984. Since then, it's responded to questions covering the full spectrum of energy related technologies, from using solar water pumps in remote areas to the cost-effectiveness of a co-generation system in a hospital. But most of the 15,000 questions received so far have come from individuals trying to make their homes more energy-efficient. Wondering how much ventilation you'll need in that greenhouse you're planning? NATAS can furnish the information you'll need.

The services include Engineering/Scientific Technical Assistance such as advice on the selection or comparison of systems or components, design assistance, troubleshooting systems or components, and engineering analysis and technology assessment.

They also offer Commercialization Technical Assistance for energy related appropriate technologies. This can include advice and information about financing, marketing, business start up, patenting, business planning, and licensing.

Also on the drawing board at NCAT is a sustainable agriculture assistance service called Appropriate Technology Transfer for Rural Areas (ATTRA). The House Appropriations Committee has already awarded \$500,000 for ATTRA in 1987, the only new, non-military program to be funded this year.

#### Further Information:

National Center for Appropriate Technology (NCAT)  
3040 Continental Dr., POB 3838,  
Butte, MT, 59702  
(406) 494-4572

### Mondragon Co-operative Model

The Mondragon West Development Group announces a meeting December 26 in the Main Auditorium of the Lemieux Library, Seattle University. The Mondragon Co-operative in the Basque region of Spain is an incredibly successful experiment in co-operative economics. The schedule for the meeting is:

1 - 3 PM Terry Mollner presentation  
3 - 3:30 Questions & Answers  
3:30 - 4:30 Social hour

Sponsoring organizations: Mondragon West Development Group, Puget Sound Co-operative, EarthBank Association of North America, the Permaculture Institute of North America, Community Education Programs, Antioch University and Chinook Learning Center. For more info: Mondragon West Dev. Gp., 2123 N. 53rd St, Seattle WA 98103.

### Apprenticeship in Ecological Horticulture

The Agroecology Program & University of California Extension at Santa Cruz offer a 6-month residential Apprenticeship in Ecological Horticulture at the Farm and Garden on the campus of U.C. Santa Cruz. Emphasis is on hands-on learning of environmentally-sound horticultural methods, taking into account ecological diversity, inter-relatedness and sustainability. Cultural requirements for vegetable, herb, flower and fruit cultivars are covered, including specifics of soil preparation, composting, sowing, cultivation, propagation, irrigation and pest and disease identification and control. The Farm and Garden comprises a total of 29 acres including 6 acres of raised-bed and drip irrigation gardens, 6 acres of fruit orchards and 5 acres of fields in row crop/cover crop rotations.

The program runs from March 31 to September 30th, 1987. Cost for the 6 months is \$750. Application deadline is December 5, 1986. Late applications considered, space permitting. For further information and application form, please write:

Apprenticeship - Box A  
Agroecology Program  
University of California  
Santa Cruz, CA 95064  
phone: (408) 429-2321

continued from Fukuoka, page 5.

people with seeds. I went to Somalia to see if it would succeed and came back with great confidence.

Just one garden or forest plot is not enough. I want the U.S. to redirect energy from the space shuttle to planting seeds. Later will be too late. If you doubt, look at Africa from the air. Although they have nothing and are starving, they're happy. New York is heaven but also hell. Somalia is hell but also heaven. To change this, Northwest [United States] people energy is need. Seven years ago while here in the U.S. I talked with a United Nations representative. I traveled around the East coast and talked with many people. I was going to talk to the U.N.'s desert lands representative, but it looks like I won't have to go. The future is in the PNW, not the East. Move the White House here. Please make efforts to plant seeds with all these weapons of war. Sylvia [Eagle - permaculture organizer from London, England who attended the Convergence] will bring my book to Prince Charles. The power to change the people at the top comes from you. We think our power is small but the potential is great, the future is great - we have leverage.

#### Question & Answer Session

Q. In Permaculture and Natural Farming we're using non-natives, what's the impact?

A. We can't get rid of national borders, but plants don't recognize them. We need to experiment with what will grow where. There's no time to be picky. It's too late. Use what's useful. Destruction has been too great, we can't exclude useful exotics. Plant edibles everywhere. We need green instead of brown. Plant edibles in waste places, replace weeds with edibles. Then you just wait for God to choose which plants will succeed.

