

## <- A Rewilding Community Toolbox VI ->

by Autumn Leaves Cascade

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For a world more feral and free,  
 In preparation for Peak Everything,  
 Autumn Leaves Cascade

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## PART I: INTRO & FAQ

### **A. Why did you make this document? What do you mean by “Peak Everything”?**

I put several years of off-and-on research and practice into this document. I learned from wilderness living enthusiasts, primitive skills practitioners, back-to-the-land types, modern homesteaders, permaculture people, “appropriate technology” aficionados, frugality fanatics, survivalists, do-it-yourself punks, radical authors, my own personal experience...even a preemptively post-apocalyptic daydreamer or two! I love earthskills. But that's not the only reason I do them.

We have almost completely lost our memory of the traditional skillsets that sustained people for generations in reciprocal relations with their landbases. Each day we grow more estranged from our paleolithic ancestry as nomadic foragers. I began re-skilling and rewilding as part of my own struggle against ignorance and dependency. I focus on skills because I find them more empowering than tangible items or abstract ideas.

We live in this world at a unique moment in our species' history. With evidence from anthropology, ecology, epidemiology, history, sociology, and political economy, I believe the recent experiment called “civilization” has proven itself a catastrophic failure. I see civilization, coming from civitatis (city-state), as a permanent settlement where overcrowded people have denuded a landscape. An urban culture. Where people have overshot their local carrying capacity and so must import staple supplies and export hazardous wastes. Ship in water, food, fiber, timber, minerals, metals, fuel, ship out excretions, refuse, chemicals. Every city, everywhere, follows this pattern.

In the last few centuries civilization has become a planetary predicament. I argue that civilization – global industrial civilization in particular – ruins the physical, mental, and spiritual wellness of the majority of the human population. It promotes addiction and delusion. It tortures and destroys our fellow lifeforms and landbases. It has little resilience, no chance of sustainability and, ultimately, no redemption. No invention or reform preserving civilization will make it compatible with an inhabitable planet. Not even the wishful thinking of “alternative energy”, which preserves the dominant order's toxicity and destructive appetite.

Civilization consumes its own support systems. We live in the Holocene Extinction, the most rapid mass extinction of species the Earth has ever faced, with upwards of 140,000 species gone forever each year. Today old growth forests, wetlands, prairies, rivers, seas, and coral reefs become toxic landfills and dead zones. Breadbaskets become dustbowls. Oceans become acid and plastic. Pollinators and phytoplankton die off. Diadromous fish disappear from the oceans. Fish, birds, amphibians, and mammals die off en masse. Life becomes pavement. Climate stability implodes. Hyperexploitation continues, “economic growth” continues, no matter the cost. The dominant culture calls its graveyards its treasuries.

The fiat currency, fractional reserve banking, and usury-and-debt economics of the modern age will evaporate into empty promises. The fossil fuels, radioactive fuels,



precious metals, conductive metals, and rare earth minerals will deplete. The arable farmland, phosphorous, fresh water, and wood will grow scarce. All hopes of a bigger, faster, shinier, science-fiction future, remain only through ignorance and denial. Civilization's upkeep hastens its downfall.



We inherited “Central Civilization”, which arose from the Mesopotamian and Egyptian civilizations. It grew into the modern, global, industrial civilization, which colonized almost every other society. For 500 years it has overrun the world in tides of social disconnection slavery, land destruction, and genocide. The world's ongoing ecological disasters, economic declines, social unrest, and limits to growth, reveal the dominant system's breaking point. We have no single magic bullet remedy, but world economic collapse seems preferable to the world ecological collapse that results from business-as-usual (or “green”-powered business-as-usual).

I believe this breakdown will soon escalate within my own lifetime into a series of swift, messy, and uneven crashes. What will the decline of petroleum as both a chemical input and a cheap energy source have in store for industrial economies? What impacts will fossil fuel depletion and climate instability have on industrial agriculture? What does an era of global instability mean for global supply chains? How fast will this system implode when the electrical grid, energy production, just-in-time delivery, transportation, or other key infrastructures break down, when technicians cannot repair them on time? What happens to economies of faith their believers awaken to the nightmare? I believe our future will proceed from Space Age to Scrap Age to Stone Age.

My predictions have nothing to do with superstitious beliefs in apocalypse, salvation, or damnation. This massive, fast-paced, tenacious social format has the highest social and technical complexity, and the least sustainability. Most urban societies have in fact

collapsed when left to their own devices. All our default behaviors draw down our long-term supplies. Who today knows their neighbors, where their own poop goes when they flush it, where their water and food come from, where things thrown "away" end up? The dominant culture has higher expectations, ignorance, addiction, and sunk costs, than ever before. More denial, delusions, and pride, than ever before. More fragility than ever before. Modern activities, attitudes, and appetites all support swifter crashes than previous collapses of civilizations. The dominant culture has the most people ever, with the largest footprints ever, on a dying planet. And still it craves growth! This civilization will not collapse as gradually as previous ones. Imagine a brick building where we keep pulling out bricks. It seems stable for a long time, but at some point, when we pull just one more brick, the whole structure falls.

Any solution must entail reversing the defining traits of the culture of city-states. What does that mean? Centralized populations and authoritarian power structures. Class division. Forced labor. Lifelong labor specialization. Mechanized production. Standing military. A hyper-exploitative, non-renewable economy. Monumental architecture. A denuded and artificial landscape. Above all: increasing complexity and growth at all costs. Any solution must entail returning to egalitarian communities in balance with their local landbases. I find such a transformation necessary and desirable. And so I present skills relating to what I call "rewilding" and "community", using a "toolbox" approach.

In the final cataclysm of the Western Roman Empire, disillusioned urban proletarians let down the Salarian gate so the barbarian hordes could sack the capital. They broke identification with their own abusive culture. They chose the ruins over the Romans. Today's empires, tomorrow's ashes. How will we survive our own multi-generational breakdown? To what degree will we dismantle the dominant structures ourselves? What seeds will grow in the ashes? I hope this document will help navigate these questions.

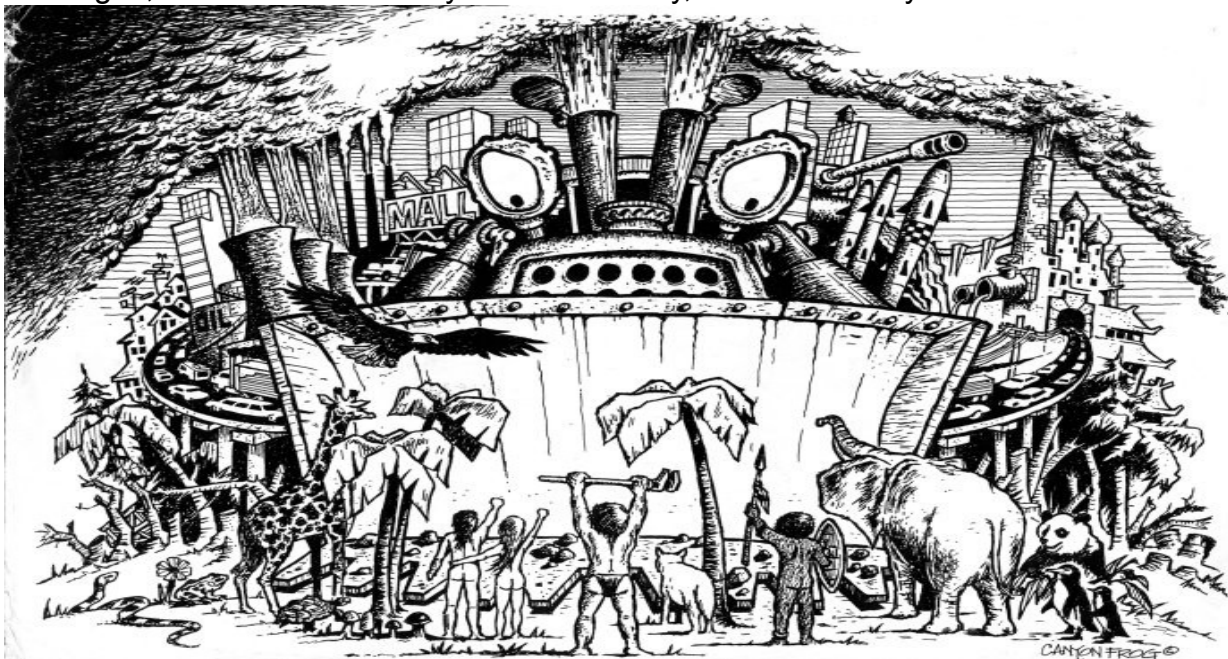
With such calamity on the horizon I see the opportunity for desirable social transformation. I see the potential for life and purpose to blossom in the now-expanding cracks of this declining global monolith. In writing about skills, I scatter seeds of a struggle for dignity and balance. A struggle for the survival and the renewal of lands and communities. The renewal of autonomy and mutual aid. I hope these seeds can take root even in such a deadened environment as this, one day to flourish again.

## **B. What do you mean by "rewilding", and why do you support it?**

I define rewilding as a process of embracing innate evolutionary biorhythms, drawing upon or returning to a wild state. In short, becoming feral. We practice this process by acting as social animals. By supporting ourselves in small groups. By reclaiming ancestral skills. By returning to evolutionary patterns for diet, sleep, and exercise. By developing animistic perspectives and unmediated relations. By practicing attachment parenting. By taking holistic approaches to wellness at cognitive, emotional, physical, and spiritual levels. By practicing gift economies and productive play. And in many other ways. Rewilding means remembering the 99% of human existence in nomadic foraging bands with autonomy, egalitarianism, and wellness as common features.

As much as some folks believe humans exist separate from and superior to "nature", we as a species still live as just one strand tied into the vast web of life. Like all the others, we have evolved our own biological needs and expected rhythms to give us life and fulfillment. Ignoring and repressing our evolution has produced miseries, maladies, and madness. Just as with all the other captive animals. Rewilding allows us to apply this understanding as a process of empowerment.

An organism displaced from the natural environment in which it evolved becomes pathological. No different than the apes in the zoos, we too pace our cages, drift between boredom and frustration. We look outside longingly, but, our training makes us fear the prospect life without masters. Rewilding means to thwart the masters, smash the cages, and revive autonomy and community, and the ferocity that defends them.



**C. What do you mean by "community", and why do you support it?**

I see a community as a mutually supportive, multi-generational, face-to-face group, living together with overlapping beliefs, values, and culture, where people understand one another within the context of each of their particular lives, and the interests of the individual and the group strongly coincide.

With that as a base we can spice it up by adding modifiers as desired, creating autonomous, egalitarian, intentional, networked, participatory, regenerative, resilient, safe communities. Community resembles an onion in that peeling off a layer gives you less onion, but not necessarily no onion. It also resembles a seed in that it needs a nurturing environment to develop – and will try its damned best to grow – but under hostile conditions it can return to dormancy or even die.

Community contrasts with "mass society", also called "the society of strangers". Because we evolved for millions of years in nomadic band societies, humans have a cognitive limit of roughly 150 people (called Dunbar's Number) to whom we can form stable social relations, and after which we no longer recognize each individual's relation

to every other individual as a cohesive group. Beyond this threshold we fit people into impersonal roles, reducing our empathy for them. Just as a functional family does not have to count heads to find out if someone did not show up at dinner time, a functional community tries to recognize face rather than function, personality rather than position, context rather than category.

Currently most of us live in a mass society of strangers hostile to sharing, mutual aid, and even face-to-face interactions, and in my opinion this suppression of community creates enormous obstacles to responsible and meaningful behavior, and proves disastrous to our wellbeing.

**D. What do you mean by a “toolbox” approach, and why do you support it?**

I support a toolbox approach to situations. I use the toolbox metaphor to represent the potential of a multi-purpose holder of options that we can adapt to suit our needs. I contrast it with the ruler metaphor, which represents the approach of an abstract, single-purpose, rigid, one-measure-fits-all dictator of options.

A toolbox holds a variety of means and enables a diverse range of responses. A ruler alone can only judge, and brings to mind the old adage, "If you only have a hammer, everything starts to look like a nail." What I call "a toolbox approach" empowers people, allowing us to become active, creative agents. We can turn obstacles into opportunities rather than just calling everyone crooked or straightening them to a pre-made mold.

Rather than put in place new institutional policies or one-size-fits-all laws against which to measure our supposed failures, I prefer people to collaborate on new tools for critical thinking and conflict resolution, keep them in mind, and practice with them as fits.

**E. What do you mean by “green anarchism”, and why do you support it?**

I understand anarchism as beliefs or behavior opposing hierarchies of power, as well as exploitation and alienation, instead advocating societies without rulers, especially through collaborative self-determination and intentional resistance.

The "green" (ecology-focused) anarchist perspectives expand on traditional "red" (worker-focused) anarchist critiques of institutions of hierarchical power such as statism, capitalism, theism, and social oppression based on race, nationality, sex, gender, orientation, age, or disability. Green anarchists look deeper for the origins and development of power hierarchies and alienation. Many of us analyze the roles of:

1. the dominance of symbolic culture (language, writing, time, math, art, ritual) over unmediated and sensual experience
2. human dominion over nature in the forms of domestication, agriculture, urbanization, and industrialism
3. the social practices of permanent settlement, labor specialization, mass society, and spectacle society
4. the colonization of traditional indigenous cultures
5. dogma, objective morality, and the ideologies of historical progress, scientism, and technophilia



## 6. forced and bribed labor, and the practice of separating labor from life

We bring a keen awareness of the many ecological issues the world currently faces, from increasing habitat destruction and volatility, to keystone species and mass species die offs, to pollution, to drawdown and overshoot. Nevertheless, wildness persists, waiting in the cracks. We do not trust authorities to solve our myriad challenges for us, instead opting to build cultures of resistance based on active decolonization and rewilding. We want to intimately weave anti-authoritarian and egalitarian cultures into the bioregions they inhabit so that this death machine can never rise again.

### F. Further Resources

For an introduction to green anarchist ideas, check out the following articles:

- "Is 'Sustainable Agriculture' an Oxymoron?" | <http://tobyhemmenway.com/sustag.html>
- "What is Civilization?" | <http://inthewake.mcbay.ca/civdef.html>
- "The Consequences of Domestication and Sedentism" | <http://tinyurl.com/ydybjne>
- "Back to Basics: Green Anarchy Primer" | <http://www.mediafire.com/?pov8jdsjg22s1dn>
- "Back to Basis: the Origins" | <http://www.mediafire.com/?jtp6jca9nygx13c>
- "A Lesson in Earth Civics" | <http://www.eco-action.org/dt/civics.html>
- "Premises of Endgame" | <http://www.endgamethebook.org/Excerpts/1-Premises.htm>
- "The False Promise of Green Technology" | <http://tinyurl.com/d6xurlw>
- "Desert" | <http://theanarchistlibrary.org/library/anonymous-desert>

And these books:

- "A New Green History of the World", by Clive Ponting
- "Overshoot: the Ecological Basis of Revolutionary Change", by William Catton
- "The Thirty Theses", by Jason Godesky
- "Origins: A John Zerzan Reader" & "Future Primitive", by John Zerzan
- "For Wildness and Anarchy" & "Species Traitor IV", by Kevin Tucker
- "Uncivilized: the Best of Green Anarchy" (Green Anarchy magazine compilation)
- "Endgame", by Derrick Jensen | "What We Leave Behind", by DJ & Aric McBay
- "Anarchy Works" & "How Nonviolence Protects the State", by Peter Gelderloos
- "The Party's Over" & "Peak Everything", by Richard Heinberg
- "The Collapse of Complex Societies", by Joseph Tainter
- "Health and the Rise of Civilization", by Mark Nathan Cohen
- "The Cambridge Encyclopedia of Hunters and Gatherers"
- "Coming Home to the Pleistocene", by Paul Shepard
- "The Headman was a Woman", by Karen L. Endicott & Kirk M. Endicott
- "For Indigenous Minds Only", edited by Waziyatawin & Michael Yellow Bird

For earthskills instructionals, look for works by the following: Cody Lundin & Dave Canterbury, John & Geri McPherson, Linda Runyon, Ray Mears, Ron Hood, Society of Primitive Technology, Tamarack Song, Tamara Wilder, Thomas Elpel, Tom Brown Jr., <http://www.primitiveways.com/>, <http://paleoplanet69529.yuku.com/>

Support Survival International, the global movement defending the self-determination of traditional indigenous cultures! | <http://www.survivalinternational.org/tribes>



### **G. Version History:**

3 December 2013 – 6<sup>th</sup> draft completed. Changes: massive content, massive format.  
8 February 2012 – 5<sup>th</sup> draft completed. Changes: moderate content, moderate format.  
29 May 2011 – 4<sup>th</sup> draft completed. Changes: massive content, minimal format.  
17 April 2011 – 3<sup>rd</sup> draft completed. Changes: massive content, massive format.  
21 July 2010 – 2<sup>nd</sup> draft completed. Changes: moderate content, moderate format.  
30 May 2010 – First draft completed.

