

# Midcoast Permaculture Design

## Perennial Polyculture Design

### Concepts:

Polyculture happens. Nature always adds species.

We are surrounded by anthropogenic landscapes. Accept our responsibility as a keystone species. This is what it means to be human. Polycultures are easily scaled from a garden bed to a mechanized farm system.

What is it? A purposeful assemblage of plants emphasizing synergistic relationships. Permaculture Design Process.

Goals - ecosystem benefit, habitat enhancement, edibility, low maintenance, medicinal, beautiful, etc.

First - Ethics, goals. Next - Observation of existing conditions (sun, water, slope, soils, etc.)

Monoculture (cultivate one) vs. polyculture (cultivate many). Polyculture can be about ecosystem design, which can sound fancy but can simply look like gardening (backyard veggie garden, mix of per flowers, fruit guild).

Scaleable for commercial purposes in agroforestry systems.

Look to nature for inspiration. Is why we make a big deal of observation. Is why we observe our site for one full year before interventions & disturbance.

**Biomes** - dominant plant ecology patterns - Coniferous, Boreal: Spruce-fir, pine-hemlock.

Northern hardwood complex: maple-birch-beech

Notice plant communities and what families of plants seem to grow together in repeating patterns (based on soil, moisture, light, microclimate). Develop botany skills. Then, design ecological analogs.

Meadow, succeeded by oldfield, succeeded by pioneer trees.

Oak savanna (as inspiration to the south and west).

Anthropogenic biomes: Oak savanna, urban, cropland, rangeland, forest systems, 'novel ecosystems.'

A secret: almost all the biomes around us are in fact, anthropogenic.

Most highly productive biomes as anthropogenic. Keystone species.

### Design:

Complimentary to goals and existing conditions. Consistent with ethics and design principles.

Goals and existing conditions help design by constraint. Establish parameters.

Tools for design: Ecosystem mimicry, design by constraint, functional interconnections

**Mimics:** Forest Garden arch layers, thicket, forest edge, oldfield, oak savanna, suburban landscape analogs

**Layers:** trees, shrubs, herbs, groundcovers, grasses, vines, roots, fungi, animals

Design by category & management requirements

Functions: edible, fodder, medicinal, craft, ecology

Ecological services: Mulch, hyper accumulator, nitrogen fix, nectary, habitat

Yields: Edible, shade, timber, fuel, fodder, habitat, water retention

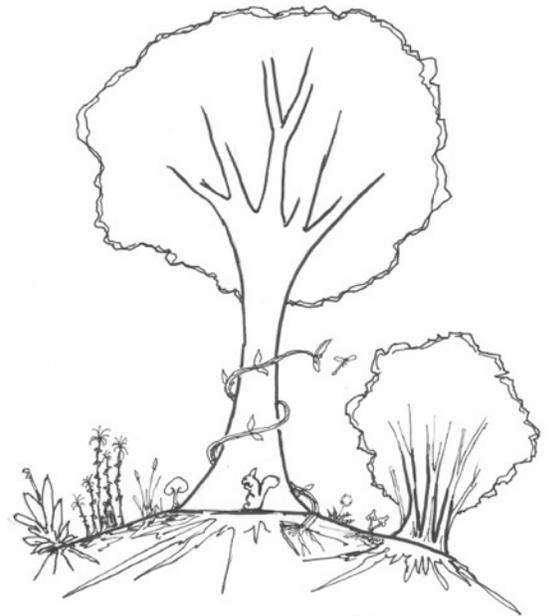
Polycultures can be in a garden bed, can take the form of a single fruit tree guild

Small scale intensive mgt can have higher biodiversity

Networks of fruit tree guilds, as a forest garden. Cammo food production for the prepper.

Larger scale (commercial) production ought to be simplified as in agroforestry systems.

Apple, comfrey. Chop & drop. Alley cropping, productive conservation, windbreaks.