Q. Re: water.

A. Deserts are not created by lack of rain. You can change the desert by planting green. Don't accept "nature" at face value. Look deeper. The first step is to acknowledge your ignorance. Pretty strange, you smart people listening to my foolish talk. People in Tokyo think I'm Don Quixote for going to Somalia. The time has come when it's necessary.



## Bulletin Board

*Are you looking for a beautiful, productive, well-developed rural site for your special project?*

The site, known as the Farallones Rural Center, is 80 acres of partially wooded, rolling hills two hours north of San Francisco in the coast range. Its Douglas firs, redwoods, madrone and bay trees frame views, little valleys, hilltops, and open meadows. The climate is gentle, with pleasant summers and mild winters with heavy rainfall. The land is held in trust and is fully paid for. There's more: roads and nature trails, auto and wood shops, large timber frame barn, solar greenhouses and cold frames, lots of deer fenced areas, library, visitor center, outdoor meeting and play areas, composting and low-water toilet systems, and even a parking lot!

Over the last ten years the Farallones Institute has been a leader in developing projects working with appropriate technology with strong emphasis in horticulture, solar energy, waste and water recycling, and self-reliance skills training. The Rural Center has been the site of numerous training programs, and extensive research work. A productive market garden is now operating on the site that could provide the nucleus or supplement to many different kinds of programs. We at Farallones have a great deal of experience with project development and dynamics and we want to share the tremendous capabilities of this well developed site along with what other support we can offer. We hope to provide a place where worthwhile ventures can make a home. We're open to a wide range of ideas and would consider any creative, responsible project.

For more information call or write:  
The Farallones Institute, 15290 Coleman Valley Rd., Occidental, CA 95465, (707) 874-3060.

## Chestnuts Return

Without Chestnuts, Fall just wasn't complete. There was a big void and a yearning when Jack Frost would visit the big dead trees and find no burrs to open.

This longing prompted me to order some Manchurian Chestnut trees advertised as blight proof. About this time I was fortunate in securing 12 American Chestnuts from a tree that had managed to survive the blight. Although afflicted with blight, the tree was still bearing profusely, giving large nuts of excellent quality. From these I raised 11 trees which were set near the Manchurian trees.

When the trees came into bearing and the big Manchurian nuts were planted, seedling trees showed up that resembled American Chestnut trees. Without planning it I was growing hybrid trees. The American pollen had pollinated the Manchurian nuts, affecting a natural hybridization. About 20 of these hybrid trees are bearing unusually fine nuts. These hybrids seem to have picked up the desirable characteristics of both parents: size and blight resistance from the Manchurian, plus early bearing and a vigor that surpasses either parent. Some folks are of the opinion that outstanding strains can come from this generation of hybrids and make it possible for Chestnuts to make a permanent comeback.

After some 20 years working with the 2nd generation of the hybrids I will pass along some observations. Some of the hybrids are free from blight but others eventually develop blight cankers. When they do, the blight resistance of the Manchurian enters in and forms a callous around the affected area, thus slowing down the spread of the canker and allowing the tree to keep on bearing. With a strong solution of a mixture of fungicides I have been able to effect a complete healing of the canker, using a power sprayer to penetrate the area.

There is another promising control coming over the horizon. It has been discovered in Europe that there is a milder form of blight, and when it attacks the old, potent blight, it immunizes, like a vaccination. These blight spores have been cultured, and have cleaned up the blight in Italy. Now some 700,000 trees on 40,000 acres in France are being treated with it. It is currently under quarantine

by the U.S. Government. Bringing back the Chest-nuts is an experiment, it has problems and a lot of promise.

### Growing Chestnuts:

Chestnuts are easy to grow if nature's method is followed. Squirrels are nature's nut planters. It is best if they do their job as soon as the nuts fall. The embryo must not dry out as in grain, garden seed, etc. There are several satisfactory methods of growing Chestnuts. They can be planted in a gallon milk carton, and stored in a damp, cold cellar until Spring when the carton can be cut off and the contents set in a hole where you want the tree. Keep the soil moist but not soggy wet, use good potting soil, mix some bone-meal and good organic fertilizer in the bottom of the container for the seedling to feed on. The nuts can be stored in a cold cellar, packed in a covered container in damp coarse sand, then planted in a nursery row early in Spring, where they can grow for a year or two until planted in a permanent location. Never use lime on Chestnuts, as they require acid soil. Chestnuts require plenty of moisture to germinate and get started.