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## **PART II: REWILDING COMMUNITY SKILLS**

The main content. Some provisos:

1. I include a mix of original and copied information, a little bit copied verbatim.
2. I did not order any of the information by importance. I fill in the details of some parts more than others due to my own knowledge constraints.
3. Just because I borrow a term or idea from an institution does not mean I endorse them. Do consider the connection between an their values and techniques.
4. I include certain industrial items in this list but do not take industrial production as a given. Use already manufactured items, while realizing the values embedded within those items. Scavenge, reverse-engineer, or improvise the rest.
5. I include certain practices for transitional purposes that I as an individual dislike. We will all make some compromises to survive. I hope we can do that in a way that still grounds us in a positive trajectory and will leave behind a better world.
6. We cannot rewild and decolonize this world while still treating traditional indigenous cultures as relics to study or resources to use. I try not to list specific, non-universal cultural practices (e.g. beliefs, ceremonies, arts) out of respect to native peoples. I intend in part with the “rewilding” framework to circumvent the colonialist process of making indig knowledge just another product to consume.
7. I do very strongly encourage non-indig folks to learn about the traditional indigenous cultures of their local bioregion, how colonization has impacted those cultures and peoples, about solidarity opportunities and [allyship](#). But non-indig folks should not go to natives seeking wisdom. They do not owe settlers a damn thing, and face the heaviest of the dominant culture's assault. Even well-meaning settlers who think they support the natives have unintentionally helped facilitate land theft or made those peoples' cultures commercial, trivial, and dead.
8. Learn from observing the patterns of wildness, learn from your ancestry as appropriate, learn from any traditional natives that invite you as an equal, but reject the role of colonialist. <http://unsettlingamerica.wordpress.com/>
9. Throughout this document I avoid discussing resistance strategy, which goes beyond its scope. I see learning skills as an essential but insufficient part of the larger process of rewilding and decolonization.

Having said all that...

|| **Anti-Authoritarian Leadership & Teamwork** || When required: temporary, self-negating leadership styles that undermine hierarchies of power. Not just kinder, gentler rulers, but life without rulers, whether formal or informal. The navigator who teaches the direction along the way, diffusing the role amongst the followers. See also: “Empowerment” & “Social Skills”

■ **guides v. masters** [**guide** – legitimate leader, voluntary, persuades by example & suggestion, based on experience or informed speculation (expressed as such) || **master** – illegitimate leader, coercive, manipulates through duress or deceit, based on exclusive interest (often concealed)]

■ **more about the anarchic guide** [expertise- & charisma-based; consistently influences a group toward a specific result desired by that group; shares Subject-Matter-Expert knowledge w/o making others dependent; reduces bystander effect w/o threats]

■ **anti-authoritarian leadership criteria** [**Active Choice** – followers actively & voluntarily decide their roles w/ informed consent, constantly re-evaluate || **Anarchistic Skepticism** – the burden of justification rests on guides rather than followers || **Contextual Merit** – guides' have proficiency in the specific context || **Egalitarian Integrity** – absence of force & fraud in interactions || **Egalitarian Purpose** – no compensation requested beyond effort expended or direct need; guides & followers live in the same material conditions || **Empowering Trajectory** – concrete processes for empowering followers, sharing information or materials, rotating roles, decentralizing agency, & rendering further guidance unnecessary || **Finite Duration** – guidance duration directly linked to mutually-agreed upon goal(s) || **Immediate Recall** – the followers' ability to immediately revoke status of guide(s), ensure followers can withdraw at any time || **Radical Accountability** – guides redress force, fraud, & failure || **Radical Transparency** – honest & empowering explanations of guides' logic & aims || **Responsible Teaching** – guides want responsibility to followers rather than power over them || **Social Leveling** – the followers thwart guides' senses of entitlement, arrogance, & contempt for followers || **Stakeholder Accessibility** – the inclusion of all parties deserving agency, based on those impacted by the actions || **Leaders Serve** – responsibility to followers, “power with”, not “power over” them]

■ **anti-authoritarian leadership archetypes** [all conditional roles, beware the “permanent emergency”! || **task-oriented leadership** – focuses on tasks & structures; “the teacher” || **stimulus-oriented leadership** – focuses on motivation & morale; “the instigator” || **example-oriented leadership** – focuses on providing a good & inspiring example; “the achiever” || **relationship-oriented leadership** – promotes better group communication & cohesion, individual development; “the mentor”]

■ **the enemy** [rulers: leaders w/ power to punish, power to give rewards & bribes, power to force participation, power from class & wealth, power via insider access to authorities; leaders w/ narcissism, sense of omniscience, sense of omnipotence, sense of invulnerability; sadistic, sociopathic, psychopathic, or supremacist leaders; politicians – managerialism, representation, bureaucracy, recuperation; empathy gap created by hierarchy; pyramidal structure / chain of command; linear & despotic hierarchies; one-way communication of superiors-subordinates + discipline & reward structure → filtered awareness, false optimism & flattery (Hagbard Celine's 2<sup>nd</sup> Law / upward info distortion + downward ambiguous orders); pillars of oppression (hierarchy + objectification +

submission + violence)]

■ **characteristics of good teamwork** [purpose – unity through common goals, relevant tasks || **priorities** – participants know what to do next, by whom, by when || **roles** – participants know when to step up & when to step back based on abilities or needs || **decisions** – clear understanding of methods || **conflict** – dealt w/ openly & considered important for decision-making & personal growth || **individuality** – participants feel appreciation for their unique personalities, abilities put to good use || **norms** – functional group habits & clear expectations || **effectiveness** – working together worth the time & effort, participants look forward to working together || **success** – participants clearly recognize team success; shared sense of accomplishment || **training** – opportunities for practice, development, feedback made & used]

|| **Aquaculture** || Synergistic, closed-loop cultivation of aquatic plants & animals for food, to apply in permaculture designs that use bio-mimicry. Eschew cages, as well as external inputs (e.g. electricity, plastics, synthetic fertilizers, antibiotics). Edible ponds & marshes that restore wetland habitat while providing food for humans.

- **concepts** [sustainable polyculture, integrated multi-trophic aquaculture, combining fed elements (e.g. fish, shrimp) + inorganic extractive elements (e.g. seaweed) + organic extractive elements (e.g. shellfish) for balance & diversity]
- **aquaculture basics** [carrying capacity, temperature; nutrient cycling; feeding; volume, area, edge; acidity-alkalinity balance; salinity; aeration; niche]
- **aquatic life** [plants; algae; bugs; amphibians; reptiles; finfish; fowl; crustaceans; echinoderms; molluscs; marine mammals]
- **passive systems** [design (channel; canal; chinampa); setup, lining]
- **integrating plants** [wild rice, taro]
- **integrating bugs** [attractive floats for grasshoppers]
- **mitigating mosquitoes** [minnows]
- **remediation** [filter ponds]
- **vertical aquaponics** [structures]

|| **Bug Foraging & Cultivation** || The West undervalues entomophagy. Bugs possess essential protein & fat, many world cultures see them as delicacies.

- **entomology** [bugs' feeding, sleeping, housing & habitat, predators]
- **stunning stick**
- **poisonous bug common warning signs** [bright colors; smelly]
- **preparation methods** [removal of wings & legs usually; cook to destroy parasites]
- **termite logs & barrel breeders**
- **grasshopper & cricket-raising**
- **popular edible bugs** [crickets, cicadas, grasshoppers, ants, beetle grubs, darkling beetle larvae, various caterpillar species, scorpions, tarantulas]
- **vermiculture** [worm compost bins]
- **challenges** [bioaccumulation of herbicides & pesticides]
- **bug cultivation for fish & fowl** [mulch heaps for cockroaches, mealworms, sowbugs, millipedes, earwigs; watered brick pit or drum filled w/ wood, cardboard, straw for termites, sowbugs; vegetables & harbors for snails; zooplankton screening; larval flies from carrion; flooding worm beds]

**|| Childrearing ||** Fear not the wild child. A list of nomadic foraging cultures' common best practices.

- **attachment parenting & continuum concept** [evolutionary needs; maternal deprivation causes lifelong personality disorders]
- **prenatal care** [omega-3 fatty acids; folic acid; iron & calcium]
- **breastfeeding** [ideally 2-5 years, on cue of infant]
- **general practices** [constant positive touch in the early years (carrying, cuddling, holding, co-sleeping); immediately comfort crying; multiple adult caregivers / communal childrearing; multi-age playgroups]
- **swaddling a baby** [burrito wrap; Mother Teresa wrap]
- **anti-authoritarian childrearing ethic** [non-violent (no physical threats, intimidation, spanking, hitting); no time-outs (no simulated abandonment); avoiding yelling; do not give commands; allow for non-coercive child-child peer sex play]
- **alternatives to punishment** [look for underlying needs; give information & reasons; look for underlying feelings; change the context; find acceptable alternatives; demonstrate desirable behavior; give choices rather than commands; make small concessions; provide for a preparation period before special settings; let natural consequences occur (when appropriate); communicate your own feelings; use actions when necessary; hold your child in a loving & supportive way; remove your child from the situation & stay w/ them; do it together & be playful; defuse the situation w/ laughter; make a deal & negotiate; do mutual conflict-resolution; revise your expectations; take a parental time-out; create a compelling positive \*image\* of change]
- **child learning process** [autonomy; constant, self-invented play; learning-through-living; self-determined mimicry; curiosity->observation->mimicry]
- **appropriate affirmation v. codependency & victimization-enabling** [recognizing-success-with-a-smile v. constantly giving compliments; responding to accidents, failure & trauma in empowering ways]

**|| Clothing & Sewing ||** When nudity seems impractical ;-)

- **heat conservation** [layering; breath-trapping]
- **hide-tanning & leather-working** [hair on / hair off; framing & fleshing/scraping; sewing holes; brain, bark, egg tanning; soaking; breaking/stretching/softening; smoking; making scrapers, frames, smokers]
- **hide-tanning tools** [hide-scrapers; fleshing beams]
- **hide materials** [rawhide; tanned leather; tanned bladders]
- **hide-storing** [freezing; salting; air-drying]
- **textiles preparation** [scouring; teasing; carding; combing; retting; breaking; scutching; hackling]
- **textiles weaving** [hand spinning; drafting; weaving; backstrap looms; stick loom shed; knitting; crocheting; darning]
- **clothing tools** [wooden awl, bone needle]
- **natural needle & thread** [e.g. agave]
- **natural dye basics** [soaking; many dyes require an alum as a mordant to set color]
- **popular natural dyes, orange** [alder bark, bloodroot, sassafras, onion skin, lichen, carrot, lilac twig, barberry, giant coreopsis, turmeric, pomegranate, butternut seed husk,

eucalyptus]

■ **popular natural dyes, brown** [wild plum root, oak bark, sumac leaf, dandelion root, broom bark, walnut hull & husk, white birch inner bark, juniper berry, fennel flowers & leaves, acorns (boiled), hollyhock petals, Colorado fir bark, yellow dock, beetroot, maple tree leaf buds, amur maple, ivy twigs, pine tree bark, white maple bark, birch bark, St. John's Wort blossom, broom sedge, coneflower flower, goldenrod shoot]

■ **popular natural dyes, pink** [strawberry, avocado skin & seed, cherry, raspberry, rose or lavender w/ mint or lemon juice, lichen, camilla w/ lemon & salt, grand fir bark]

■ **popular natural dyes, blue-purple** [dogwood bark, red cabbage, woad 1<sup>st</sup> year leaves, mulberry, elderberry, saffron petal, grape, blueberry, cornflower petal, cherry root, blackberry fruit, hyacinth flower, Japanese indigo, indigo leaf, red cedar root, raspberry fruit, red maple inner bark, nearly black iris, dogwood fruit, oregon grape fruit, purple iris, sweetgum bark, Queen Anne's lace]

■ **popular natural dyes, red-brown** [elderberry, pomegranate, sumac fruit, sycamore bark, dandelion root, beet, bamboo, crab apple bark, rose hips, chokecherry, madder root, dried hibiscus flower, Canadian hemlock bark, Japanese yew heartwood, blackberry, Brazilwood, St. John's wort soaked in alcohol, bedstraw root]

■ **popular natural dyes, grey-black** [iris root, sumac leaf, meadowsweet, blackberry, butternut hull, boiled carob pod, oak gall, sawthorn oak seed cup, walnut hull]

■ **popular natural dyes, red-purple** [pokeweed berry, hibiscus flower, old daylily blooms, safflower flowers soaked in alcohol, logwood, huckleberry, portulaca flowers dried & powdered, beluga black lentils soaked in water, dark hollyhock petal, basil]

■ **popular natural dyes, green** [artemisia, artichoke, tea tree flower, spinach leaf, sorrel root, foxglove flower, lilac flower, camelia petals, snapdragon flower, black-eyed susans, grass, pigweed, red pine needle, nettle, broom stem, larkspur, plantain root, white ash bark, purple milkweed flower & leaf, barberry root, red onion skin, yarrow flower, mulga acacia seed pod, peach leaf, coneflower flower, peppermint, Queen Anne's lace, hydrangea flower, chamomile leaf]

■ **popular natural dyes, peach-salmon** [jewelweed, broom flower, Virginia creeper, annatto tree seed, plum tree root, weeping willow wood & bark, balm blossom]

■ **popular natural dyes, yellow-wheat** [bay leaf, barberry bark, crocus, fustic, saffron stigma, safflower flower soaked in water, sassafras bark, syrian rue, red clover, yellow cone flower head, onion skin, alfalfa seed, marigold blossom, willow leaf, Queen Anne's lace, heather, St. John's wort flower & leaf, burdock, celery leaf, golden rod flower, sumac bark & inner pith, weld, old man's beard lichen, Oregon grape root, chameleon plant, mimosa flower, dandelion flower, osage orange heartwood & inner bark, dried daffodil flower head, mullein leaf & root, hickory leaf, dock (yellow, curly, bitter, butter), white mulberry tree bark, paprika, peach leaf, beetroot, turmeric, wood sorrel flower, dahlia flower, mulga acacia flower, sunflower flower, dyer's greenwood shoot, tansy tops, yarrow]

■ **sewing** [knotting; back tack; backstitch; basting stitch; blind stitch; chain stitch; cross-stitch; catch stitch; cross-stitch tack; darning stick; pad stitch; running stitch; sailmaker's stitch; tent stitch; topstitch; whipstitch]

■ **hemming** [blanket stitch; slant hemming; couch stitch; slip hemming; herringbone stitch; blind hemming stitch; blind herringbone stitch; buttonhole stitch; pick stitch]

■ **tailoring** [sizing; cutting; patching; buttoning; zippers]



- **tire-sandals** [peeling; removing metal threading]
- **boot-repair**
- **mittens & gloves**
- **carriers** [tumplines, backpacks, pouches]
- **spindle-making** [discs; dowels; hooks; glue]
- **needles & thread** [making & using]
- **earthen shoes** [birch bark]
- **snow shoes** [brush; cordage; sledge]
- **earthen buttons** [eucalyptus; bone; antler]
- **snow goggles & pinhole goggles**
- **earthen hats** [cattails]
- **raincapes** [e.g. cattails, phragmites]
- **rainhoods** [e.g. birch bark, elm bark, cedar]

|| **Communication & Signaling** || Portable & primarily non-electric means, as direct & healthy as possible.

