

Ecoculture: Emergence in urban ecology

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Basic Characteristics of Oak Mott Ecology

- Carbon retentive at soil level (suckers)
- Deep fermentation layer/ A layer in soil increases:
 - Nutrient cycling (microbial activity)
 - Moisture absorption/retention, deep storage
 - Deep, dense root systems
- Humus/organic matter/root mass “heaving” alleviates slope
- Emergence of soil depth, biomass, species richness and diversity. Growth over time.







Typical Managed Landscape Model:

- Carbon depleting: mow, blow, haul it to the dump
- Cleanliness over ecological process
- Rainwater repellant: send it to the gutter
- Thin-soiled:
 - garden soil smeared over clay, bedrock.
 - Very little microbial/fungal activity.
 - Very little moisture absorption/retention.
 - Shallow roots, quick to dry up
- Heavily leached with chlorinated tap water irrigation
- Warm season only
- Product-heavy (snake oil)





Ecoculture

- New model for urban residential land management
- Seeks to maximize productivity and carbon/nitrogen cycling through:
 - deep tilling of organic matter/compost
 - terraforming for passive rainwater harvesting
 - use of “carbon dumping” perennials and woodies
 - spring/fall cut and cover while still green
 - seasonal (x4) application of compost/mulch to cover
 - cool season manure crops

Deep soil is key.

- Start with clay, ideally
- Broadfork (12-16")
- Manure compost 10-20%
- Bark mulch/wood chips 10-20%
- 3-5 turnings--broadfork and shovel-- to break up clay
- Light liquid feed at time of planting (humic acid, N, fungal)
- Drench soil at planting: large H₂O investment











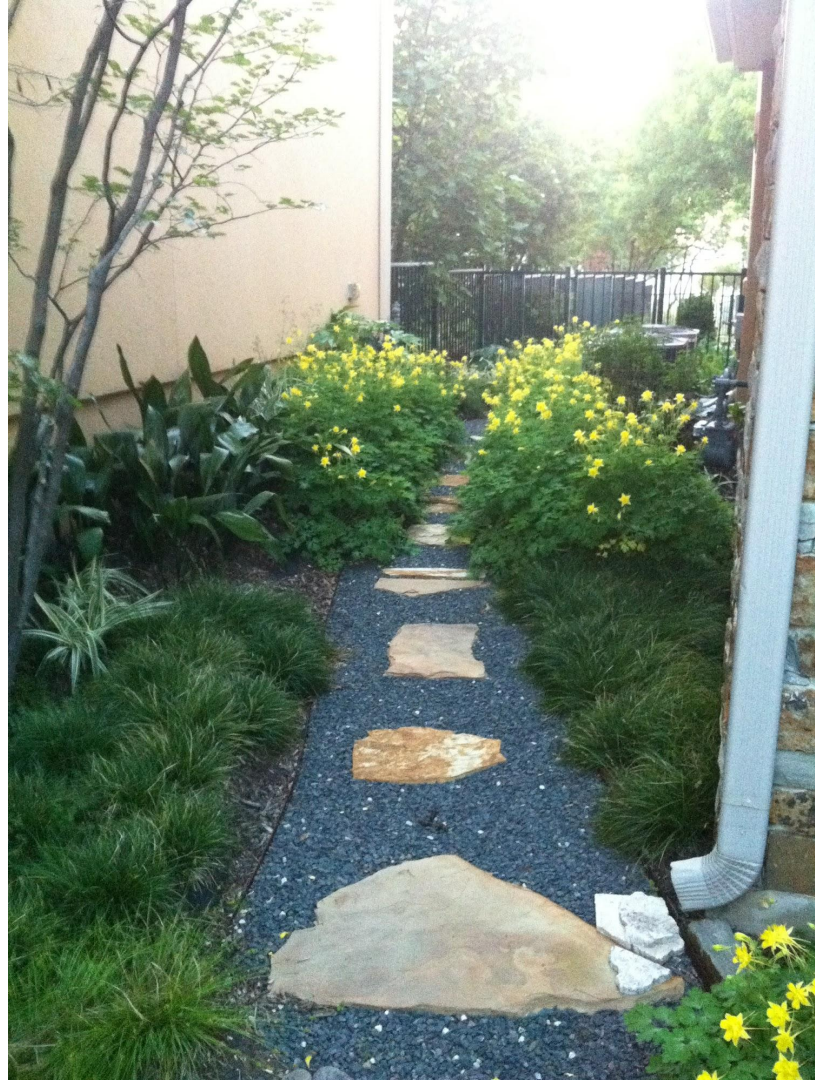












Myths worth busting:

1. Native plants “need” poor soil
2. Xeric plants are more ecologically beneficial
3. Organic matter just disappears
4. Mulch with gravel
5. Plants will “drown” if flooded

Areas for research:

- plants' phenological response to drought in nature vs. urban landscape (irrigation, etc).
- Size and abundance of large woody material (hugel culture).
- How to scale this up from yard to parcel.
- Effects of city water (chlorine, etc) on soil biology, respiration, etc. vs rainwater