If you have any questions, feel free to ask. I am not an authority but have had some 30 years experience endeavoring to bring back the Chestnuts so that future generations may enjoy gathering, eating raw, boiling, roasting, and stuffing the turkey with this delightful gift of nature. Please enclose an envelope, addressed and stamped.

A limited amount of seed and seedlings are available in season, Fall or Spring. In making up the seed packets an assortment of Manchurian and hybrid nuts are used. The trees resulting from this assortment could and should produce a desirable and varied grove of Chestnut trees bearing nuts of fine eating quality and valuable seed.

Include \$2.00 with first order for postage and handling, add 50 cents for each additional order. More than one must be planted for cross pollination).

1 lb. seed nuts	\$4.00
10 seed nuts	\$2.00
2 - 1 year seedlings	\$7.00
5 - 1 year seedlings	\$15.00

Earl Douglass  
Red Creek, NY 13143

## The International Permaculture Fund

Dear Friend,

Please consider the following proposal. We are sending two instructors to three countries in the Third World. They have been invited by local organizations to impart their knowledge of ecological regeneration and community revitalization strategies. The teachers will instruct men and women of these nations in methods of ecological design. They will alert their students to patterns of land use that are causing tremendous environmental damage. And they will teach techniques that enable the restoration of such depleted ecosystems. The resulting increase in productivity will improve local residents' well being.

### The Permaculture Education Project

Throughout the Third World people are faced by increasingly severe living conditions. Struggling economies depend on export crops to bolster balances of trade. The poor, ever growing in number, crowd more tightly on what land remains to squeeze out a meager sustenance. In their effort to survive they prey upon an already unstable environment.

In a speech delivered in Washington last year Robert McNamara, former president of the World Bank, said this of conditions in Africa: "...continued overuse of these ecosystems can set in motion dangerous processes that are self-reinforcing..Each stage of ecological deterioration appears to accelerate the onset of the next. As land is cleared of vegetation (for fuel), soil erosion accelerates, and more rainfall runs off to the ocean rather than seeping into the earth. With less water retained in the land to be re-evaporated into the atmosphere, fewer clouds are recharged, and rainfall declines. The diminishing rainfall, in turn, dries out the landscape and further aggravates the already serious desertification."

Conditions are similar in varying degrees across the tropics. In seeking solutions to the problem, recent debates in development circles have centered on alternative strategies. The search is...for equitable distribution along with growth, for self-reliance (of nations and local communities) instead of chronic depen-

dency, for models of problem solving which respect traditional values instead of imposing solutions from the outside or from the top downwards."

To date, the majority of development and relief efforts have been massive in scale, requiring huge investment and concentrated expertise and necessitating large, unresponsive bureaucracies for their administration. In response to the perceived insufficiencies of this approach there is growing support for smaller, more locally detailed projects in which local residents are integral participants. Outside experts function solely as educators, advisors, and facilitators. Locals are encouraged to take part and to take control.

"Permaculture" as a study and a practice is ideally suited to this style of development. Permaculture's main goals are to increase the self-reliance of its practitioners and to enhance the stability of their immediate environments. Permaculture goals are achieved through the considered use of contour, water, food-bearing perennials, tree crops, and appropriate technologies on a given site.

The value and efficacy of permaculture are being demonstrated by individuals and organizations all over the world. In essence permaculture differs little from the wisdom of traditional agriculturalists. But, because the ecozones in which these methods were practiced are being irrevocably altered and/or destroyed, and because the old ways are falling out of practice, it is necessary to reacquire indigenous people around the globe with the tools of self-reliance. Permaculture instructors provide their students with the conceptual and informational tools to heal their environments and to live well on the richness of the earth that they have nurtured.

Permaculture Design students are taught the guiding concepts of ecological design. They are shown the numerous ways in which design components can fit together in dynamic, harmonious wholes that meet the basic needs of humans, wildlife, and the environment. Students are required to team up during the three weeks of intensive instruction and design the course site.

Non-governmental organizations in Kenya, Malaysia, and The Philippines have invited Dan Hemenway and his assistant, Thelma Snell, to teach Permaculture Design in their countries in 1987. Dan is the founder, editor, and publisher of *The International Permaculture Species Yearbook*, and has taught Permaculture Design Courses in low-income regions from Maine to Mexico and from rural Kentucky to New York City's Lower East Side. Thelma is a Permaculture Design Course graduate, and as managing editor of the *Yearbook* she has been well steeped in the details of the science.