- **expression via body language** [posture (head position, arms crossed or not, mirroring someone or not); gesture (nervous or controlled); facial expressions; breathing]
- **subconscious eye movements** [from individual's own field of vision – looking right (guessing, fabricating); looking left (remembering); looking right + up (visual imagining, fabricating); looking right sideways (imagining sounds); looking right + down (accessing feelings); looking left + up (recalling images, truth); looking left sideways (remembering sounds); looking left + down (self-talking, rationalizing); direct eye contact when speaking (honesty, faked honesty); direct eye contact when listening (attentiveness, interest, attraction); widening eyes (interest, appeal, invitation); eye rubbing (disbelief, upset, tiredness); eye shrug (frustration); pupil dilation (attraction, desire); blinking frequently (excitement, pressure); eyebrow raising (recognition, curiosity, fear, shock); winking (intimate acknowledgement, complicity)]
- **expression via verbal cues** [tone; pitch; volume; pacing; pauses; variation; phrasing; gasps; sighs; hearing the unmentioned]
- **expression via distance cues** [specific cultural cues for intimate distance, personal distance, social distance, public distance]
- **non-violent communication concepts** [expressing observation v. evaluation; expressing emotions & sensations w/o narrative; expressing met & unmet needs; requesting action]
- **non-violent communication modes** [self-empathy; receiving empathically; truthspeaking]
- **checking in** [feelings; wellness; activities]
- **double I statements** ["I feel\_\_\_\_", "when you\_\_\_\_", "because of my need for\_\_\_\_", "I'd appreciate if you would\_\_\_\_"]
- **consent culture** [asking before acting, all parties give explicit, informed approval & have viable alternatives; understanding altered states]
- **languages of love** [affirmation; quality time; gifts; acts of service; physical touch]
- **fire signaling basics** [gray-by-day; light-in-night]
- **alternative signals** [reflectors; flags; lanterns]

- **earthen signaling devices** [bull-roarer; conch shell; willow whistle]
- **radio types** [GMRS; FRS; CB; ham]
- **ink, quills & woven paper** [making]
- **charcoal & bark writing**
- **ciphering & one-time pads**
- **recognized distress signals** [triangles]

**|| Containers ||** Certainly some of the most valuable human inventions.

- **clay pottery** [locating; tempering; shaping; pit-firing v. above-ground firing v. primitive kilns; coating/glazing/water-proofing; patching; pinch v. coil v. slab]
- **clay pottery tools** [sponge; wire; ribbing tools; trimming tools; pedal potter's wheel]
- **clay ecology** [lowland marsh, riverbanks, ponds]
- **testing clay** [can make ball, snake, loop, all w/o cracks]
- **preparing clay** [drying; pounding; removing debris; soaking; screening; settling; skimming/wicking/scooping; drying; kneading like dough for consistency; storing]
- **coiled basketry** [spoking; twining; finishing; continuous v. start-stop weave; handles]
- **twining basketry**
- **pine needle basketry** [bundling; threading]
- **gourds** [growing; curing; cleaning; sealing]
- **primitive container types** [cookware (e.g. bowl, plate, pot, trencher); buckets; canteens & bladders]
- **primitive container materials** [bark; stone; wood; plant fiber; horn; beak; bone; hide & stomach; shell; pods]
- **sealing wood w/ wax or fat**
- **bark containers** [peeling; folding; bottoms; sewing; top ring; plastering]
- **packframes & backpacks; modular carrying systems** [Roycroft packframe]
- **sleds & travois**
- **carts, trailers & Chinese wheelbarrows**
- **HDPE & PETE food grade plastic containers**

**|| Depaving ||** Toward a less lifeless world. Let's get those tool libraries & seed libraries going.

- **media** [asphalt v. concrete]
- **depaving tools** [breaker bar; pickaxe/mattock; sledgehammer]
- **techniques** [edging; cornering; fulcrums; leverage]
- **pavement recycling** [urbanite building material; raised garden beds]
- **soil rehabilitation** [sheet mulching; mycelium; phytoremediating plants]
- **natural depavers** [black locust; daikon radish; dandelion]

**|| Emergency Preparedness & Survival Skills ||** Basic survival knowledge. Skills & items for self-determination or survival. Appropriate use of some of the empire's artifacts. See also: "Food & Water Storage".

- **survival psychology** [will to live; perseverance; improvisation; natural drift]
- **survival primary obstacles** [grief; shock; pain & injury; cold & heat; hunger & thirst; fatigue; fear & anxiety; boredom & loneliness; depression & apathy; sleep deprivation]

- **strategies** [hunker down v. bug out; portable self-sufficiency v. pre-placed caches]
- **hunker down considerations** [light, noise, smell discipline; supplies; communications; escape routes & rally points]
- **situations** [SHTF (shit-hits-the-fan, a short term emergency) v. TEOTWAWKI (the-end-of-the-world-as-we-know-it, a long-term emergency)]
- **rule of three sources** [3 separate & distinct supply sources for all necessities]
- **survival rule of threes** [rough averages: 3 minutes w/o air; 3 hours w/o shelter; 3 days w/o water; 3 weeks w/o food]
- **physical needs** [in this order: security, air, shelter, water, food]
- **rule of passive & active means** [have both passive & active means for each essential need]
- **3 P's of survival** [priorities, proficiencies, provisions]
- **first 5 "C" items** [cutting tool; combustion tool; cover; canteen; cordage]
- **second 5 "C" items** [candle; cloth; compass; cargo tape; canvas needle]
- **prime auxiliaries** [tools for: fire-making, water-purifying, containing, cutting, navigating, communicating, provide for multiple needs]
- **gear philosophies** [balancing minimalism v. capabilities; blending in v. sticking out; nested gear levels for modular use; pre-plan for duration, setting, season, terrain, population density, multiple routes; keep inventory list near kits w/ item replacement dates + items removed/added]
- **Everyday Carry (EDC) concept** [everyday access; containers: keychain, necklace, pockets, belt, fannypack, altoids tin]
- **Everyday Carry (EDC) contents brainstorm** [keychain (kubotan keychain; whistle; micro LED flashlight; firesteel, 20mm button compass) + paracord bracelet + pocket (handkerchief; Swiss army knife; mobile phone) + altoids tin (fishing hooks, weights & lures); fresnel lens; signal mirror; alcohol cleansing pads; candle in plastic straw; x-acto knife; matches; currency; thread; needle; awl; p-51 can opener; pocket measuring ribbon) + fanny pack (duct tape wrapped around flat card; resealable plastic bags; emergency water filter straw; emergency space blanket; superglue)
- **Bug-Out-Bag (BOB) concept** [3-7 day duration; test everything in real conditions before use; containers: medium backpack, web gear]
- **Bug-Out-Bag (BOB) contents brainstorm** [**self-defense** – baton, pepperspray, fighting stick, handgun + ammo || **change of clothes** – zip-off cargo pants, long-sleeve shirt, t-shirt, windbreaker / wool overshirt (keep next to bag) dollar store gloves, headcover (boonie hat, beanie, balaclava, cap, shemagh) || **shelter** – 3 mil trash bag, mylar space blanket, sleeping pad, wool blanket, <4 lbs sleeping bag, mylar bivy sack, Gore-Tex shell, bedsheet, poncho tarp, 2 mil 9'x12' plastic drop cloth, silnylon tarp, 3/4 sleeping pad, fleece liner, wool blanket, tube tent || **water** – emergency water filter straw, hydration pack, water (~1 gallon, consider burden v. scarcity), water purification tablets, metal bottle / canteen || **fire** – combustion tools (firesteel, lighter, matches), char cloth / tinder, candle, tiny pencil sharpener || **cordage** – 550 paracord (100 ft.), unscented floss / artificial sinew thread || **food & cookware** – 775ml cooking pot, spork, steel wool / brillo pad, survival food rations, wax-lint tuna can stove / alcohol stove + fuel || **communications** – key documents (ID, medical records, proof of residence & employment, health insurance #s & records, encrypted banking #s & records, social security card, prescriptions, property deeds, tax records, wills), contact info (telephone

#s, addresses), photos of loved ones, writing implement + notepad, solar dynamo radio phone charger flashlight || **navigation** – marching compass, topographic maps, crank flashlight / headlamp, monocular || **medical** – <see: “Health Care – First Aid & Medicine” section> || **hunting** – slingshot / slingbow, AR-7 (takedown .22 rifle), M6 Scout (folding .22 rifle / shotgun), snaring wire, light fishing gear || **general tools** – survival knife, multi-tool, pocket SAS Survival Guide, micro-thermometer, “pocket chainsaw” / small folding saw || **entry tools** – tungsten-carbide saw, lockpicks (if proficient) || **hygiene** – toilet paper, small microfiber towel, plastic trowel || **containers** – resealable plastic bags || **misc. items** – N95 dust mask, handkerchief, caffeine pills, earplugs, foot powder, climbing carabiner, morale & entertainment items, gift & barter items]

■ **I'm-Never-Coming-Home (INCH) concept:** [containers: large backpack, handcart / stroller]

■ **I'm-Never-Coming-Home (INCH) contents brainstorm:** [seeds, shovel head, hoe head, axe head, woodworking tools (e.g. crafts knife, crooked knife, rasp), work gloves, multivitamins, sharpener, light 2-person tent, sewing kit (needle, thread, awl / nail), notebook, hatchet / machete, firearms cleaning tools, AK-47, flip flops (so shoes can dry out at camp), foraging bait (birdseed, peanut butter), metal tin for making char cloth), skills manuals; shovel / e-tool; dutch oven]

■ **max gear loads:** [EDC: <1/12 bodyweight + can still sprint; BOB: <1/6 bodyweight + can still run; INCH: <1/3 bodyweight + can still power-walk]

■ **caches** [sealed, waterproof PVC pipes; 5-gallon buckets]

■ **survival food concept** [max calories per volume & weight, low preparation effort, long shelf-life, nutritious or combine w/ vitamin pills; palatable; cheap]

■ **survival food examples** [GORP, pemmican, fish in pouches, summer sausage, dehydrated meals, instant mashed potatoes, instant beans & rice, instant pancake mix, olive oil, energy bars, nut butters, crackers, ramen noodles, DATREX bars, MREs, mac & cheese, tortilla sandwich wraps]

|| **Empowerment – Psychology, Creativity, Learning, Critical Thinking, Planning** ||  
Some mental tools for self-improvement.

■ **stages of needs** [sustenance; security; sociability; self-esteem; self-actualization; self-transcendence]

■ **the power process** [participation in decisions; belonging to group & place; purposeful effort; achievement-by-effort; intrinsically valuable effort; competence in abilities; confidence in role; recognition of contribution; respect from peers; respect for peers; autonomy; engagement / flow (losing oneself in the task); feedback & progress]

■ **flow characteristics** [intense focus on the present; merging of action & awareness; loss of reflective self-consciousness; sense of personal agency; distortion of temporal experience; intrinsically meaningful action]

■ **flow conditions** [clear goals, progress, feedback; balance of opportunity & capacity; intrinsic motivation]

■ **flow obstructions** [apathy, boredom, anxiety, fear of failure]

■ **mental state awareness** [self-esteem; codependency; cognitive biases; psychological heuristics]

■ **codependency signs** [low self-esteem; refusing requests causes anxiety; poor

boundaries; reactivity; sacrificial caretaking; control / manipulation | submissiveness; dysfunctional communication; obsession w/ others; dependency & fear of being alone; denial; problems w/ intimacy; addictions; perfectionism; trapped in emotional pain (shame, anxiety, fear, guilt, despair, depression)]

■ **motivation** [intrinsic v. extrinsic; dissonance reduction]

■ **psychological stress stages** [denial; deliberation; decision]

■ **creativity** [imagination; inspiration; intuition]

■ **increasing intelligence** ["seek novelty; challenge yourself; think creatively; do things the hard way; network"]

■ **increasing learning** [working memory; attention]

■ **multiple intelligences** [spatial; linguistic; logical-mathematical; bodily-kinesthetic; musical; interpersonal; intrapersonal; naturalistic; existential]

■ **reason v. intuition** [instincts, associations]

■ **prejudice** [cognitive prejudice; affective prejudice; behavioral prejudice]

■ **cognitive biases** [ambiguity effect; anchoring / focalism; attentional bias; availability heuristic; availability cascade; backfire effect; bandwagon effect; base rate neglect; belief bias; bias blind spot; cheerleader effect; choice-supportive bias; clustering illusion; confirmation bias; congruence bias; conservatism / regressive bias; contrast effect; curse of knowledge; decoy effect; denomination effect; distinction bias; duration neglect; empathy gap; endowment effect; essentialism; exaggerated expectation; experimenter's bias; functional fixedness; focusing effect; Forer / Barnum effect; framing effect; frequency illusion; hard-easy effect; hindsight bias; hostile media; hyperbolic discounting; identifiable victim effect; illusion of control; illusion of validity; illusory correlation; impact bias; information bias; insensitivity to sample size; irrational escalation; just-world hypothesis; less-is-better effect; loss aversion; mere exposure effect; money illusion; moral credential effect; negativity effect; negativity bias; neglect of probability; normalcy bias; observation selection bias; observer-expectancy effect; omission bias; optimism bias; ostrich effect; outcome bias; overconfidence effect; pareidolia; pessimism bias; planning fallacy; post-purchase rationalization; pro-innovation bias; pseudocertainty effect; reactance; recency illusion; restraint bias; rhyme as reason effect; risk compensation; selective perception; Semmelweis reflex; social comparison bias; social desirability bias; status quo bias; stereotyping; subadditivity effect; subjective validation; survivorship bias; time-saving bias; unit bias; well traveled road effect; zero-risk bias; zero-sum heuristic]

■ **social biases** [actor-observer bias; defensive attribution hypothesis; Dunning-Kruger effect; egocentric bias; extrinsic incentives bias; false consensus effect; fundamental attribution error; group attribution error; halo effect; illusion of asymmetric insight; illusion of external agency; illusion of transparency; illusory superiority; ingroup bias; moral luck; naive cynicism; outgroup homogeneity bias; projection bias; self-serving] bias; shared information bias; system justification; trait ascription bias; ultimate attribution; worse-than-average effect]

■ **memory errors** [bizarreness effect; choice-supportive bias; change bias; childhood amnesia; conservatism / regressive bias; consistency bias; context effect; cross-race effect; cryptomnesia; egocentric bias; fading affect bias; false memory; generation effect; Google effect; hindsight bias; humor effect; illusion of truth effect; illusory correlation; leveling & sharpening; levels-of-processing effect; list-length effect;



misinformation effect; modality effect; mood-congruent memory bias; next-in-line effect; Osborn effect; part-list cueing effect; peak-end rule; persistence; picture superiority effect; positivity effect; primacy effect / recency effect / serial position effect; processing difficulty effect; reminiscence bump; rosy retrospection; self-relevance effect; spacing effect; stereotypical bias; suffix effect; suggestibility; telescoping effect; testing effect; tip of the tongue phenomenon; verbatim effect; Von Restorff effect; Zeigarnik effect]

■ **logic** [formal v. informal; inductive v. deductive; factual error]

■ **formal logic** [valid argument: premises true → conclusion must be true || sound argument: formally correct argument w/ true premises]

■ **logical fallacies: formal** [appeal to probability; argument from fallacy; masked man fallacy; proof by example; quantifier shift]

■ **logical fallacies: formal, quantification** [base rate fallacy; conjunction fallacy; gambler's fallacy; hot hand fallacy; multiple comparisons fallacy; existential fallacy; double counting; spurious relationship]

■ **logical fallacies: propositional** [affirming a disjunct; affirming the consequent; denying the antecedent; commutation of conditionals; denying a conjunct; improper transposition; infinite regress; loaded question]

■ **logical fallacies: syllogistic** [affirming conclusion from negative premise; fallacy of exclusive premises; fallacy of four terms; illicit major; illicit minor; negative conclusion from affirmative premises; fallacy of undistributed middle; illicit contrary; illicit subcontrary; illicit subalternation; fallacy of necessity; inconsistent triad; politician's syllogism]

■ **logical fallacies: informal** [argument from ignorance; argument from incredulity; argument from repetition; begging the question, burden of proof (shifting); circular reasoning; circular cause & consequence; continuum fallacy; correlation proves causation; suppressed correlative; false equivocation; ambiguous middle term; ecological fallacy; etymological fallacy; fallacy of composition; fallacy of division; false dilemma; if-by-whiskey; fallacy of many questions; Ludic fallacy; fallacy of the single cause; false attribution; quoting out of context; false authority; argument to moderation; hedging; historian's fallacy; homunculus fallacy; inflation of conflict; incomplete comparison; inconsistent comparison; irrelevant conclusion; kettle logic; mind projection fallacy; moral high ground fallacy; moralistic fallacy; moving the goalposts; nirvana fallacy; post hoc ergo propter hoc; proof by verbosity / shotgun argumentation; prosecutor's fallacy; psychologist's fallacy; red herring; referential fallacy; regression fallacy; reification; retrospective determinism; special pleading; wrong direction; confusion of the inverse; descriptive fallacy; balance fallacy; special pleading]

■ **logical fallacies: informal, faulty generalizations** [faulty generalization; accident; No True Scotsman; cherry picking; false analogy; hasty generalization; misleading vividness; overwhelming exception; pathetic fallacy; thought-terminating cliché; inductive fallacy; biased sample]

