

THE WELL-ROUNDED PERMACULTURIST

By Michael Pilarski, Friends of the Trees Society

So what is permaculture? What makes it different from: organic gardening? organic farming? sustainable agriculture? ecological agriculture? bio-dynamic farming? regeneration farming? forest gardening? Holistic Resource Management HRM? ecosystem restoration? sustainability? or natural building?

Permaculture is unique, yet at the same time includes all of the above. Permaculture is the design of sustainable human settlement. One of the most important things about permaculture is that is a synthesis of agriculture, ecology, and forestry. Permaculture is inter-disciplinary as will be outlined in this article.

Permaculture doesn't have a corner on the market when it comes to sustainable design of human settlements, but permaculture is one of the best design systems we have today. The word "permaculture" was first coined in the mid-1970s by Australians' Bill Mollison and David Holmgren. The first book on permaculture, "Permaculture One", was published in 1978. Today there are hundreds of books. The first permaculture design course was held in 1980. Since then tens of thousands of people have gone through design courses in countries around the world. Millions of people have been influenced by permaculture. In spite of this, permaculture remains relatively unknown in most places. The need for sustainable human settlement and local food production is growing fast as of early 2009. The world needs permaculture.

Let's look at some things a well-rounded permaculturist has to know.

1) A permaculturist has to know food production. How to produce abundant harvests with low external inputs at both the garden scale and farm scale. A good permaculturist should be able to beat the yields (or at least equal) the yields of the best farmers and gardeners in their neighborhood. And at the same time they should be able to do it sustainably and in fact, improve their soils and yields over time, while reducing costs.

The well-rounded permaculturist should know the full range of fruits, vegetables, and crops that can be grown in their region. They should be walking plant encyclopedias. Some permaculturists become fluent in the crops and flora of multiple climates. The extreme example is a person who has a good working knowledge of plants useful to humans from the Arctic circle to the equator. This obviously takes decades of study and travel to accomplish. "Economic botanists" are the university-trained professionals who make this their life career. So, in a sense, well-rounded permaculturists are economic botanists. A permaculturist should know the common crops and useful plants of their neighborhood and region. They would also be interested in plants from those parts of the planet with analogous climates/regions. A well-rounded permaculturist will know the native flora of their specific eco-region, e.g. Maritime Pacific Northwest, Great Basin, Intermountain Pacific, Northern Great Plains, Hawaiian Islands, etc.

2. A permaculturist also has to know how to restore ecosystems. How to stop human-accelerated erosion. Native plant restoration – restoration of native flora and fauna – plants and animals, forests, waterways, streams, rivers, and aquifers. How to restore ecosystem functions. How to fix up the damage which humans have caused and help nature get back to a state of exuberant health.

3. A well-rounded permaculturist should understand a lot about traditional agriculture and hunter-gatherer cultures, particularly the ethnobotany and ethnoecology of the native people of their region. What were the native foods, medicinal plants, fiber plants, etc. How did indigenous people manage game, fish and plant resources of their area? A large part of permaculture knowledge is based on traditional systems from around the world.

These three above traits combined give permaculturists a unique perspective on food production. There are good farmers and gardeners wherever you go. There are good restorationists. There still are some indigenous people practicing their traditional ways. But seldom do members of these three groups know each others skills. The permaculturist strives to integrate the knowledge of all three and create systems which are productive, restorative (benefit the ecosystems) and rely a lot on native plants and biota.

Permaculture doesn't create uniform landscapes. It is the opposite of monoculture and could be called "diversiculture". Areas close to most dwellings include intensive vegetable gardens, but as one goes further out from the dwellings the landscape becomes more wild and self-managed. Areas that look wild can actually be very productive. Permaculture is based on ecology. Working with nature rather than working against nature. When the Spaniards first came to Guatemala the Mayan home forest gardens established and maintained by the indigenous Maya could contain as many as 200 crop species and be very productive. But they looked so wild that the Spanish did not even recognize them as agriculture. That is the sine qua non of permaculture. To have a system that looks wild and takes care of itself, yet

meets the needs of the people. Besides permaculture I only know of two systems which blend these three disciplines together (agriculture, restoration ecology and indigenous knowledge). These two systems are “Analog Forestry” developed in Sri Lanka by Ranil Sunenenyace (sp?) and “Restoration Forestry” developed in The Philippines.

Permaculture encompasses the design of urban yards, suburbs, farmland, rangeland, forests, as well as houses, businesses, intentional communities, eco-villages, islands and whole regions.

A well-rounded permaculturist has to know natural building materials and building design for climate. Passive solar design, energy efficiency, local materials, sustainability. Building materials should be non-toxic during manufacture, use and when decommissioned. How do plants interact with the building? How to blend outdoor and indoor living spaces. Cost efficient, comfortable, affordable housing.