Dan and Thelma's trip is being sponsored by The School of Living which has been an educational organization for over forty years, promoting decentralism, alternative economics, community living, and land conservation.

Our funding goal is \$18,000. This amount will cover Dan and Thelma's air and ground travel expenses, pay for lodgings, and meet the costs of course materials (reading materials, A.V. equipment, etc.) Your contribution toward our goal will be greatly appreciated. Checks should be made out to "The International Permaculture Fund" and mailed to me, the authorized fundraiser at the below address. All donations are fully tax deductible.

If you would like a more detailed budget of the trip, more information on the itinerary, or more information about the Permaculture Design Course, please let me know.

A full accounting of expenses will be made available upon the project's completion. Any funds that we receive in excess of our needs will go towards the purchase of tools, seeds, etc. to be given to the indigenous groups involved and toward our outreach to other, similar groups. Elfin Permaculture's bioregional newsletter, *Robin*, will print a story covering Dan and Thelma's trip. Copies will be sent to all of you who support the project.

Your generosity is deeply appreciated,

Sincerely,  
Minot Weld  
RD 2, Box 235  
Ovid, NY 14521

## A Poem from Fukuoka-san

*Note: while attending the Permaculture Designer's Convergence, Fukuoka-san presented this poem to the assembly.*

Early today, I went to morning circle and wrote this poem:

I don't know, I don't know  
I saw barley in the field today  
I saw daikon too  
I don't know, I don't know  
I forgot to see the god  
But the god never forgets us  
I don't know, I don't know

The god talks to himself  
Those who are wise can't understand that  
I don't know, I don't know  
I will ask a frog tomorrow  
I will ask the dragonfly too,  
I don't know, I don't know

The frog laughed and said  
I don't know about tomorrow  
The dragonfly laughed and said  
The reason my wing is light is,  
My mind is light.  
I don't know, I don't know  
But I'm happy

The frog and the dragonfly said  
"It's best to be a fool"  
I don't know, I don't know  
I don't know anything  
But that's all I need to know

continued from page 11 - City Farms.

so that no one is surprised or disappointed when the land has to be returned.

### Statutory Permissions

Planning permission for public open-space facility and building regulation approval for structures above and below ground.

### Insurance

Cover for public liability and where relevant, employers liability, personal accident, fire and theft.

### Security

Fences and other safeguards for people and animals.

NFCF publishes an information magazine "City Farmer". For this and other publications, write to: NFCF, The Old Vicarage, 66 Fraser St, Windmill Hill, Bedminster, Bristol, ENGLAND, BS3 4LY.

## Audio Cassette Tapes - 2nd International Permaculture Conference, Olympia, Washington

### Workshop Themes

1. Seeds, Genetic Heritage, Genetic Erosion
2. Drylands: Turning Back the Desert
3. Policy & Patterns for Sustainable Society
4. Small Farms
5. Asia

6. Biological Management of Soil Fertility
7. Permaculture Design
8. Urban Strategies
9. Agroforestry
10. Communities
11. Projects in Process

### Keynotes:

- # K-1 Wes Jackson "New Roots for Agriculture"
- # K-2 Bill Mollison "Permaculture: History & Future Direction"
- # K-3 Masanobu Fukuoka (with translator) "Natural Farming"
- # K-4 Panel with Jackson, Mollison, Fukuoka