■ **logical fallacies: informal, red herring fallacies** [personal attack / ad hominem; pro hominem; poisoning the well; abusive fallacy; appeal to force; bandwagon argument; appeal to equality; guilt by association; appeal to authority / accomplishment; appeal to consequences; appeal to motive; appeal to novelty / tradition; appeal to poverty / wealth; appeal to nature; argument from silence; chronological snobbery; fallacy of relative privation; genetic fallacy; judgmental language; naturalistic fallacy; straw person]

argument; Texas sharpshooter fallacy; appeal to hypocrisy; two wrongs make a right; package deal fallacy; trivial objections]

■ **logical fallacies: informal, appeal to emotion** [appeal to emotion; appeal to fear; appeal to flattery; appeal to pity; appeal to ridicule; appeal to spite; appeal to disgust; wishful thinking]

■ **logical fallacies: conditional** [broken window fallacy; definist fallacy; slippery slope; appeal to probability; appeal to the contrary; relativist fallacy; my enemy's enemy]

■ **critical thinking virtues** [humility, integrity, courage, autonomy, open-mindedness, inquisitiveness]

■ **critical thinking components** [skepticism; logic; clarity; credibility; accuracy; precision; relevance; depth; breadth; significance; fairness]

■ **critical thinking goals** [examine assumptions, discern hidden values, evaluate evidence, accomplish actions, assess conclusions]

■ **six rules of evidential reasoning** [FiLCHeRS: Falsifiability, Logic, Comprehensiveness, Honesty, Replicability, Sufficiency]

■ **4 C's of argumentation** [content, clarity, conciseness, consistency]

■ **recognizing disinformation techniques** [hiding the truth; denial, incredulity & indignation; rumor-mongering & guilting by (false) association; straw-person arguments; public hit & run; sidetracking w/ name-calling & ridicule, questioning motives; invoking authority; associating charges w/ older news; relying on fall-back positions; portraying issues as enigmatic; reasoning backward; demanding complete solutions & impossible proof; fitting facts to alternate conclusions; vanishing evidence & conclusions; changing the subject; emotionalizing, antagonizing, goading opponents; falsifying evidence; summoning biased investigators & authorities; cherry-picking data; manufacturing new investigators & authorities; creating bigger distractions; silencing critics; controlling opposition; vanishing altogether]

■ **argument mapping** [contentions, premises, co-premises, objections, rebuttals, lemmas]

■ **problem-solving** [techniques & methodologies; brainstorming; collaboration; networking]

■ **lateral thinking** [idea-generating tools; altering focus; selection; application]

■ **empowerment techniques** [codependency / victimization-enabling awareness; "coyote" teaching method; role-playing]

■ **planning principles** [PsyBlog goal hacks: stop fantasizing; start committing; start starting; visualize process not outcome; avoid the what-the-hell-effect; sidestep procrastination; shifting task-or-goal focus; reject robotic behavior; focus on the aim not the goal; know when to stop; if-then plans; verbalization & visualization of processes; contrast positive fantasy / indulging w/ negative reality / dwelling]

■ **planning methodologies** [Eisenhower matrix of importance v. urgency; S.T.O.P. (stop-think-observe-plan); OODA loop cycle (observe-orient-decide-act); SWOT analysis (strengths-weaknesses-opportunities-threats); PDCA cycle (plan-do-check-adjust); flow charts]

■ **working backward** [goal; strategy; tactics; timeframes; deadlines; review]

■ **systems analysis** [complexity; emergence; fragility / resilience; systempunkts (point of potential cascading collapse); schwerpunkts (center of gravity susceptible to concentrated force)]

- **risk management** [risks; threats; vulnerability; mitigation]
- **SMART goals** [Specific, Measurable, Attainable, Realistic, Timely]

|| **Fasteners – Cordage & Glue** || Often taken for granted but still crucial.

- **cordage methodology** [identification; harvest; hand-twist & leg-roll methods; splicing; anti-fraying; firing; maintenance / repair]
- **cordage testing** [strong, durable, can fold over on itself]
- **cordage styles** [threads, laces, lashes, cords, ropes; dynamic v. static rope]
- **cordage material** [plant stalks, leaves, roots, vines, bark; hide, sinew, intestines, hair]
- **natural cordage example fibers** [dogbane (bast); milkweed; New Zealand flax; nettles; hemp; flax (leaves); cattail; yucca; agave; douglas iris; willow (bark); maple; basswood; cedar; leather root (root); spruce (root); beach lupine; tule (whole stem); straw; juncus]
- **tying** [knots; loops; ladders; hitches; securing; binding & fastening; shortening; nets; lasso; climbing knots; lashing & frapping]
- **essential knots** [bowline; power cinch knot; square knot; sheet bend; lark's head; slip knot; prussic loop; self-tensioner; Canadian jam knot; water knot]
- **essential hitches** [trucker's hitch; taut-line hitch; clove hitch; half hitch; timber hitch; two half hitches]
- **essential lashes** [transom knot]
- **rope-tossing**
- **natural glue examples** [e.g. pine & birch pitch; gum; resin; bark; hide; hoof; horn; cartilage; mixing w/ fat, charcoal / ashes, veg\*n scat]
- **pitch-sticks** [making & using]
- **earth concrete** [bone shavings, sand, pine sap]
- **primitive vise**

|| **Field Dressing Animals** || Use every part, respectfully, knowing that our ancestors became the soil that turned into the plants that fed the animals. Think seven generations ahead. See also, "Food – Preservation".

- **field dressing tools** [obsidian flake x-acto knife; stone axe]
- **field dressing process** [bleeding; skinning & de-hairing; gutting; jointing; cutting]
- **skinning specifics** [gloves; cut paws; cut down limbs; cut down or around head; cut down body cavity; cut around genitals & anus; remove skin]
- **sinew & marrow**
- **meat cutting** [against the grain]
- **signs of taint** [milky eyes; spotted organs; missing fur patches; bugs eating; find sign of death]
- **meat cuts** [e.g. loins, tenderloins, backstrap, etc.; use intestines for sausage]
- **organ identification & use** [eat organs first as they spoil quickly]
- **dried blood for waterproofing**
- **transporting carcasses**

|| **Fire** || Humans' superpower. Must go hand-in-hand w/ reforestation.

- **fire physics** [heat rises; heat, oxygen, fuel]

- **wood categories** [green; squaw; punk]
- **firewood categories** [tinder; fatwood; kindling; hardwood fuel]
- **fire safety** [distance; water / dirt; fire ladder; flammables; “small fire burns clothing, big fire dries clothing”]
- **firewood foraging** [wood identification; breaking on rocks; breaking between poles; cracking test; resinous woods for certain purposes; break away from people]
- **fire construction** [tinder bundle; kindling pile; reflectors; fire lay / platform]
- **fires for smoking** [snake hole fire; tipi fire; use green & wet woods]
- **fires for drying** [temple fire]
- **fires for cooking** [keyhole fire; Dakota fire hole]
- **fires for roasting** [trench fire]
- **fires for boiling** [Schwedenfackel]
- **fires for lasting heat** [rakovalkea; upside-down (self-feeding); 3 logs; cabin]
- **fires for all-night burn** [upside-down, stack wood perpendicular, pack gaps w/ dirt]
- **minimalist fires** [scout fire]
- **fire-summoning** [bow drill; hand drill; pump drill; fire piston; fire plow; fire saw; flint & steel / marcasite; magnesium & ferrocium; lighter; reflectors & magnifiers; aluminum can + abrasive / polish; battery fire; fire from ice; fire from water]
- **bow drill & hand drill tips** [keep spindle bottom rough; flare fireboard base; use hand straps for hand drill]
- **firesteel method** [hold steel, draw firesteel back from it, strike 90° angle]
- **fire tools** [quartz drills; axe; hearth; spindle; socket; tongs; wedge; bellows; fire rake]
- **flammable refuse** [e.g. lint]
- **mitigating wind & wetness**
- **fire-tending** [keep wood stashes nearby of each type; wait til flame passes fuel to add more; keep it breathable; dry out surplus fuel safely for next fire]
- **putting out fires** [“break it, drown it, stir it”]
- **fire-storing** [tinder fungus; coals; hot rocks]
- **DIY tinder: char cloth** [making]
- **friction fire tinder traits** [high surface area; dry; catches spark easily like bird nest]
- **tinder bundle process** [bundle bark, shred out outer bark, shred out fine fibers, place fine fibers pile in bundle to catch spark; keep tinder in shirt pocket to draw]
- **friction fire preferred tinders** [red cedar bark, white cedar bark, inner chestnut bark, cottonwood bark, inner red elm bark, rotten pine wood, tree moss, shredded dry grass, cattail fluff, dry pine needles, rotten buckeye, dry white punk from rotten hollow trees, white alder, shredded cottonwood root, dried & powdered leaves of CA black oak, oak galls, bird & mice nests, crushed spruce needles, beaten rope, milkweed silk in red cedar bark best]
- **friction fire spindle traits** [dead or nascent growth; finger-width; unpolished]
- **friction fire preferred hand drills woods** [yarrow, horsetail, box elder, CA buckeye, seep willow, blue elderberry, coast redwood, cattail, big-leaf maple, mugwort, bull thistle, scotch broom, douglas fir, CA figwort, sow thistle, fleabane daisy, CA bay laurel, common mullein, garden sunflower, hairy honeysuckle, willow, coast goldenrod, American dogwood, thimbleberry, milk thistle, wild grape, white alder, CA sagebrush, chaparral virgin's bower, red-osier dogwood, quaking aspen, black cottonwood, mountain red elderberry, white alder, great basin sagebrush, coyote brush, rabbit brush,

grey pine, manzanita, desert almond, juniper]

■ **friction fire preferred bow drill woods** [blue elderberry, CA buckeye, coast redwood, douglas fir, clematis, big-leaf maple, hairy honeysuckle, western red cedar, horsetail, monterey pine, wild grape, wood rose, acacia, pear, box elder, eucalyptus, wild cherry, apple, canyon gooseberry, english ivy, cherry plum, willow, Santa Cruz cypress, thimbleberry, CA bay laurel, scotch broom, CA sagebrush, American dogwood, Pacific rhododendron, tree lupine, western burning bush, white alder]

■ **friction fire fireboard traits** [nail test for medium softness; finger width]

■ **friction fire preferred fireboards** [western red cedar, quaking aspen, black cottonwood, California incense cedar, California buckeye, mule fat, redwood root, box elder]

|| **Fishing** || Go for a quick, pain-free kill. Do not overfish. Do not fish endangered species or pregnant mothers. Think seven generations ahead.

■ **fish anatomy**

■ **zoology** [fish' feeding, sleeping, housing & habitat, predators]

■ **fish habitat** [eddies; downstream of rocks & gravel bars; shade beneath vegetation]

■ **population dynamics & seasonal fishing**

■ **fishing basics** [rods, lines, hooks, points, bait]

■ **baiting** [red colors; fish eyes; worms; entrails]

■ **finding worms for bait**

■ **netting & gill netting** [making & placing]

■ **fish traps** [making & placing; fish weir; basket trap]

■ **spearing & free point spearing** [making]

■ **blowguns** [making]

■ **snaring, trotlines & nightlines** [making & placing]

■ **hand-fishing** [disturbance->bottlenecking]

|| **Food – Preparation & Cooking** || Practice eating a nutritious, diverse, but stoic diet of self-prepared, whole foods. Build up your hunger tolerance. Move as much as possible from farming to foraging, or at least gardening.

■ **food 101** [buy it w/ thought; cook it w/ care; serve just enough; save what will keep; eat what would spoil; home-grown is best; do not waste it; salvage what you can; compost the rest]

■ **grinding tools** [mano, metate, mortar, pestle]

■ **traditional food preparation methods** [raw; sprout; soak; ferment; stock; cultures]

■ **coal cooking** [temperature estimations, how long you can safely keep your hand over heated open cookware: 1 sec = ~500°F, 2 sec = ~500°F, 3 sec = 450°F, 4 sec = 400°F, 5 sec = 350°F, 6 sec = 300°F, 7 sec = 250°F, 8 sec = 200°F]

■ **DIY ovens & stoves** [dutch oven; clay oven; earth oven; pit cooker; tandoor cooker; solar cooker; rock oven; bucket stove; bush fungus stove; 16 square brick rocket stove; 6 hex brick rocket stove; 4 cinderblock rocket stove [3 8's + 1 H block]; dona justa oven; upesi stove; parabolic cooker; zen stove; solar umbrella cooker; solar tire cooker]

■ **dutch oven cooking** [rotate oven every ~10 minutes || **baking** – ¾ coals above, ¼ below || **roasting** – ½ coals above, ½ coals below || **stewing / simmering** – ¼ coals above, ¾ below || **frying / boiling** – all coals below]



- **blanching** [immerse in boiling water → immerse in ice water]
- **thermos bottle cooking**
- **steaming & steam pits**
- **pots** [tripod, bipod, monopod]
- **cast iron** [seasoning & maintenance]
- **boiling** [metal; hot rock]
- **fry rock cooking**
- **bark wok cooking**
- **spit cooking**
- **board / rock reflectors**
- **improvised utensils** [skewers; chopsticks; spoons; forks; knives; tongs; ladles; scrapers; graters; mashers]
- **food conservation** [making bone & veggie scrap stock; cooking meat to the side of fires to save the fat drippings]

|| **Food – Preservation** || Do not waste food for lack of knowledge. Compost what you must discard.

- **basics** [temperature; moisture; critters]
- **root cellars** [uninsulated north-walled basement partition; in-ground root cellar; hay bale shack; vented mound]
- **boiling water bath canning**
- **dry-pack canning**
- **pressure canning** [meats; veggies; seafood]
- **preservation methods** [freezing; curing (salt; brine; smoke); drying / leathering (air, contact, freeze-drying; jerky & pemmican; leathered fruits); vinegar / pickling; culturing / lacto-fermentation; jellying (jellies; jams; preserves; marmalade; conserves; butters; syrups); fat / oil potting; waxing; sugar / honey; alcohol & fermentation; dehydration]
- **solar dehydrators**
- **rendering fat**
- **ghee-making**
- **stomach & intestinal storage**
- **put fish in wetted grass bundles to prevent drying**

|| **Food & Water Storage** || For the hard times. See also: “Emergency Preparedness”, “Heating & Cooling”.

- **food insurance v. food security**
- **water insurance v. water security**
- **spoilage factors** [temperature; humidity; air; pests; oxygen]
- **storage foods & vitamins**
- **discount / bulk suppliers**
- **accumulation** [bulk; doubling-up]
- **shelf-lives**
- **rotation schedules** [notifications calendar; library check-in; & first-in-first-out (F.I.F.O.) rotation]
- **food spoilage & food-borne illness** [e.g. botulism, e. coli, salmonella, cafeteria germ, c. jejuni]

- **acorn baskets**
- **caches & geo-caching**
- **water storage** [secure quantities for drinking, dishwashing, bathing, cleaning, watering]
- **cisterns & swales**

**|| Foraging Wild Plants ||** Do not overpick. Do not gather endangered species. Replant what you can. Think seven generations ahead.