The well-rounded permaculturist should know energy systems and technologies.

Well-rounded permaculturists understand how to set up local economic systems, local currencies, barter and exchange systems.

The fully-rounded permaculturist would have a broad understanding of the roles of livestock in agro-ecosystems. What functions do animals have? How can they be beneficial? How to use animals for their function as well as yield. What do the different kinds of livestock eat, natural medicines, breeds adapted to local conditions, grazing systems, fencing, live fences, pasture species' composition, self-forage crops, practical aspects of raising, etc.

A permaculture student studies and learns how water works in the landscape. How to capture runoff, direct water, deflect flood waters, clean water, store water. What can be done to increase water absorption into the landscape to water the web of life which covers the land and restore springs and natural flows of streams and rivers. The human yield aspect is to study aquaculture, aquatic food chains, species interactions, creating optimal habitat, and fishing management.

Anyone who works with permaculture and other multiple-story agroforestry systems has to study understory/overstory plant relationships. Multiple layers of tall trees, medium trees, tall shrubs, low shrubs, ground covers, tubers, vines, etc. How much shade are plants adapted to? What grows well together? Permaculture is companion planting on a large scale.

Not every region has forests, but where there are forests, then permaculturists study them. What are the native species? Special attention is given to the non-native, weedy species in the region. What are the natural forest successions and which plant species predominate in each succession? What are understory plants, economic species, etc? What are the timber harvesting methods which are sustainable and lead to forest restoration? Where should the network of protected areas be expanded to encompass the full range of native habitats and plant communities in the area? Most places in the world need the active planting of trees and forests to achieve ecosystem health. Forestry is not only the active betterment of current forest acreage, it also includes the active expansion of forest areas into degraded areas, farmland, suburbs and even into the city.

A well-rounded permaculturist will be conversant in the field of mycology – fungi and mushrooms. What are the roles of fungi in the ecosystem? The role of fungi in forests and ecosystems. How to inoculate edible and medicinal mushrooms into the landscape and into the garden. How to encourage and proliferate mycorrhizal fungi which have symbiotic relationships with native plants and our garden vegetables.

Since building soils is the one chief aim of permaculture, a permaculturist learns how to do this. Most permaculturists study how soils work, soil biology, bacteria, web of life, mycorrhizal fungi, earthworms, nitrogen-fixing azotobacters, soil cation exchange capacity, role of arthropods, insects, minerals, etc, etc. The main thing is to know how to turn poor and mediocre soils into luscious fertile soils that grows bountiful crops.

Permaculture is based on ecology. How does the ecosystem function? What are all the parts, but more importantly how do the parts interact. How does fire affect ecology? Permaculturists study the role of wildfires in ecosystems.

These are just some of the things a well-rounded permaculturist has to know.

Permaculture involves ethics, principles, design methodologies, observation skills, analytical skills and people skills. Design always involves working with people. Design skills can be applied to social situations as well as to land design.

One person has a hard time to be an expert in all of these fields/topics. A well-rounded permaculturist will specialize in specific fields but also has to gain a general understanding of most of the topics. Permaculturists aren't born. It takes

years and decades of study and practical application to become a well-rounded permaculturalist. But it only takes one course to put people on the path. Practical experience is the most important factor in true learning. Permaculture design, principles and methodology are powerful tools for farmers, gardeners, foresters, social workers, and anyone working for social and ecological change. Permaculture is not something that can be awarded, it is something that has to be earned. It is applying common sense and ecological knowledge to obtaining human sustenance. Permaculturists don't have a corner on the market. Most permaculturists of the world have never even heard the term. They are quietly going about using their skills to help transform their land, their village, their neighborhood. There are millions of people in every region of the world working towards similar goals and using similar methods. The value in permaculture is that we have devised curricula to help people learn faster how to succeed at creating healthy and productive agro-ecosystems. One permaculture design course sets you on the path. Permaculturists have been searching the world for useful plants, agro-forestry systems, traditional systems, economic botany, sustainable communities, local economies, etc. etc. Through permaculture trainings and books we publicize the knowledge from grass-root experimentation and traditional knowledge from throughout the world and throughout history.

But I'd like to be clear, permaculture is not a religion. True permaculture cannot be dogmatic. There are no cookie-cutter designs. Every permaculture site will look different. Every site and every client is unique. People select what is appropriate and acceptable within their cultural context. Permaculture design methodology can be useful anywhere. However, this does not mean that individual permaculturists are infallible. Like every other profession there are members with lots of practical experience and others that are just beginning and those in between. Permaculturists include the usual wide range of personalities. There are saints, there are jerks, and everything in between. Don't judge permaculture by your impression of the first person you meet who is espousing it. I encourage everyone who is interested in growing their own food and/or sustainability to look into permaculture. If you are already into permaculture I encourage you to deepen your journey.

Towards a greener and happier world,

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