### Workshop tapes: (numbers refer to Workshop Themes listed above)

- |  |   |
|--|---|
| — #A-2 Range & Resource Management                                       | Allan Savory                                |
| — #A-3 Regenerative Agriculture  | David Haencke & Jeff Cox                    |
| — #A-8 City Farming in Great Britain                                     | John Bond                                   |
| — #B-2 Imprintation  | Robert Dixon                                |
| — #B-5 Alternative Agriculture in Japan                                  | Arthur Getz & Larry Korn                    |
| — #B-6 Earthworms  | Nancy Baumeister                            |
| Soil Fertility   | Lea Harrison                                |
| — #B-4 Permaculture Design   | Zea Sonnabend & Rick Landt                  |
| — #C-5 Natural Farming in India  | Partap Aggarwal                             |
| — #C-7 Bioregionalism, Design Process, Lifestyle & Reading the Landscape | Max Lindegger                               |
| — #C-9 Panel: Permaculture & Forestry                                    | S. Erickson, D. Bainbridge, R. Gold, Harron |
| — #C-12 Gardening & Land Use in the Soviet Union                         | Kate Gessert                                |
| Open Water Polyculture   | Barbara Daniels                             |
| — #D-3 Wes Jackson Questions & Answers                                   |   |
| — #D-5 Farming in the Philippines  | Jeem Peterson                               |
| — #D-7 New Alchemy Institute   | John Quinney                                |
| — #D-9 Forests of the Future   | D. Haenke, R. Gold, M. Mali, J. Schulze     |
| — #E-2 Third World: Fuel & Nature  |   |
| — #E-4 Sustainable Agriculture   | E. Surridge, S. Kravit, L. McDonnell        |
| — #E-5 Masanobu Fukuoka (with translators) Questions & Answers           |   |
| — #E-7 Land Restoration in Northern California                           | W. Rain, D. Meda                            |

### TAPE COST - \$ 4.00 EACH

**TO ORDER TAPES:** Please put a check by the tape(s) you want. Put the total in the subtotal line. Add on sales tax if a WA state resident and add \$.50 per tape shipping up to \$3.50 and put the total in the space provided. Then ship payment by cash, check or purchase order to:

**AUDIO PRODUCTIONS**  
2442 NW Market #163  
Seattle, WA 98107  
(206) 329-1674

Name	_____
Address	_____
Phone	_____
Purchase Order #	_____
Number of tapes	_____
@ \$4.00 each (Subtotal)	\$ _____
WA State tax (7.9%)	\$ _____
Shipping (\$.50 per tape up to \$3.50)	\$ _____
<b>TOTAL</b>	\$ _____



## Classifieds

### Books & Publications

Natural Insect Controls, over 100. Save, effective, inexpensive. 10 page pamphlet, send \$2.00 plus a S.A.S.E.: **GROWING** (safely) **GREEN**, Rt. 1, Box 121, Bardstown, KY 40004.

TWO FOR ONE BOOK OFFER, titles include: *The Owner Built Home*, *The Owner Built Homestead*, *Stone Masonry*, *Fireplaces*, *The Earth Sheltered Owner Built Home*. Send for catalog: Owner Builder Publications, PO Box 817, North Fork, CA 93643.

*Journal of the International Permaculture Association* - Back issues are available - an incredible source of background information on permaculture! Issues #7 - #14 \$2.50 each Issues #15 - #24 \$3.25 each. Available from: Permaculture Communications, PO Box 101, Davis, CA 95617.

**MAKING CONTACT: HOMESCHOOLERS' NETWORK for COMMUNITY.** Link up with others to co-create community through: home-schooling neighborhood... intentional community... village...homestead clusters... For more information, send SASE to MAKING CONTACT, 3543 E. Bellevue, Tucson, AZ 85716.

**GUIDE TO UNUSUAL HOW-TO SOURCES** - describes over 50 periodicals and handbooks on alternative tech., gardening, home learning, low-cost shelters, tree growing, travel, etc. All addresses included. Free for S.A.S.E. Light Living, PO Box 190-pa, Philomath, OR 97370.

**SOURCES OF NATIVE SEEDS AND PLANTS** lists native grass, wildflower, and forb seed and nursery stock suppliers. 35 pages. \$3.00. Soil Conservation Society of America, 7515 N.E. Ankeny Rd., Ankeny, IA 50021-9764.

**Organic Marketing News & Information Service (OMNIS)** - a weekly report on current prices paid to growers and paid by retailers on over 70 organically grown food commodities. Very valuable, up-to-date information for organic growers, marketers, purchasers - lets you know what you should be getting paid for your farm products. Subscription price: individuals/growers - \$73/year or \$39/6 months, non-grower businesses - \$125/yr or \$65/6 months.

### Help Wanted/Offered

**WANTED:** Permaculture oriented land steward-care taker person for western country property one hour from county seat. Contact: Horace Gray, PO Box 188, Glenbrook NV 89413.

### Help Wanted/Offered

**BUSINESS PARTNER** wanted to manage rapidly growing nursery devoted to historic apple trees. Contact Living Tree Centre, P.O. Box 797, Bolinas, CA 94924. Phone: (415) 868-2224.