- **modern storage** [100 gallon Water Bob; siphon pump]
- **ethical wildcrafting principles** [gather sparingly; gather from different plants to minimize impact; choose healthy plants in clean areas; replant whenever possible; minimize competition w/ other animals; harvest tree roots on opposite sides each year; try to wait at least 2 years before gathering from same site]
- **botany** [pattern method of identification; learn plant families]
- **general plant types** [grass; shrub; tree; vine]
- **I.T.E.M.** [(I)dentify the plant beyond doubt (always use 2 sources if new plant), (T)ime of year check, (E)nvironment check, (M)ethod of preparation]
- **common warning signs for many poisonous plants** [milky or discolored sap; spines, fine hairs, or thorns; beans, bulbs, or seeds inside pods; bitter or soapy taste; dill / carrot / parsnip / parsley-like foliage; “almond” scent in the woody parts & leaves; grain heads w/ pink, purplish, or black spurs; three-leaved growth pattern; fruits w/ five segments; red berries in clusters; white, green, & yellow berries; red plants]
- **regular flower parts** [stamen (pollen, anther, filament); pistil (stigma, style, ovary, ovule); petal & corolla; sepal & calyx]
- **flower & fruit clusters** [raceme; spike; panicle; umbel; compound umbel; cyme; composite]
- **leaf patterns** [**leaf margins**: toothed, lobed, smooth; **leaf shapes**: lance-shaped; elliptic, egg-shaped, oblong, wedge-shaped, triangular, long-pointed, top-shaped; **leaf arrangements**: opposite, compound, simple, basal rosette, alternate; whorled]
- **root patterns** [taproot; tubers; bulb; rhizome]
- **seasonal awareness** [observation; foraging calendars]
- **how to gather** [conservation; precision; thinning]
- **foraging tools** [digging sticks, pouch, bag, seedbeater basket, poles, blade]
- **edibility tests** [8 hour fast; isolate parts; inspect, smell, skin contact, lips, mouth corner, tongue tip, tongue bottom, chew, swallow, eat]
- **preparation of wild plants** [greens; shoots & stalks; roots; fruits & berries; seeds & pods & grains; pollen; sap; nuts; flowers; skin; inner bark; soft twigs]
- **plant processing methods** [soak; bake; boil; leach; powder]
- **survival stage foraging** [fruit → fat → protein → greens]
- **calorie-foraging** [tubers]
- **wild plant essential vitamins & minerals**
- **poisonous plants & look-similar**
- **famine foods** [edible inner tree barks: pine, slippery elm, black birch, yellow birch, red spruce, black spruce, balsam fir, tamarack, hemlock, basswood, aspen, poplar, maple, willow]

**|| Frugality ||** We will move once more to a world of durable goods made by hand.

- **frugal 101** ["use it up, wear it out, make it do, or do without"]
- **self-restraint & avoiding sunk costs**
- **re-purposing**
- **seasonal living**
- **DIY v. consumerism**
- **example gear you can make yourself** [arrowheads (from tin can lids or glass bottle bottoms or TV screens or toilet ceramic); sleeping bags from raw materials (e.g. fleece, ripstop nylon); mini alcohol stove from metal can; backpack from silnylon; knife from a flattened railroad tie; awl from a nail; char cloth tinder from cotton handkerchief; tarp tents; whistle from willow; solar cookers; food dehydrators; passive solar water heaters; rope ladder]

**|| Fungiculture & Mushroom Foraging ||** Take special care with fungi.

- **mushroom basics** [cap; umbo; upper scales; gills; tubes; pores; ring; stalk; volva; lower scales; mycelium; warts; patches; flesh; button stage; spines; margin]
- **I.T.E.M.** [(I)dentify the fungi beyond doubt (always use 2 sources if new fungi), (T)ime of year check, (E)nvironment check, (M)ethod of preparation]
- **common warning signs for many poisonous fungi** [white gills; cup-like basin at base; rings around stem]
- **mushroom log cultivation** [timing; usable logs; log sources; structures / ricks; cutting; usable mushrooms; mushroom sources; plug spawn; flushes; waxing; moisture / soaking]
- **mushroom cardboard cultivation**
- **indoor cultivation** [trays; composting; pasteurization; spawning; casing; pinning; cropping]
- **bug cultivators** [leafcutter ants, termites, ambrosia beetles, marsh periwinkles]

**|| Health Care – Exercise & Fitness ||** Paleolithic fitness & general best practices.

- **basic fitness categories** [discipline; balance; coordination; agility; speed; strength; stamina; flexibility; reflexes]
- **basic flexibility stretches** [mountain pose + arm raising; standing forward bend; garland pose; lunge pose; plank pose; staff pose; seated forward bend; head to knee pose; happy baby pose; downward dog & cobra; bridge pose; triangle pose; seated twist; child's pose]
- **[near-]barefoot walking** [strike mid- & forward on foot, v. heel]
- **homeo-dynamics** [variety]
- **stamina, balance, jumping & lifting basics** [form]
- **paleo exercise** [walking; hiking; sprinting; interval training; lifting; dancing; climbing; crouching; crawling; carrying]
- **continual care** [e.g. for knees, eyes, shoulders, feet, etc.]
- **carrying strength** [military presses; squats; deadlifts; hip & back exercises]

**|| Health Care – First Aid & Medicine ||** Beyond the era of unsustainable industrial medicine & pharmaceutical antibiotics.

- **basic first aid** [ABCDEFGH - airway, breathing, circulation, disability, exposure & allergies, fractures, gashes]
- **intermediate first aid** [assess dangers, assess injuries; CPR; bleeding; burns; wounds; fractures; shock; recovery positions; unconsciousness; pressure points; infections; incisions; punctures; specific body wounds e.g. eye; Heimlich maneuver; bandaging; dislocations; sprains (muscle or tendon) & strains (ligament); transporting the injured; emergency childbirth; stitching wounds; nosebleeds; sores; indigestion; heartburn; skin problems]
- **wilderness first aid** [e.g. thorns & splinters; poisonous plants; blisters & abrasions; bites & stings; hypothermia; frostbite; heat cramps; heat exhaustion; heat stroke; burns; pain; shock; diarrhea; dehydration; intestinal parasites; food poisoning; rashes; fungal infections; altitude sickness; snowblindness; regional diseases; waterborne diseases; insectborne diseases; intestinal worms]
- **main arteries for rapid heating or cooling** [temporal (temple); carotid (throat); femoral (inner upper leg); brachial (inner bicep)]
- **treating shock** [morale; sense of purpose]
- **inter-species communicable diseases** [rabies, hanta virus, lyme disease]
- **minimal first aid kit** [**dehydration** – oral re-hydration mix (proper ratio of sodium, glucose, potassium, chloride, citrate, zinc), water purification tablets || **wound care** – bandages, moleskin, butterfly sutures, alcohol swabs, medical tape, gauze roll, cotton balls, disinfecting ointment, soap, tampons || **infection** – hydrogen peroxide / betadine / iodine / alcohol swabs / triple antibiotic ointment || **rashes & bites** – hydrocortisone / itch cream || **anti-diarrheal** – antidiarrheal antacid / bismuth subsalicylate (e.g. Pepto-Bismol, for diarrhea, heartburn, nausea); anti-diarrheal anti-laxative / loperamide (e.g. Imodium, for gastroenteritis or inflammatory bowel disease) || **anti-poison** – charcoal || **sprain, bruise, abscess** – magnesium sulfate || **misc.** – nitrile exam gloves, burn cream, emergency hand warmer]
- **minimal medical kit** [**surgical basics** (sterile x-acto knife blade; fresnel magnifying lens; cayenne for bleeding; dressing pads; needle & thread; tweezers) || **ibuprofen** (e.g. Motrin, Advil: NSAID for pain, fever, swelling, minor blood-thinning, arthritis) || **acetylsalicylic acid** (i.e. aspirin: swelling, pain, fever, blood-thinning, heart attack) || **paracetamol** (e.g. Tylenol: fever, pain, allergies, cough, flu) || **guaifenesin** (e.g. Mucinex: respiratory tract infection, cough, asthma, gout, fibromyalgia) || **antihistamine** / diphenhydramine (e.g. Benadryl: allergies, nausea, runny nose, sneezing, itchy / watery eyes, itchy throat, insomnia, sedation) || **topical local anesthetic** (e.g. Lidocaine 1%, for itching, burning, skin inflammation, dental anesthetic, local anesthetic for minor surgery) || **topical decongestant** (e.g. Vicks Vaporub) || **baking soda** (antifungal for athlete's foot, ringworm, thrush, as cryptococcal meningitis)]
- **minimal antibiotics kit** [see: natural antibiotic & antiviral alternatives (note: fish antibiotics can work safely for humans for cheaper) || **amoxicillin / cephalaxin** (lungs & above: bronchitis, pneumonia, strep throat, middle ear infections) || **doxycycline** (lungs & below) || **ciprofloxacin** (broad spectrum; respiratory, urinary tract, gastrointestinal, abdominal infections, prostate infections, bronchitis, pneumonia,

bacterial diarrhea) || **erythromycin** (most respiratory infections & middle ear infections, syphilis, lyme disease & chlamydia)

■ **expanded med kit** [apple cider vinegar; instant cold pack; thermometer; oral care fluid / powder; stethoscope]

■ **allopathic v. folk medicine**

■ **medicinal plant actions** [anodynes / analgesics; astringents; antispasmodics; nervines; soporifics; alteratives; antiseptics; antibiotics; cardiacs; carminatives; demulcents; diaphoretics; diuretics; emollients; expectorants; emmenagogues; rubefacients; styptics; stimulants; tonics; vulneraries]

■ **medicinal plant internal delivery** [eating or drinking (e.g. juice, capsule, syrup); enema; douche; smoking / inhaling; **tincture** – plant dissolved in alcohol, drank]

■ **medicinal plant external delivery** [**poultice** - macerated fresh plant applied directly || **plaster** – dried or powdered poultice mixed w/ carrying medium e.g. flour || **decoction** – liquid made from hard parts, e.g. roots, seeds, bark) || **infusion** – liquid made from soft parts, e.g. flowers, leaves, soft stems || **ointment / salve** – oil / cream containing plant || **compress** – soaked cloth | **fomentation** – topical decoction || **wash** – splashed decoction, e.g. eyewash]

■ **DIY health exams** [breast, cervix, prostate]

■ **food-borne illnesses** [symptoms & treatment]

■ **home-birthing**

■ **triage** [immediate, delayed, expectant]

■ **natural antibiotic & antiviral alternatives** [mints; garlic; cloves; Oregon grape root; raw honey; mullein; myrrh; sage; thyme; echinacea]

■ **herbal birth control** [neem oil, Queen Anne's lace, tansy, stoneseed root, Jack in the Pulpit root, thistles, smartweed leaves, rutin, ginger root, vitamin C, pennyroyal, juniper berries, myrrh, angelica]

■ **tissue states** [**heat** – e.g. minor burns, fever, bites, beginning blisters || **cold** – e.g. constipation, fungal infection || **wind** – e.g. changing hot / cold, spasm, cramp || **dry** – e.g. dry cough, 1st \* burns, scrapes || **wet** – e.g. bleeding, diarrhea]

■ **herbal properties** [**mucelage** – lubricating / cooling || **bitters** – stimulating / heating || **astringents** – drying / restricting || **volatile oils** – soothing / anti-inflammatory / antiseptic || **resins** – antiseptic / antifungal]

<b>Health Care – Hygiene, Sanitation &amp; Dentistry</b>    For health & comfort.
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■ **bodily hygiene basics** [germ theory; washing hands; safe waste disposal; do not touch common serving utensils to personal dishes]

■ **cleaning dishes** [wood ash lye paste]

■ **combs / brushes** [notched wood, teasel seed heads, echinacea seed heads, yucca, splinterbands, eel vertebrae]

■ **natural soaps** [alkali / ash + water + fat / oil + antiseptic; soapwort; clematis; yucca; agave; spanish bayonet; sotol; Joshua tree]

■ **sand & snow bathing**

■ **sunning & airing bedding, utensils, containers**

■ **DIY laundry** [foot agitation method]

■ **DIY cleanses** [cleanses (for liver, kidney, colon); fasting; enemas; tonics]

■ **primitive hand washing methods** [antiseptic plants e.g. pine]



■ **smudge pots**

■ **natural sunscreen** [raspberry seed oil; carrot seed oil; wheat germ oil; sesame oil; coconut oil; hemp oil; avocado oil; soybean oil; peanut oil; beeswax]

■ **natural bug-repellents** [witch hazel + essential oils from: citronella, clove, lemongrass, rosemary, tea tree, cajeput, eucalyptus, cedar, catnip, lavender, mint; witch hazel + herbs: peppermint, spearmint, citronella, lemongrass, catnip, lavender]

■ **handling corpses, carcasses & burials**

■ **pit / trench latrines** [siting; digging / construction; timing; de-commissioning]

■ **composting toilets** [nitrogen, carbon, oxygen, warmth, moisture; Jenkins sawdust toilet; 2 chamber toilet]

■ **greywater systems** [filter ponds]

■ **primitive toothcare & gumcare** [chewsticks; toothbrushes; toothpicks; gargles; powders; flosses]

■ **basic dentistry** [cavities; abscesses; pyorrhea; canker sores; cold sores; bleeding gums; gingivitis; trench mouth]

■ **intermediate dentistry** [tooth removal]

|| **Health Care – Mental Health** || Self & peer mental health care.

■ **de-stressing techniques** [slow, deep breathing; 4-count breathing; visualization; progressive muscle relaxation; go for a walk; go outside; potassium]

■ **processing stress** [journaling; art; group therapy]

■ **chaplaining** [confidentiality; appropriate boundaries; empathic listening; non-directive helping]

■ **gestalt therapy** [creating safe situations of experimental empowerment]

■ **grieving processes** [denial->anger->bargaining->depression->acceptance; grief triggers; habit formation]

|| **Health Care – Nutrition** || What did your eldest ancestors subsist on? See also: "Food – Preparation & Cooking".

■ **bodyworks 101** [sunlight; hydration; digestion & metabolism]

■ **Satter's hierarchy of food needs** [enough food → acceptable food → reliable, ongoing access to food → good-tasting food → novel food → instrumental food]

■ **basic nutrition** [fat- & water-soluble vitamins; essential amino acids; essential fatty acids; minerals; appropriate carbohydrates; enzymes; glycemic index; satiety index]

■ **traditional nutrition** [Weston A. Price Foundation; paleo diet; bitters help digestion]

■ **advanced nutrition** [superfoods; probiotics; rainbow diet: chlorophylls; carotenoids; anthocyanins; betalains]

■ **malnutrition ailments** [scurvy; anemia; pellagra; night blindness & xerophthalmia; goiter & cretinism; beriberi; rickets; vitamin K deficiency; tetany; osteoporosis; keshan disease; zinc deficiency]

■ **agricultural food health implications**

■ **industrial food health implications**

|| **Heating & Cooling** || For food or bodies.

■ **physics** [convection, conduction, radiation, respiration, evaporation, insulation,

infiltration, exfiltration]

- **body temperature danger** [conditioning; prevention; treatment]
- **maintaining body heat equilibrium** [ease it, raise it, cover it, reflect it, don't sweat it]
- **building cold & heat tolerance** [as a constant exercise; sleeping cooler; bloodflow]
- **hayboxes**
- **firebed & headhole** [2 hour burn, 4 inches dirt, 8 inches deep]
- **solar hot water heating from recycled materials**
- **solar thermal heating** [inc. compost hoop-shaped heater]
- **cold hole, cold cellar, root cellar** [inc. garbage can root cellar]
- **ice caves, ice houses, ice boxes**
- **spring houses, stream immersion & cold rooms**
- **two bucket / pot-in-pot evaporative cooler** [Xeer pot]
- **cabinet-style evaporative cooler**

|| **Horticulture & Food Forestry** || Regenerative, perennial polyculture gardens. Synergistic, closed-loop cultivation of (mainly native) plants & animals for food, using bio-mimicry, & allowing for ecological succession. Avoid cages, plows, & external inputs (e.g. electricity, plastics, synthetic fertilizers, antibiotics). Edible landscapes that restore native habitat while providing for human needs. Torch GM crops.