Vaccinium  
Ribes  
Gaultheria  
Viburnum  
Amelanchier  
Sambucus  
Prunus  
Rubus  
Fragaria  
Corylus  
Malus  
Vitis  
Urtica  
Fagaceae  
Fungi

### Action:

Observe landscapes, look to the edges

It's just gardening!

Use a tape measure

Study plants by function and botany

Take a class, Get a consultation,

Do a design



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## Midcoast Permaculture Design

### Regenerative design for Home and Farm

Primary tools used to make decisions:

Holistic Goal - quality of life, forms of production, future resource base.

Observation of site-specific ecological and social conditions

Design results in unique solutions for unique situations

Agroforestry forms of production - Alley cropping, Silvopasture, Riparian/upland buffers, Windbreaks, Forest farming, Forest gardening.

Non-timber forest products (cultivated and wildcrafted). Productive conservation, multifunctional buffers, stewarding forest health.

Practices: multistrata homegardening, water management through earthworks, livestock/tree crop integration.

To address: drought/flood, diet and nutrition diversification, on-farm livestock feed/fodder production, carbon sequestration for climate mitigation, food sovereignty

### Permaculture Master Plan Design Layers

Adapted from the Keyline Scales of Permanence (Yeomans, Doherty, Jacke)

Used as a method for Analysis, Design and Construction

CLIMATE - You, Enterprise, Risk, Legal, Weather, Worldview. Holistic goal.

LANDFORM - Landform, Slope, Components, Proximity. Use keyline geometry for layout: tractor path, tree lanes, alley cropping, row cropping

WATER - Storage, Harvesting, Reticulation. Ponds, earthworks, tanks, piping. Productive conservation along riparian zones.

ACCESS - Roads, Tracks, Trails, Markets, Utilities, People. Where are you going and why. Use ridges that are high and dry. Direct water with roads. Plan access first, then design 'negative space' in between.

FORESTRY - Gardens, Blocks, Shelter, Savannah, Orchards, Natural. Use keyline geometry for tree layout.

MICROCLIMATE - Warm/Cold, Wet/Dry, First/Last Frost, Shade. Multifunctional windbreaks

BUILDINGS - Homes, Sheds, Portable, Yards

FENCING - Permanent, Electric, Cross, Living (Hedgerows)

ZONES of use - Intensive/Extensive, Near/Distant to house

SOILS - Planned Grazing, Minerals, Fertility, Crops. Management intensive grazing, heavy mulches ("grass-fed vegetables"), biochar compost, manures.

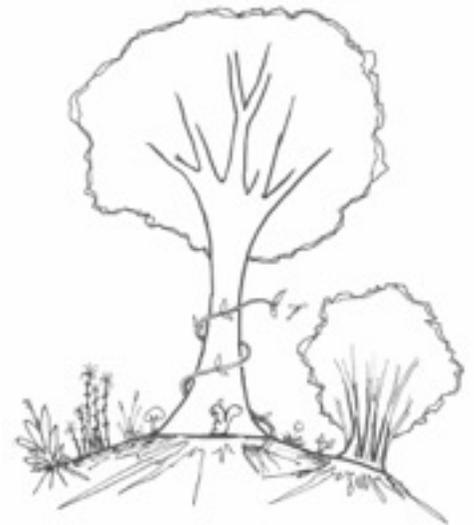
AESTHETICS - Views, Public/Private, Beautification, Worldview

MARKETING - Analysis, Strategy, Value Chain. Forms of production. Cash flow while perennials establish: Livestock products, alley cropping, u-pick fruits/nuts.

ENERGY - Photosynthesis, Generation, Storage. Solar, biogas digestion.



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### Upcoming events:

See [midcoastpermaculture.com](http://midcoastpermaculture.com) for details and to sign up for our newsletter

Permaculture Design Certification course. Weekend format at MOFGA in Unity May-August 2020 FMI: [maine-pdc.com](http://maine-pdc.com)

Authors to read:

Darren Doherty

Steve Gabriel

Alan Savory

David Holmgren

Toby Hemenway

Dave Jacke/Eric Toensmeier

# Getting Humanity Back on Track

## Midcoast Permaculture Design

### Definitions

**What does it mean to be human?** A few universal patterns of being fully human include: language, tools, symbolic thought, art, familial/tribal society & cooperation, use of fire.