**PEACEFUL VALLEY FARM SUPPLY** is ripe for change. Fast growing, socially responsible, 9-year old, profitable business needs self-motivated committed person(s) willing to learn. We are interested in a long term employee and/or a working partner and/or a buyer for the business. Call: (916) 265-FARM or write: 11173 Peaceful Valley Road, Nevada City, CA 95959.

Environmental education farm manager position available at Old Mill Farm School of Country Living, PO Box 463, Mendocino, CA 95460. Requires person with mechanical and carpentry skills, long term, cabin and stipend, couple preferred. 40 acre homestead with biodynamic gardens, fruit trees, grains, goats, sheep, fows, draft horses, alternative energy and timber.

### Real Estate

**SEEKING LOAN** for socially and ecologically responsible community land trust, for land purchase. Sort or long term loan. Equity guaranteed. Cave Creek Community Land Trust, Beth & Eric Ardapple-Kindberg, Bass, AR, 72612.

**Cave Creek Community Land Trust**, 53 acres, half wooded, half good agricultural land designed using Keyline & Permaculture. We are seeking 5 individuals/families to co-operate in horticulture and home building on the property. Profits will be applied towards purchase of homesites and/or agricultural land. Pay as you produce. Experienced and inexperienced both welcome. Situated in friendly, isolated valley near Mt. Judea, Arkansas. Excellent water. Further information, send SASE to Eric & Beth Ardapple-Kindberg, Bass Arkansas 72612.

### Poultry

**DUCKLINGS AND GOSLINGS** - Forty colorful and useful varieties nurtured with care. Young shipped safely nationwide, mature stock at farm. Send stamp for literature. Holderread's Waterfowl Farm, P.O. Box 492, Corvallis, OR 97339.

**Using Weeder Geese**, a four page pamphlet explaining the basics of management, care and rearing of geese, what crops they can be used in, housing, fencing, etc., is available for \$.50 plus a SASE from PINA, 6488 Maxwellton Rd., Clinton WA 98236. The Permaculture Institute of North America (PINA) supplies White China Goslings - minimum order of 6, birds shipped when one day old and are ready to weed in 6 weeks. For more information, **The Book of Geese** by Dave Holderread is available from PINA for \$7.95 (includes postage & handling) or contact PINA at address above.

## Membership Benefits

- One year subscription to our quarterly newsletter, *The Permaculture Activist*
- One year subscription to the quarterly magazine, the *International Permaculture Journal*
- Discounts on selected educational events sponsored by PINA
- One free 25-word Classified Ad in *The Permaculture Activist*
- Discounts on selected book titles from Permaculture Resources (see catalog in this newsletter)

## Yes!

I want to become a member of the Permaculture Institute of North America (PINA) and work together in developing ecologically sound and sustainable land-use systems. In becoming a member, I pledge to work in some way to help heal, nurture, and regenerate the natural world which we share.

Membership categories:

- |                                      |  |
|--------------------------------------|--|
| <input type="checkbox"/> \$25/year   | Regular member   |
| <input type="checkbox"/> \$50/year   | Sustaining member  |
| <input type="checkbox"/> \$100/yr    | Contributing member  |
| <input type="checkbox"/> \$250-\$500 | Patron   |
| <input type="checkbox"/> \$1000      | Lifetime member  |
| <input type="checkbox"/> \$16/year   | Low income member - includes subscription to <i>The Permaculture Activist</i> only |

- Membership rates above are valid for U.S., Canada, and Mexico only. Overseas memberships are only available at the \$16/year rate, which includes *The Permaculture Activist* only. Overseas members may subscribe to *Permaculture*, the *Journal of the International Permaculture Association* through their office in Australia: P.O. Box 367, Maryborough, Victoria 3465, Australia.

Name (please print)

phone

Address

City

postal code

country

Make check payable to PINA in U.S. \$ and mail to: PINA (address on reverse)

## Calendar of Events

January 26 - May 15, 1987. New Alchemy Institute Semester in Sustainable Agriculture and Appropriate Technology. See details inside, page 18.

January 30, 31, February 1, 1987. The Seventh Annual Ecological Farming Conference. Don't miss it! See details inside, pg. 18.

February 13 - 15, 1987. Farm Conference '87, Strategies for a New Agriculture. Location: Cal Poly Pomona. For more information contact: Small Farm Center, UC Davis, Davis, CA 95616.