- **ecology** [niche; succession; biodiversity; sustainability; ecotones; synergy; cycles; annual v. perennial; native v. invasive; pollination; nutrient exchange; humus; microclimate]
- **climate zones** [polar; tundra; northern coniferous forest; deciduous forest; temperate grassland; mediterranean; tropical forest; savannah; desert; sea]
- **general gardening** [digging; planting; hardiness zones; watering; seed collecting; weather; sun & shade; harvesting; nitrogen-phosphorus-potassium; recording]
- **composting & mulching** [sources; nitrogen-phosphorus-potassium; sheet mulching; vermicomposting; active v. passive composting; solar composting; biothermal heating; manure; humanure; urine; biochar; bokashi composting; hugelkultur; compost tea]
- **ecological design process** [observation; visioning; planning; development; implementation]
- **garden plant functions** [mulch-makers; nutrient-accumulators; nitrogen-fixers; soil-fumigants / pest-repellents; insectaries; fortress-plants; spike roots; wildlife nurturers; shelterbelts; nurse; chaperone; scaffold]
- **garden plant profiles**
- **DIY soil tests** [finger test for sand-clay-silt; mason jar test]
- **permaculture-specific techniques** [5 zones; keyhole beds; mandala gardens; herb spirals; net-and-pan; organic water conservation; contouring / swales; companion planting; stacking; edge effects; multiplicity; backyard wetlands; natural "pest control"; spacing; beneficial bugs, birds & mammals; interplanting; creating guilds; habitat mimicry]
- **arboriculture & food forestry** [digging; spacing; coppicing; plucking; pruning; pollarding; grafting; horseshoe forest gardens; seven-story gardens]
- **grow biointensive** [hexagonal planting; double-dug raised beds; carbon farming; calorie farming; open pollination; companion planting; integrated pest control]
- **Fukuoka's method** [seedballs; bio-mimicry; design for bodies not machines]

- **vertical gardening** [trellis; fence; cage; wall; pergola; tipi; hanger; barrel; shadehouse; upside-down garden; bucket; tower]
- **square-foot gardening** [location; spacing 1x1 v. 4x4 beds; raised beds; staggered harvests; 1/2 v. 1 foot depth; boxes; aisles; grids; seed saving; tabletop gardens; obtaining wood; pinch-seeding; snipping; attaching carry-poles; lazy soil improvement; potted gardens; sun orientation; back-end trellises; wood ash; tallboxes; caging; covering; frames; tying; gated composters; sprouting; transplanting; seed storage; root trimming; harvesting; watering; extending seasons; tire gardens; earth-boxes]
- **Gardening When It Counts** [mounds]
- **extending seasons** [bioshelters; low tunnels; cold frames]
- **dryland gardening techniques** [mulch; deep roots; water retention w/ stones; terraces; swales; berms; hugelkultur; ollas; drip irrigation w/ buckets; rainwater harvesting; greywater; chinampas; imprinting; sponge ladders]
- **gardening tools** [trowel; hoe; spade; machete]
- **plant nutrient deficiency indicators** [**calcium** – new leaves misshapen or stunted || **iron** – young leaves yellow / white w/ green veins || **nitrogen** – upper leaves light green, lower leaves yellow, bottom leaves yellow & shriveled || **potassium** – yellowing at tips & edges, esp. in young leaves; dead, yellow patches, or spots on leaves || **carbon dioxide** – white deposit; stunted growth; plant die back || **manganese** – yellow spots &/or elongated holes between veins || **phosphate** – leaves darker than normal; loss of leaves || **magnesium** – lower leaves turn yellow from inward; veins remain green]
- **resources** [[101 permaculture designs downloadable imgur](#)]
- **plant foods to regrow from scraps** [celery / romaine lettuce / bok choy / cabbage; sweet potato; potato / ginger root; green onions / onions / leeks / fennel / garlic clove; pumpkin seeds; tomato; lentil sprouts; apple seeds; lemongrass; basil; carrot tops]
- **phytoremediation** [hyperaccumulators for various heavy metals, pesticides, solvents, explosives, petrochemicals, e.g. *Thlaspi* genus, mustards, alpine pennycress, hemp, pigweed, sunflower, Chinese brake fern, willow, ragweed, hemp dogbane, poplar]
- **traditional native horticultural practices** [rest periods for land; burning to encourage grasses for game animals to eat; burning to smoke, stun, or scare game animals; burning to clear & open woodlands; burning to promote greens & grasses for food; burning to add nutrients to soil; slight water diversion to plant stands; pruning & coppicing; sowing seeds in burnt areas; stick-digging; transplanting; replanting bulbs, corms, rhizomes, taproots, & tubers too small for food; weeding; thinning to aid shade-intolerant species; cultivating forbs, sedges, grasses, & tules for basketry; cultivating shrubs & trees for arrows & weirs; encouraging young growths for trap parts, cordage, rabbit sticks, digging sticks]
- **ecological restoration knowledge sources** [ethnographies & ethnobiologies; historical surveys; elders' memories; present-day remnant vegetation]
- **ecological restoration methodologies** [understanding species' requirements; assessing former ecological importance of species; reintroducing species; reconstructing & reintroducing traditional foraging & harvesting strategies; reconstructing & reintroducing disturbance regimes; restoration & conservation of traditional indigenous cultures]

**|| Hunting & Tracking ||** Use every part, respectfully, knowing that our ancestors became the soil that turned into the plants that fed the animals. Go for a quick, pain-free kill. Do not overhunt. Do not hunt endangered species or pregnant mothers. Think seven generations ahead. Shoot sport hunters. See also: “Field Dressing Animals”.

- **animal anatomy**
- **zoology** [animals' feeding, watering, sleeping, housing & habitat, predators]
- **population dynamics & seasonal hunting**
- **rabbit stick** [selection; hardening; throwing]
- **atlatl & spear throwing** [safety; composition; staff selection; carving; heating; straightening; spearhead knapping; hafting spearheads; gluing, binding, tying; sanding]
- **slings & slingshots**
- **frog gigs**
- **fire-hardening spears**
- **bow-making** [standard v. quickie v. bunch; composition; staff selection; cutting; splitting; curing; preserving backing (summer growth age ring); marking outlines w/ charcoal; thinning w/ drawknife & hatchet; reducing ends (thin-tips for speed, less shock); rasping (handle esp., indented handle for center-fire accuracy); heating; fire- & vice-straightening; backing; oiling; gradual tillering on wood or knee (checking even bend); rasping again; making low-contact arrow shelf; nocking ends at angle; threading & waxing string; stringing; wrap handle for quieter shot; rounding edges; smoothening & sanding; firing]
- **archery** [**stance** – assume perpendicular stance; nock arrow || **draw & aim** – set bow hand; set draw hand hook; raise bow then draw; anchor; align sight & level bow; steady bow || **release & follow-through** – tighten back muscles; relax draw hand to release; keep bow arm up & steady]
- **VietCong crossbow** [carving; stringing; marksmanship; arrows; quivers]
- **arrows** [sight it, roll it, bind it; arrowhead knapping; hafting arrowheads; gluing, binding, fletching, tying; sanding; quiver-making; foreshaft-tailshaft arrows]
- **bow-making tools** [adze, standing vise]
- **firearms or crossbows** [safety; purchasing; composition; dis/assembling; cleaning; ammunition; maintaining, repairing; replacing parts; storing; marksmanship]
- **blowguns** [safety; composition; barrel making; dart making; shooting]
- **tick & flea identification**
- **viruses & disease** [e.g. hantavirus, lyme disease]
- **camouflage philosophy** [shape; shadow; shine; silhouette; surface; sound; smell; movement]
- **camouflage & stealth** [fox-walking; wide-angle vision; ghillie suits, wind walking, scent hiding]
- **lures & calls**
- **tracking & counter-tracking media** [patterning, scat, leftovers, rubbings, tracks, hair, stains, displacement, transfers, compressions, depressions]
- **tracking & counter-tracking objectives** [stride; straddle; speed; direction; aging; ball & heel width; length; crispness; initial & terminal contact points; pitch; mass; depth]
- **tracking & counter-tracking techniques** [quick scan, linear search, round search; tracking pits; tracking stick; sighting stick; silhouetting; shadowing; sideheading]

- **non-human track identification** [toe number; toe placement; toe pad shape; nails; fur; palm pad; heel pad; negative space]
- **human track identification** [shoulder-height broken & bent limbs; hip-level tree scarring; displaced ground objects; mudprints]
- **track patterns** [direct register walks; overstep walks; direct register trots; overstep trots; hops; bounds; lopes; gallops; 2x2 lopes; bipedal hops; bipedal skips]
- **dwelling** [beds; lays; wallows; baths; nests; burrows; dens; cavities]
- **trails** [runs; ridges; tunnels; eskers; water]
- **sign cutting** [natural lines of drift – downward, linear; orientation toward lights; plotting charts]

**|| Knapping ||** One of the oldest human skills. The craft that made the Stone Age.

- **physics** [cone; platform; bi-polar]
- **techniques** [direct percussion; indirect percussion; pressure flaking]
- **safety** [eyes, mouth & fingers]
- **polishing tools** [sand-glued rock, abrasive horsetail patches]
- **knapping tools** [pads, percussion "whackers"; pressure flakers, grinding stones]
- **knapping materials** [flint-like; shell; bone; antler; glass]
- **rock identification**
- **discoidal blade-making**
- **scapular bone saws**
- **flake knife-making**
- **knapped endpoints** [arrowheads, spearheads, drillheads]
- **axehead-making** [celt; hafting]
- **tool crafting** [adze, scraper, knife]
- **blade crafting material** [stone, glass, bone, wood, metal]

**|| Knifework ||** A simple blade can help accomplish most other skills.

- **knife types** [discoidal; hoko; fillet; paring; cleaver; kukri; crafts; crooked; chef's knife]
- **cutting techniques** [stab; slash; chop; carve; dice; batonnet; notch; saw]
- **survival knife criteria** [3/16 in. thickness; full tang; fixed blade; 90° spine for firesteel striking & de-barking; pointed end for fine cuts (feathersticks, filleting, skinning); carbon steel; single-sided]
- **essential knife techniques** [batoning: hit knife w/ baton to make a hatchet or split kindling; feathersticks]
- **sharpening materials** [sandpaper; rocks; pre-made sharpeners (e.g. rod, file)]
- **sharpening process** [fix: dings, edge roll, chips, profiling; de bur or stropping]

**|| Lighting ||** From earthen materials. See also: "Fire".

- **oil lamp in jar**
- **plant wicks** [e.g. mullein pith, cattail seed fluff, rose campion leaf, sedge, burdock, giant ragweed]
- **candles** [e.g. bush pine, tallow; braided wicks]
- **torches** [e.g. cattail head in fat / oil in bamboo; bark torches; suet; tallow; beeswax]

**|| Micro-Livestock ||** Use every part, respectfully. Go for a quick, pain-free kill. Let them live as wild as possible. Think seven generations ahead. Torch factory farms. See also: “Field Dressing Animals”.

- **micro-livestock** [Indian runner & muscovy ducks; pheasant; chickens w/ paddock shift method; rabbits; guinea pigs; pygmy / dwarf goats; Icelandic sheep]
- **livestock basics** [breeds, health / sanitation, feeding, shelter, water, space]
- **slaughter** [sharp, smooth, single-sided knife cuts through jugular vein, carotid artery, & trachea in one fatal incision causing exsanguination that drains blood from brain]
- **beekeeping** [symbiosis w/ plants]

**|| Self-Defense & Security ||** How to protect yourself & your loved ones.

- **situational awareness** [know local laws; wide-angle vision, keeping whole body in sight; recognizing center-of-gravity; eye–hand coordination; target perception & recognition; attack recognition]
- **privacy v. anonymity v. security** [**privacy** – control over one's personal identifying info || **anonymity** – unidentifiable in one's actions || **security** – freedom from risk or danger]
- **security culture** [do not brag of, gossip about, or accuse folks of illegal action; don't speculate on another's interest in illegal action; do not guilt folks into discussing illegal action; do not snitch; “nobody talks, everybody walks”; “never say something you might do”; know people very well before activism / crime; keep info on need-to-know basis]
- **legal concepts** [probable cause; reasonable suspicion; plausible deniability; reasonable doubt]
- **when dealing w/ police** [ask repeatedly if needed, “am I being detained or am I free to go?” & if free to go then simply leave!; remain silent – do not answer questions or make statements w/o a lawyer!!!; refuse all searches, w/o exception; record badge numbers, patrol car numbers; police testimony can \*only\* legally be used against you; police are legally allowed to lie; police must meet arrest & conviction quotas, do not trust them; some states have stop-and-identify laws requiring you to present ID; Constitutional rights still apply at DUI checkpoints; they don't always have to read you your Miranda Rights; you only have to let police into your home w/ a search or arrest warrant; w/o warrant you must only tell them your name, address, & birthdate]
- **security awareness** [“wolf's mind” vulnerability assessment]
- **buddy systems** [presence; signals]
- **deterrence** [posture; tone; becoming the “grey man” who does not stand out]
- **camouflage philosophy** [shape; shadow; shine; silhouette; surface; sound; smell; movement]
- **initiative** [OODA loop cycle (observe-orient-decide-act)]
- **risk assessment** [vulnerability; threats; likelihood; response]
- **CARVER matrix** [criticality, accessibility, recuperability, vulnerability, effect, recognizability]
- **pre-assault common indicators** [take this w/ a grain of salt, do not stereotype groups || gunfighter approach (aggressor's arms & legs move together rather than opposite); quartering off (hands over feet, body at 45° angle); bent knees, hips forward, back straight, shoulders down & back; invasion of space; staredown or furtive glances;

rapid breathing, body shaking esp. knees & non-dominant hand; hands digging around or centered, hands fidgeting w/ face, rubbing hands; clenched fists or pumping hands; rocking up on balls of feet onto toes, pacing; crossed arms at chest; puffed up chest; rehearsal (head nodding or shaking while looking at ground); angry face or squinted eyes; abrupt approach or turning toward; scanning surroundings; eyebrows lowered; teeth clenched; lips narrowed; nose flared; head down; hiding hands or face]

■ **evasion & de-escalation** [doubt; diversion; stalling; redirection; reminding consequences; summoning aid; “throwing the wallet”]

■ **protective clothing** [stopping blades w/ stacked newspaper or glossy magazines]

■ **physiological effects of imminent danger** [Condition Black – loss of fine motor skill; fight, flight, freeze, posture, submit]

■ **unarmed fighting: fitness** [balance; coordination; agility; speed; strength; stamina; flexibility; reflexes || discipline, technique, timing, targeting]

■ **unarmed fighting: fundamentals** [survival mindset; weaponize what comes naturally; improvise weapons & shields whenever possible, fight unarmed only as last resort; basics of nervous system in sheer panic]

■ **unarmed fighting: principles** [S.A.F.E.: Simple Adaptable Fast Effective; decisiveness, practice what ends a fight; strike the exposed & vulnerable targets; focus on gross motor movements & breathing; enhancing instincts; simultaneously attack & defend; momentum; leverage; initiative (surprise & overwhelm); conservation of energy]

■ **unarmed fighting: bodywork** [4 count breathing; know dominant hand, eye, foot; understand center-of-gravity; breathing out during falling & strikes; using bodyweight (e.g. power of lowering bodyweight, swinging opposing arm back during strike); making contact w/ opponent's body when they grab; attacking & blocking angles; body positioning & distancing; closing distance; body rotation; proper turning radius; ambidexterity absorbing & shrugging blows; explosive power; pressure points]

■ **unarmed fighting: stance** [**cautious stance** – arms folded but not crossed || **ready stance** – hands up & open (talk w/ hands), body bladed, chin tucked || **combat stance** – stagger legs shoulder-width apart, slightly forward weight, weight lowered, hips forward; keep hands above assailant's hands at rest position when possible]

■ **unarmed fighting: footwork & angling** [don't cross legs; advancing & retreating; changing angles (if right-handed, rear leg moves right first to move right, forward leg moves left first to move left); attacks of opportunity (e.g. low kicks, strikes to vital targets when grabbed)]

■ **unarmed fighting: defensive techniques** [“the hand fence” & “the invisible fence”, the line past which “it is on”; blocking w/ open hands; blocking w/ elbows & knees; judo falls (forward, backward, left, right); standing up – bladed, one knee up, one arm on knee, one arm behind, rear leg moves]

■ **unarmed fighting: offensive targeting** [disarming, immobilizing, & neutralizing strikes; Larry Jordan's “dirty dozen”; striking knees, neck, face, groin, solar plexus;

■ **unarmed fighting: offensive techniques** [**arms** – squared arm blade; elbow strike; tiger claw / palm strike; jab & cross punches; backfist; hammerfist; rotational ear slap; pronating wristlock; finger jab & rake, throat crush; ax hand; safer strikes than forward punch to not self-injure (e.g. backfists, open palm) || **legs** – knee strike; heel-to-knee kick; foot-to-groin kick; stomp; rotating defensive kicks from back on ground || **combos** – hit chin → hit throat; pull back hair → strike throat; grab blocking hand → palm strike]

temple; knee groin ↔ stomp feet; kick groin → hammerfist back of neck; slap ear → thumb eye → backfist groin]