**Horticultural vs agricultural societies & cultures.** Horticulture - "garden cultivation". Agriculture - "field cultivation". **Horticulture** as plant tenders making a transition from pure hunting and gathering. Hunting, foraging and plant tending that isn't quite domestication. **Agriculture** as domestication of and dependence on early successional annual plants that prefer bare soil for germination and cycle from seed to seed in one year. Based on tillage and bare soil cultivation which inevitably leads to exhaustion. "Where forests precede it, deserts dog its heels."

**Anthropological definitions of civilization.** Complex society characterized by urban development, social stratification imposed by a cultural elite, writing, ideologies of separation from and domination over the natural environment. Centralization of power (nation state), domestication, specialization of labor, ideologies of progress and supremacism, monumental architecture, taxation, dependence on farming and territorial expansionism.

**Problems - biodevastation, technology, political economy, culture, myth**

### Provocations

Questioning sustainable agriculture and civilization:

"Sustainable agriculture" is an oxymoron if it's based on tillage. Civilization ≠ humanity. Beyond civilization ≠ extinction.

Assaulting the myth of progress. The American Dream has become a nightmare for the biosphere. Ideologies of expansionism and supremacy are toxic to most forms of life. (Origin of empire and ethnocentrism)  
Universal neurosis as evidence for collapse of meaning. Or the logical conclusion to an omnicidal culture.

### Solutions

Remembering what it means to be human. Remember humility. Beware hubris.

Provision of meaning through rewilding. Rejoining the larger biotic community. Decolonizing our hearts and minds to reject agrarianism, urbanism and statism. Remembering what it means to be in right relationship with all conscious agents on this planet.

Envisioning a regenerative human ecology. Using permaculture design to guide a graceful powerdown, regenerate ecosystem health, tree-based food systems. Less stuff, conveniences & comforts.

Food and water sovereignty ordinances, rights of nature in law. CELDF.org

Solidarity with indigenous nations: TRC, Wabanaki Reach

**On making a bridge from an global industrial agriculture economy to a resilient local economy based on agroecology and appropriate technology**  
**Permaculture as provision of Meaning.** Belonging on Earth in nature as a keystone species. Part of nature as a beneficial force that consciously guides evolution. A cosmology of conscious agents weaving relationships of experience. Deep time of evolutionary ecology and geophysiology. Ethic of Awareness of Limits as antidote to Progress.

**Permaculture as a set of ethics and principles** for taking responsibility for your existence, provision of your livelihood, while at home as a beneficial keystone species in your ecosystem.

It gives you a reason to look forward to tomorrow.

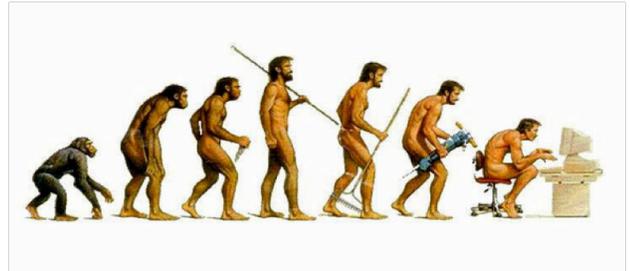
**Permaculture as design:** set goals, understand context, design appropriately. Dance with evolution, guide succession. Ethically bounded by awareness of limits. Design to appropriate scale of client and landscape.

**Permaculture as technique:** place-based, resilient, durable, cheap technologies. Perennial Ag: nuts, meadow, woodland, livestock, wildlife. Rebuild local economy. Reskill. Redesign food systems. Resilient, localized economies, sovereign in provision of needs (shelter, water, energy, food). Legal strategies: food and water sovereignty municipal ordinances. localfoodrules.org



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