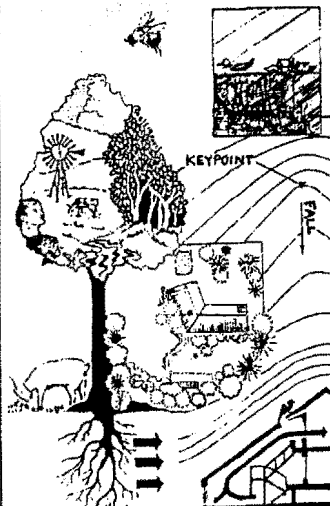
February 21-22, Feb. 28-Mar.1, Mar. 7-8, 1987. Three-Weekend Short Course on Permaculture Topics. Location: Merritt College, Oakland, CA and Clear Lake, CA. Resource people include Gretchen Will, Tom Ward, Guy Baldwin, Gray Shaw, Barbara Daniels, David Kaplow. Details inside, page 3.

March 31 - September 30, 1987. Apprenticeship in Ecological Horticulture offered by Agroecology Program/ University of California Extension at Santa Cruz. See details inside, page 19.

May 29 - June 13. Planning the 21st Century Sustainable Community: The Urban-Rural Interface: A group of three weekend workshops and a concurrent two-week Permaculture Design Course. Contact: Ojai Foundation, P.O. Box 1620, Ojai, CA 93023, attn: Bill Roley. phone: (805) 646-8343. See details inside, page 3.

June - August, 1987. Summer Internship Program: Introduction to Sustainable Agricultural Systems, 10-week intensive course, field work, lectures, discussions, field trips, etc. 8 units UC Davis credit. Contact: Sustainable Agriculture Program, L.A.W.R., 139 Hoagland Hall, UCD, Davis CA 95616, phone: (916) 752-7645.

## The Best of Permaculture



This book is a selection of articles, photographs, drawings and essays that have appeared in Permaculture journals and newsletters from around the world. The editors have updated information whenever possible. Articles have been selected for their contribution to and reinforcement of permaculture concepts and are inspirational as well as educational. Titles include: Control of Fungus Diseases; City Farms; Trees as Animal Feed; Forest Regeneration; Reafforestation and Agroforestry in East Africa; Foodscapes, Self-Reliance and the Landscape Architect; Composting Perth's Refuse; Double Mulches and Deep Litter;

Cost: \$12.50 each + \$1.50 shipping for one or two books. (Calif. residents add 75¢ sales tax) *The Best of Permaculture* and other publications are available from:

Permaculture Communications  
PO Box 101  
Davis, CA 95617

### Advertising Rates

Classified ads in *The Permaculture Activist*: 25¢/word, \$5.00 minimum, prepayment required. Display advertising space is available in standard sizes of 1/8, 1/6, 1/4, 1/3, 1/2 page at \$28, \$35, \$49, \$65, \$80 per single inclusion. Other sizes available. Discounts for prepayment and multiple inclusions. For rate sheet or to place an ad contact: Editor, *The Permaculture Activist*, 6488 Maxwellton Rd, Clinton WA 98236, phone: (206) 221-3979. Our circulation is approximately 3,000 throughout North America, about 1/2 located in OR, WA & CA. *The Permaculture Activist* is an ideal place to advertise if you want to reach gardeners, farmers, homesteaders, tree crops enthusiasts, and permaculture activists.

Important note to our member/subscribers regarding your mailing label: please refer to numbers in the upper right hand corner for information on the status of your subscription.

1	Polly Culture	3-2/26
	123-The Jungle	
	Stackville WA	
	U.S.A. 98103	

Last issue of *The Permaculture Activist* in your current subscription

Last issue of the *International Permaculture Journal* in your current subscription

## JOIN PINA!

Membership includes:

- A subscription to our quarterly newsletter, *The Permaculture Activist*
- A subscription to the quarterly magazine the *International Permaculture Journal*
- Discounts on selected books and resource materials from Permaculture Resources (catalog inside pp. 14)

Membership form on inside back cover

The Permaculture Activist  
Post Office Box 1209  
Black Mtn., NC 28711 USA

NON PROFIT  
ORGANIZATION  
US POSTAGE PAID  
CLINTON, WA  
PERMIT NO. 64

ADDRESS CORRECTION REQUESTED