■ **unarmed fighting: counters** [against rushes – unless evading / tripping, spread legs, lower weight, keep body bladed; counter far rush (heel kick to knee); counter near rush (lower & square arm blade to throat | groin kick & palm strike face); counter close rush (diving arms from in to out w/o thumb to wrap arms → knee groin & stomp feet / knees) || **against wrist & shirt grabs** – counter hand-on-wrist grab (wrist-to-collarbone & extend / rotate wrist & push elbow forward); counter hand-on-wrist + hand-on-elbow grab <same as previous but add bodyweight rotation>; counter shirt grab (pronating wristlock → kick face) || **against bearhugs** – counter rear bearhug above elbows (hammerfist to groin / heel to groin & stomp feet); counter rear bearhug below elbows (hold hands together & push elbows over → pry thumb → rear elbow to face | heel to groin & stomp feet) || **against chokes** – counter collar grab or choke (jujutsu: two-hands on one rotation + elbow to face | krav maga: pull open hands & knee groin, elbow temple | Gracie jiu-jitsu: duck under & ear slap + thumb eye); counter rear headlock (grab choking arm to allow breathing → hammerfist groin); counter rear naked choke (grab choking elbow w/ hands → elbow strike groin | grab choking elbow w/ hands → step behind leg → swivel & drop) || **against pins** – escape from wall (slide instead of push); escape sitting pin on waist (elbows down to prevent knee movement → grab one wrist w/ both hands w/o thumbs → place foot outside their leg on same side → raise hips → roll over → shield face & elbow-strike groin → push off from their knees); escape sideways pin (cross arm over their arms → downward elbow strike to face / crush throat / pierce eye → swivel & post knee or leg to hip); escape rear ground grab (elbow-strike → swivel → kick face); escape sitting pin between legs (grab arms → push legs off hip → raised-hip swivel or push w/ arm from their knee & raised-hip swivel / “the shrimp” → sitting escape: kick groin or face | ear slap); push w/ wrapped legs & hips if full body pinned]

■ **unarmed fighting: practicing** [prior, informed consent at each phase (esp. for triggering actions, e.g. grabs, chokes, pins); have support people for folks triggered by memories of sexual assault, domestic violence, & other violence; partner up, close eyes, people raise hand if they feel unsafe w/ their partner, if so put hands down, open eyes, shuffle, repeat as needed; safe but realistic practice w/ partners; consistency to build muscle memory; keep up heartrate while practicing to simulate combat stress]

■ **improvising shields & weapons** [e.g. dust, belts, chains, metal bottles, keys, pens, bags & purses, coats]

■ **knife-fighting** [stance – chin down; slightly bent knees; slightly crouched; body bladed; even footing || **grip** – hold knife parallel to ground in rear hand or in line w/ 1<sup>st</sup> knuckles in forward hand || **footwork** – small steps; triangles; pivoting away from attack; advancing (rear foot then forward foot); retreating (forward foot then rear foot); “cutting the angle” (swing out rear foot to change angles advantageously) || **objectives** – “blade seeks flesh”; disarm; immobilize; neutralize; all knife hand motions within target range (no sword slashing) || **strategies** – disarming strikes; immobilizing strikes; neutralizing strikes; deployment & engagement distance || **tactics** – constant movement; slicing in & out; slash; stab; check / block; handle strike; trapping; “occupy the line” (attack while retreating); counters: block flesh w/ knife || **angles for stabs & slashes** – horizontal left & right; down diagonal left & right; up diagonal left & right; vertical up & down || **combos**



– slash chains; stab chains; stab->slash, slash->stab; block->stab; block->slash]

■ **stick-fighting** [see above; “stick seeks bone”; 2-stick Eskrima sinawali]

■ **firearms safety** [F.I.N.E.: **F**inger off trigger, **I**dentify target & all behind it, **N**ever point at something you do not intend to destroy, **E**very firearm is always loaded]

■ **gun-fighting** [reloading; cover v. concealment; disarming; getting off the X (learn to sidestep on your draw); MDCR (move, distance, cover, reload)]

■ **shooting [field positions, general]** – prone, sitting, standing; consider target, terrain, time; minimize muscle use, use bone || **breathing** – pause exhale to shoot or shoot after exhale || **slings** – use sling as shooting tool; know how to sling (support side & trigger side) || **natural point of aim (NPOA)** – finding NPOA (sling up → close eyes → relax muscles → breathe in & out → open eyes → if needed, shift body, not elbow → “be the cannon carriage” & “aim from the hip”) || **rifler's cadence** – capable of firing a well-aimed shot ~ each 3 seconds; stay relaxed between shots; teaches shooter to trust NPOA || **accuracy** – rifler can hit 4 inch diameter target group per 100 yards, e.g. 20 in. @ 500 yrd. || **zeroing rifle** – matches rifle's line of sight w/ trajectory; inches, minutes, & clicks procedure]

■ **shooting position: prone** [most stable; lowest exposure; trigger-side leg forward, bent; support-side leg in line w/ spine; shooter at 30° angle to target, elbow under rifle; support leg + spine not parallel w/ barrel; forearm at 45° angle to ground, sling parallel to ground; maintain support elbow position; **11 steady hold factors** (support elbow under rifle; support hand relaxed; sling behind support wrist; sling snug; sling well up on support arm; support side leg in line w/ spine; trigger side leg bent at knee; trigger side elbow planted firmly; trigger hand firm “handshake”; neck extended (“turkey neck”); cheek planted on stock (“cheek weld”))]

■ **shooting position: sitting** [moderate stability; moderate exposure; good for shooting over low obstacles; loop sling configuration; shooter at 30° angle to target, elbow under rifle; legs crossed; elbows in front of & in firm contact w/ knees, absorb recoil; unmoving pivot point (bottom ankle of crossed legs); if needed, tighten legs so feet hold thighs up; to gain height, bring butt closer to ankles or bring knees closer; for windage, scoot butt left / right; **9 steady hold factors** (elbow under rifle; support hand relaxed; sling behind support wrist; sling snug; sling well up on support arm; neck extended (“turkey neck”); cheek planted on stock (“cheek weld”); firm “handshake” grip; trigger finger air-gap (“not dragging wood”))]

■ **shooting position: standing** [least stable; highest exposure; most muscle use; good for shooting over tall obstacles; shooter faces trigger side of target at 90°; feet shoulder width apart; hasty sling configuration (both ends of sling connect to swivels); bring rifle up to face; unmoving pivot point (front foot); move rear foot to pivot; to gain height, bring rear foot back; for windage, move back foot left / right; every 3-4 shots, lower rifle muzzle to rest arms; front sight will wobble over target; keep constant pressure on trigger; squeeze off final bit when sight passes over target; **9 steady hold factors** (elbow under rifle; support hand relaxed; sling behind support wrist; sling snug; sling well up on support arm; neck extended (“turkey neck”); cheek planted on stock (“cheek weld”); firm handshake grip; trigger finger air-gap (“not dragging wood”))]

■ **firearms: nine steps to firing** [if learning, write 9 steps down on trigger-side arm of jacket; 1. **Sight Alignment** (horizontal & vertical) → 2. **Sight Picture** (“6 o'clock hold” on sight for target visibility at far distances; “center of mass hold” in sight for up to 200

yards iron or all scopes) → 3. **Respiratory Pause** (each breath moves sights vertically; fire when exhaled; inhaled breath requires muscle) → 4. **Focus Eye on Front Sight** (aim the rifle, not the target; acquire NPOA) → 5. **Focus Mind on Keeping Front Sight on Target** (repeat “front sight on target” to self while breathing) → 6. **Trigger Squeeze** (firm steady pressure, straight back; hold the trigger back for 1-2 seconds) → 7. **Follow Through** (trigger hold lets bullet pass barrel w/o disturbance; “ride the recoil”; if NPOA on target, recoil settles sights back on target) → 8. **Call the Shot** (take “mental snapshot” of front sight placement when fired; watch for downrange feedback, such as dirt splash) → 9. **Trigger Reset** (guide trigger forward til “click”; keep finger on trigger, maintaining slight pressure) → cycle repeats]

■ **making cut shells for shotguns**

■ **advanced fighting** [third-party defense; fighting multiple attackers; group tactics]

|| **Shelters** || Simple, sustainable shelters from local, natural & reclaimed materials.

■ **location** [sustainability; security; convenience; supply; 5 W's: wood, weather, widow-maker branches, wiggles, water]

■ **design** [site, floor / bed, walls, roof / waterproofing, smoke hole, entrance, racks, doors, fire siting; passive solar heating; insulation; vapor barriers; thermal mass; mold prevention]

■ **primitive shelters** [lean-to; thatched wickiup / wigwam; debris hut; tipi; brush shelter; quinzee; igloo; yurt; snow shelter; scout pit; log cabins; dugout; cave]

■ **tarp shelters** [a-frame; lean-to; pit shelter; overhang; wrapping rock in tarp corner for tying-point]

■ **load-bearing natural materials** [cob; adobe; straw bale; rammed earth; stone; wood]

■ **modern shelters** [sleeping bags; bivouac bags; tents]

■ **furniture & bedding** [rush beds; hammocks; stools; antiseptic plant bedding]

■ **shelter tools** [wood / stone hammer, bone / antler chisel, stone knife; stone axe]

■ **visions of defensibility** [Fujian Tulou; motte-palisade-bailey-keep]

■ **natural weatherproofing** [pine sap, shredded rope bark or grass, finely ground charcoal, face branches downward so water sheds out instead of down]

■ **debris shelter concepts** [make a rake; hand's-width wider than head, shoulders, elbows, hips, knees, ankles, feet; roof & rafters w/ leaves on top; gather away first; crossed poles make drips; compressed leaf bed as high as possible; close the door]

|| **Social Skills – Assemblies, Meetings, Consensus, Dissent, Conflict Resolution, Mediation, Negotiation** || Valuable social skills. Formal tools for those who want them & won't get overly bored. Informal & autonomous practices always have a place too. Let's destroy the myth of the power vacuum! See also: “Communications & Signaling”.

■ **truth-speaking**

■ **dialogue v. debate** [exploring & defining v. converting & refuting]

■ **effective assemblies** [inclusivity; continuity; list “<who> commits to <what> by <when>”; communicating to the absent; clear process; clear roles; appropriate priorities, timing, pace; clear, detailed records & agreements; feedback & review]

■ **agenda prioritizing** [order by necessity; urgency; resources; effort; scale; uniqueness]

■ **agenda organizing methods** [group tallies; committee-by-lot; delegated committee;

facilitator decides; raised hands; control of agenda frames everything so all need input; pre-planned agenda can help folks decide whether or not to attend & what they want to say but also favors more involved participants; preliminary agenda of unfinished tasks]

■ **formal meeting skeleton schedule** [check-in → announcements & schedule → appreciations → report-backs → action items → agenda review → old stuff → new stuff → meeting & process evaluation]

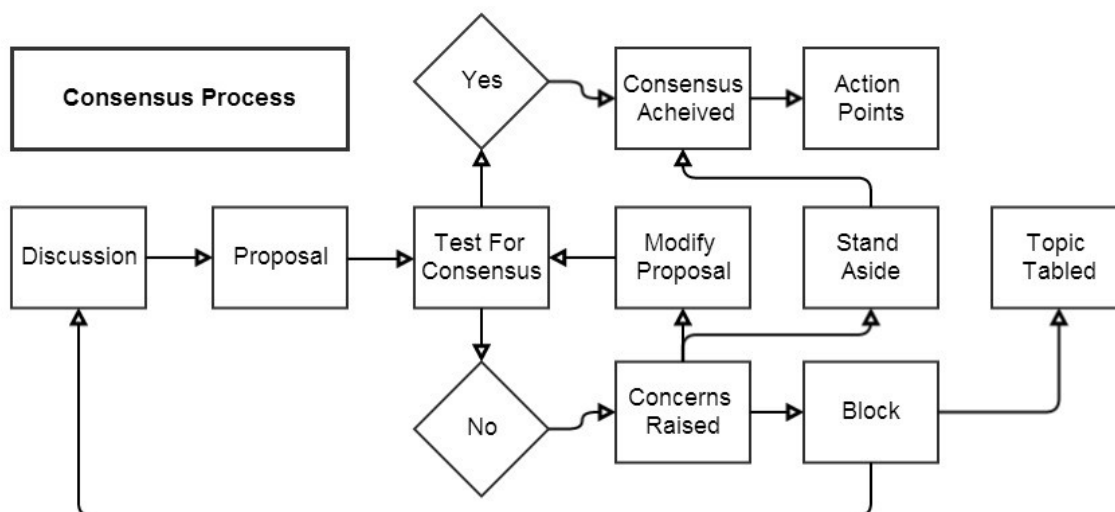
■ **formal meeting best practices** [action reminders; post presenters' names, estimated time, maximum time; ask, “do our meetings alienate potential allies?”]

■ **formal consensus – definition** [decision by approval w/o principled objections; consensus does not mean unanimity (where all people give enthusiastic support)]

■ **formal consensus – traits** [collaboration; absence of principled objections, not total unanimity; dialogue; less efficient process, more efficient implementation; diversity & conflict as assets; collective ratification; sharing information, materials, opportunity; qualitative; universal relevance & authenticity; egalitarian; inclusive; participatory; positive sum]

■ **formal consensus – process, simple version** [frame → inform → discuss → propose → discuss → revise → decide (or block) → implement (or not)]

■ **formal consensus – process, detailed version** [common framework → articulate topic → envision success → ask questions → brainstorm suggestions → identify underlying concerns → collaborative proposal building → summarize & synthesize → check if concerns & stand asides addressed → test for consensus → logistics: who, when, how? | return to discussion | block | table topic]



■ **formal consensus – when to block** [personal v. principled objections; **block proposals that:** go against group goals, values, or principles; conflict w/ individual conscience; hurt group members; alienate group from support base; involve manipulation of process]

■ **formal consensus – when to not act** [if making no decision prioritizes group health; if acting would coerce minorities; if it does not make sense for a group to decide; people can still act autonomously, just don't strongly endanger participants, stakeholders, allies]

■ **formal consensus – dissent levels** [critique; counter-proposal; “I will stand aside b/c a personal objection”; “better than nothing”; “I wouldn't participate”; “I would obstruct”]

■ **formal consensus – requirements** [common goal(s); collectively desirable outcomes; Good Faith; all principled concerns addressed; clear process & transparency; good facilitation; commitment to people & process; sufficient time; accessibility, transparency & accountability; all stakeholders' needs voiced; practice; self-esteem & safety; appropriate group size (or creative process to accommodate largeness); all principled concerns addressed; critical thinking; patience & listening; evaluating ideas rather than insulting or bullying]

■ **formal consensus – speaking tips** [open, direct & concise; step up & step back (give & take space in ways that give everyone a chance); “I statements” & “proposal language”; separate identities from ideas; test assumptions & inferences; use criticism & disagreement constructively; avoid repeating; respond to conflict w/ inquiry; think before you speak, listen before you object; do not invest identity in idea]

■ **formal consensus – hand signals** [add to stack; clarifying question; process issue; fact correction; support; oppose; block; abstain; re-focus; irrelevant point; get to the point; approval; disapproval]

■ **formal consensus – roles to rotate** [facilitator (asks group what they want to do; involved v. uninvolved); stack-keeper (takes stack so people can put hands down; some prioritize by equal access to time for different perspectives, esp. the marginalized); note-taker; vibes-watcher; time-keeper; agenda-writer; devil's advocate (opt.)]

■ **formal consensus – techniques** [pass, abstain, block; friendly amendment; withdrawal; challenge process, dynamic, facilitator; fist of five straw poll; brainstorm; go-around; spectrogram; form committee; brainstorm; fishbowl of interest groups; fishbowl of delegates; tabling; committee formation; extension; divide topics; spectrogram; stack speakers; request proposals; request amendments; presentations; partnering; feelings check; moment of reflection; decompression; interrupting interruptors]

■ **facilitation tools** [tabling items; dividing issues; stacking; requesting proposals; requesting amendments; passing facilitation; add yourself to stack like everyone else]

■ **formal consensus – things to beware of** [grandstanding, bragging, withdrawn apathy, digression; annoyed rushes, exasperated dismissals, provocation, monopolies, emergency authorizations, support-from-impatience, hollow flattery; secret meetings; character assassinations; rumors; marginalizing / oppressive behavior; cliques; bureaucracy &/or rigidity; socialized expectations of who should speak or lead & who should just listen & follow; derailing]

■ **formal consensus – doing it faster** [practice; clear process; clear roles; appropriate priorities, timing, pace; clear, detailed records; clear, written agreements; formal feedback; tolerance & grace]

■ **formal consensus – potential pitfalls** [groupthink; Abilene Paradox (when all sacrifice for the group); conservatism & inaction; too slow; fear of conflict or standing for principles; captive audience]

■ **formal consensus evaluation** [process; behavior; facilitation; energy; logistics; tone]

■ **dissent** [separation by time (“taking turns”); separation by space (“voting with the feet”); withdrawing participation; withholding support; disruption; ridicule; attacking reputation; obstruction; shunning; feuding & pranks; property destruction; violence]

■ **de-escalation techniques** [doubt; diversion; stalling; redirection; reminding consequences; summoning aid]

■ **conflict resolution theories** [punitive, distributive, restorative & transformative]

- **conflict resolution practices** [intervention / mediation; communication for prevention; reintegration]
- **alternative dispute resolution** [**arbitration** – all parties decide to let third-party decide solution || **mediation** – all parties decide to let a third-party facilitate dialogue to help them form their own solution) || **conciliation** – third-party meets all parties separately to achieve concessions & compromises working toward a solution]
- **conflict resolution** [chill sessions; safehouses; decision by game of skill or luck; ad hoc discussion; formal debate; arbitration, mediation, or conciliation by mutually-agreed upon third-parties; arbitration, mediation, or conciliation by community assembly; arbitration, mediation, or conciliation by ad hoc peer council; immediate recall of delegated roles or tasks; banishment; consensual duels; restorative service; counseling & therapy]
- **mediation stages** [agreeing on mediator(s); establishing boundaries; parties detail stories; identifying issues; clarify & detail respective interests & objectives; search for objective criteria; identify options; discuss & analyze solutions; adjust & refine proposed solutions; record agreement w/ witnesses]
- **negotiation principles** [cordiality; grace; charity; reception & integration; suggestion; analysis; non-confrontation; opportunity; patterns before details; watchfulness; strategy; attentiveness to body language]
- **negotiation styles** [accommodating; avoiding; collaborating; competing; compromising]
- **negotiation formats** [adversary v. partner]
- **negotiation positions** [best alternative to a negotiated agreement (BATNA): disclose if offer inferior, but not if offer superior]
- **competitive negotiation tactics** [auction; brinkmanship; bogey; chicken; defence in depth; deadlines; flinch; good guy / bad guy; highball / lowball; the nibble, snow job]

|| **Trapping** || Use every part, respectfully, knowing that our ancestors became the soil that turned into the plants that fed the animals. Go for a quick kill. Do not overtrap. Do not trap endangered species or pregnant mothers. Check your traps as often as possible. Think seven generations ahead. Trap cruel & greedy trappers. See also: "Field Dressing Animals".

- **trapping basics** [placement: hiding scent, camouflage, attraction]
- **trapping methods** [mangle, strangle, dangle, tangle]
- **camouflage philosophy** [shape; shadow; shine; silhouette; surface; sound; smell; movement]
- **zoology** [animals' feeding, watering, sleeping, housing & habitat, predators]
- **population dynamics & seasonal trapping**
- **merciful killing** [e.g. deadfalls & choke snares, no leg-holds; dispatching any still dying w/ quick strike of blunt end of knife to back of skull]
- **small, medium, large game traps** [construction, baiting & placement]
- **bird traps** [construction, baiting & placement]
- **amphibian / reptile traps** [construction, baiting & placement]
- **bug traps** [construction, baiting & placement]
- **"coffee can" & x-cut tin traps** [construction, baiting & placement]
- **snares & spring snares** [foothold & neck]
- **deadfalls** [Paiute; figure-4; McPherson; 1 stick]

- **tick & flea identification**
- **viruses & disease** [e.g. hantavirus, lyme disease]

**|| Travel – Movement, Navigation, Time-Telling, Measuring Distance, Weather Forecasting ||** Lostproof yourself by recognizing natural patterns.

- **conservation of energy** [foxwalking; plainsman's stride / lockstep]
- **resting** [3-5 v. 20 min breaks]
- **mobile decision-making**
- **planning** [routes; rally points; contingency plans; evacuation]
- **group movement**
- **listening breaks**
- **difficult terrain** [slopes; dark / low-light; waterways; swamps; snow; briar]
- **bicycles** [safety; maintenance; repair; trailers]
- **primitive vehicles** [coracles, rafts, canoes; safety; making; steering; maintenance]
- **footcare** [rubbing; powders; absorbing friction]
- **blousing pants**
- **wind direction** [dropping dirt]
- **snowshoes** [making & using]
- **dominant eye & foot tests**
- **natural lateral drift [know whether you naturally drift left or right]**
- **navigation 101** [looking back; predominant object marking; placing standing sticks at turning points (clearing or not on reverse); handrails (following beside long, prominent features to a destination); backstops (prominent feature showing you've passed your destination); baselines (marker showing which direction to return to camp); aiming off (taking a bearing to a prominent landmark w/ a predictable route to destination); blazing (marking turning points w/ bright color)]
- **estimating remaining daylight** [horizon rule of thumb & horizon rule of fists: each hand width between sun & horizon ~ 1 hour]
- **maps** [making & reading]
- **patrol map** [mark walk time between landmarks as you go, naming landmarks]
- **compasses** [making & using]
- **natural navigation** [e.g. moss, birds, winds, trees, snowmelt]
- **sun compasses** [sun rises in the East, sets in the West, travels in southern arc; phases; shadow-tip compass; shadowless-tip compass; watch compass; Ottomani hanging sun compass]
- **moon compasses** [phases; crescent moon line to horizon south; moonrise before sunset shines west, moonrise after midnight shines east]
- **star compasses** [polaris; southern cross; celestial north accurizing shadow tip for latitude, finding magnetic deviation; two-stick at night method up=east, left=north]
- **telestick** [trekking staff used for estimating distances]
- **weather forecasting** [clouds; waterbodies; winds; barometric pressure; humidity; plant / animal behavior]
- **cloud types** [cirrocumulus; altocumulus; cumulonimbus; cumulus; cirrus; cirrostratus; altostratus; nimbostratus; stratocumulus; stratus]
- **weather forecasting via clouds** [clouds moving lower, darker, tighter, differing directions signal storms; cumulus towers indicate possible rain later in the day, cumulus

towers can become cumulonimbus clouds; cumulonimbus developments signal storms; cirrus & altocumulus clouds indicate possible rain within 36 hours; nimbostratus clouds mean imminent rain; "Red sky at night, sailor's delight, red sky in the morning, sailors take warning"; Grey morning = dry day, grey evening = wet night; "Rainbow in the morning, need for a warning"; rainbow in the west indicates possible storm approaching; cloudy night reflects more heat; "When clouds look like black smoke, the wise one puts on a cloak"]

■ **weather forecasting via sun & moon** [shrinking corona around sun or moon means rain within 72 hours; "Circle around the moon, rain or snow soon"; reddish or pale moon means dust]

■ **weather forecasting via wind** [Northern hemisphere: Easterly winds usually indicate approaching storm, Westerly winds usually do not; smoke swirls & sinks in low pressure when rain approaches; wind changing direction can signal a front's passage]

■ **weather forecasting via flora** [oak & maple leaves curl in high humidity, usually preceding rain; pine cone scales stay closed in high humidity, open in dry air; many plants release compost-smell when rain approaches; dry grass at morning means high wind & possible rain, dewy grass at morning means probably won't rain (unreliable if it rained the last night); deciduous trees show their leaf undersides in unusual winds; under humid conditions wood swells & salt clumps]

■ **weather forecasting via fauna** [birds fly low when pressure falls before rain; birds become quiet right before rain; ants sometimes build hills w/ steeper sides before rain & cover the mound hole; bees hover around hives during low pressure; turtles head to higher ground 1-2 days before heavy rain; herd animals usually cluster prior to a storm; if birds feed during a storm it will last awhile]

■ **weather forecasting via bodies** [hair can curl & become frizzy; feeling air pressure difference; feeling pain in bones & joints]

■ **natural temperature reading** [if temp. over 40°F: cricket chirps per 14 seconds + 40 = temp. in °F +/- 2]

|| **Water** || Fresh water and industrial purification will become increasingly scarce. See also: Food & Water Storage.

■ **hydrological cycle** [evaporation/condensation; precipitation; interception; infiltration; percolation; transpiration; runoff; storage (atmosphere, surface, ground; advection)]

■ **water use basics** [drink high, wash low, pee away]

■ **ideal water** [source; clear; fast; upstream; no animal carcasses / feces]

■ **contaminants** [turbidity; chemicals; heavy metals; bacteria; protozoa; viruses]

■ **aeration**

■ **fluid retention** [cool; shade; contact; digestion; nasal breathing; sipping]

■ **rainwater catching** [sizing; timing; roofing; downspouts; delivery systems; foul flushes]

■ **rainwater storing** [sizing; cisterns; barrels; bungholes; bulkheads; freeze mitigation]

■ **solar disinfection**

■ **distillation & solar stills** [cloche solar still; panel solar still]

■ **dew catching & fog netting**

■ **swales & ponds**

■ **particle filtration** [slow & rapid sand filters; cloth filtration in lashed tripods]

- **seepage basin**
- **[activated] charcoal filters**
- **earth filter** [sand - grass - charcoal - rock - corded birch bark funnel]
- **portable filter use** [e.g. Katadyn portable filter, Aquamira Frontier Emergency Filter]
- **stationary filter use** [e.g. Big Berkey water filter]
- **chemical treatment** [chlorine; bleach; iodine; potassium permanganate]
- **boiling** [hot rock v. flame]
- **in-ground clay basin for boiling w/ hot rocks**
- **transpiration bags**
- **water-possessing plants** [e.g. grapevine; plugging in dripper stick]
- **water witching** [rural & wild]
- **primitive well digging**
- **wastewater recycling** [greywater; blackwater; wetlands]

\* \* \*

### **PART III: HOW TO USE THE SKILLS LIST**

Keep the list accessible, stapled or folded. Take stock of what you already know, and any relevant skill-sharing or supplies you can access. Mark in at least two different ways: one for things you know as concepts or through witnessing, and one for things you know through your own practice. Classify skills for personal relevance, accessibility of locations or materials, and effort required. Highlight or underline the easiest-with-the-highest-impact. Start with “Empowerment”, then rank by immediacy to survival.

If you have a small group (or even a pair) of like-minded folks, divide the skills into "things everyone should know" and "things at least one should know for now". From there, divvy it up and practice. Once people become competent they should teach others, as specialization breeds dependency and fragility. You do not need to know every little thing, but everyone should know the basics. Start with the least in each area, make a routine, and practice often. Practicing in pairs or small groups will help make the learning fun and reliable. Start a local skill-sharing group if possible. It takes time, support, and humility. We learn most from failures before we become competent. Enjoy!

\* \* \*

### **PART IV: HOW TO TALK TO LOVED ONES ABOUT HARD TOPICS**

Make sure you've processed the information yourself first, and remember how you reacted when you first learned of it. Do a lot of reading beforehand and get your hands dirty trying out some of the skills. Decide whether you want to just explain your views, or actually persuade someone to believe as you do. The explain-and-define approach comes across as less confrontational, often preferable for loved ones. Measure success by if the other person can explain with accuracy what you would think on a given topic.

Either way, rehearse the key points of what you want to say, no more “errr”, “ummm”, “I



guess”, “I mean”, “like”. Speak with confidence! Yelling and interruption rarely prove useful for dialogue between trusting parties. Make sure to listen with humility and acknowledge where you need to grow in your own thinking. Loved ones respect when you listen. Showing fair-mindedness promotes them doing the same.

Talk to the most open-minded ones first so you can have reliable support for future discussions with others. Choose the right time, when they already feel more receptive, such as when current or local events tie in. Make sure the setting supports focus and has adequate comfort and privacy for them to feel comfortable opening up. Try to cut out the technical jargon as a gesture of good faith communication.

Decide, how much to focus on advocating beliefs and values? How much to focus on advocating hobbies? How much to focus on the obstacles and calamities we face? How much to focus on the pathways and opportunities we may pursue? This applies to not only how you discuss hard topics with loved ones, but your personal habits or general outlook as well.

Many people you want to talk to will live a comfortable First World lifestyle with identities built on denial. They will reject a lot of this as irrationality, paranoia, “just a phase”, non-conformity for its own sake, or even mental illness. Develop memorable responses for each of those. Use the empowerment & social skills sections to frame your thoughts to address important needs: physical, social, psychological, spiritual. Many will go through “just a phase” of denial, and can only reduce their cognitive dissonance gradually.

Many people raised by the dominant culture, socialized to see rewilding as “gross”, “dirty”, “unclean”, will have a visceral reaction of disgust. Part of the transformation you will need to promote involves overcoming shame, fear, hate, and certain desires to control or destroy. This applies to everything from our bodily fluids, to “dirt”, “weeds”, “pests”, and wildness in general. These feelings come from a cultural upbringing based on disconnection and repression, part of the civilized worldview annihilating the biosphere. Navigate this vital task with care, and consider ahead of time when to make concessions and when to make a firm stand.

Another visceral reaction you will face involves sentiments associated with “survivalism” and “prepping”. That includes everything from dismissals of preparedness as paranoia and selfishness, to disagreements about faith in authority structures, to insecurities with the potential for uncertainty and instability, to perceived irrationality and wastefulness. Emphasize that short-term disasters and long-term emergencies have happened throughout history. Even in First World countries. Frame it as skepticism of modern structures’ resilience, pointing to local and current examples. Avoid one tragedy above all: convincing loved ones on the possibility of breakdown but allowing them to think during an emergency they can just rely on you. Do what it takes to avoid situations of scarcity and conflict between you and your loved ones during the hard times ahead.

You can frame the future as a “transition”, as a “crash” or “collapse”, as a “revolution”, even as an “apocalypse”. In reality, the long emergency we face – Peak Everything –

will have elements of each. Some diverse case studies for various purposes include: the fall of the Western Roman Empire (313-476), the decline of the Byzantine Empire (602-1204), the Mongol invasions of China (1205-1279), the European colonization of the Americas & its mass deaths (1492-ongoing), the Easter Island collapse (1600s-1860s), the Year Without a Summer (1816), the Spanish flu pandemic that killed 50-100 million (1918), hyperinflation in the Weimar Republic (1921-24), the Battle of Stalingrad (1942-43), the Sobibór death camp uprising (1943), the collapse of the Iq people (1958-ongoing), the dissolution of the Soviet Union (1985-91), the Cuban Special Period (1991-98), the Siege of Sarajevo (1992-96), New Orleans after Hurricane Katrina (2005), the Arab Spring Uprisings (2010-ongoing), and Typhoon Haiyan (2013).

Every culture has a history of self-reliance you can appeal to. Remind your loved ones that had their ancestors remained passive, they would not have weathered the storms of the past. If you can not convince them of a widespread, long-term, dramatic change, instead appeal to responsible risk-management for local, short-term, routine disruptions. Maybe they can not conceive of the impact of climate change. Or solar flares, magnetic pole shifts, or asteroid impacts. So point out examples of proactive adaptation they already take for granted, such as insurance. Practicing earthskills or prepping can resemble “buckling up your seat-belt in case of a crash”.

Assure them you do not prepare for a zombie apocalypse, evil robot takeover, or alien invaders. Remind them of the many dire ecological issues presented in Part I. Since 863 million people on Earth already live in slums, dispossession should not seem improbable. Cite the many threats people around the world have already had to experience and adapt for:

- **economic disruption** (e.g. debt, unemployment, inflation, austerity, strike, bankruptcy, foreclosure, confiscation, bank failure, embargo, bubble, fuel shortage, depression)
- **epidemics** (e.g. bubonic plague, cholera, dengue fever, ebola, hepatitis, HIV, influenza, malaria, measles, meningitis, mumps, polio, SARS, smallpox, typhoid, typhus, yellow fever)
- **famines** (maldistribution, crop failure, livestock disease, pollinator die off)
- **industrial accidents** (e.g. contamination, nuclear leaks & meltdowns)
- **infrastructure failures** (e.g. airports & seaports, bridges, clean water, dams & dikes & levees, Earth-monitoring & measurement networks, electrical grid, factories, natural gas & oil pipelines, railways & roads, satellites & telecommunications, sewage & waste disposal; shipping & trucking)
- **natural disasters** (e.g. droughts, dust storms & tornadoes, earthquakes, floods & tsunamis, hailstorms & blizzards, heatwaves & wildfires, hurricanes, mudslides & avalanches, volcanic eruptions)
- **social unrest** (e.g. violent crime, persecution, riot, uprising, quarantine, internment, mass evacuations, martial law, disarmament, civil war, invasion, revolution, nuclear & biological & chemical war).

But Rewilding must not come just from a place of fear of future cataclysm. For millenia people have taken pleasure in handcrafts, hiking, camping, and foraging. Seize the

opportunity for better relations, for better worlds. We have ahead of us an adventure both dangerous and dramatic, both miserable and meaningful. A whole world to fight for.

In the words of Paul Shepard, "Why should we tolerate a diet of weak poisons, a home in insipid surroundings, a circle of acquaintances who are not quite our enemies, the noise of motors with just enough relief to prevent insanity? Who would want to live in a world which is just not quite fatal?" Wildness will rise again. Eco-defense means self-defense. The longer we wait, the harder it gets.

Forward, to the ruins!

