

# SURVIVAL PAPER

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### **MAY THE CIRCLE BE UNBROKEN** Experiences with Passive Agriculture

Christopher Nyerges

One day I was in a wild section of Pasadena's Arroyo Seco collecting pencil-thick willow twigs for craft projects. I'd collected wood in this area for several years, and now I had moved a bit south from where I'd done my heaviest collecting. I had been in this completely wild area for about an hour, removing all the dead branches, and pruning away the many twigs and branches that rubbed against each other or were otherwise too thick. That was my typical procedure before collecting twigs that I was going to use. This day, I noticed that a man had walked along the trail, and appeared to be hiding behind a tree across the river. He was very obvious to me, but I think he really thought I didn't see him. After awhile, I simply called to him, said hello, and inviting him to come on over. He was young Indian man who told me he was the "caretaker" for this area, appointed by the local chief. He then went on to say that his job was to protect the land from people like me who ruin it by all their careless cutting and damage. After he explained to me that I was the problem, I showed him that I had only been removing dead wood, and doing careful pruning. He then went on to say that he was there to collect some willow shoots for a pipe he was making, and he didn't think he'd find any good wood there because people like me ruined the trees. I smiled, and told him that the reason there was no good shoots in that specific area was not because I was there, but because I had not been there in the last few seasons. This got his attention. I said that if he wanted good willow shoots, follow me and I'd take him to where I'd already done intensive pruning the last two years. We walked upstream, and there were very healthy willow trees, well-pruned, and plenty of the shoots he was seeking. He took what he needed, and I told him that – in the old days – when people pruned regularly, the plants were much healthier and produced more usable shoots year-round. I told him that I wasn't the problem – that I was on his side— and that such intensive use, done carefully and scientifically, is clearly a benefit to the forest.

Many times we jump to conclusions when we don't have all the facts. We also reach false conclusions about these matters when we ask the wrong questions.

A reporter asked me whether or not the collection and use of wild foods is truly a viable activity in and around urban areas. "Would there really be enough food if everyone tried to simply live off the land today?" he asked with sincerity. Such a question implies that the only reason to learn about wild foods is so you can make a meal if and when you happen to survive a massive catastrophe which wipes out stores and the transportation system. Nevertheless, if a major disaster should occur in the Southern California areas where I conduct my classes, the answer to the reporter's question is No, there is not enough food growing wild here – with all the paved-over highways and homes – to support such a massive population for much more than a few days – if that. This is a theoretical answer – the majority of urban dwellers are not likely to know what to eat and not eat from the wild. Furthermore, since many regard "eating weeds" as a fate worse than death, they'd not likely resort to eating from the wild unless they really were close to death.

Southern California is an ecological anomaly. There are so many people packed in so little space that there is insufficient local water supplies to deal with the needs of these people. This is why at least 85% of the water needs of Southern California come from hundreds of miles away.

Sometimes, this point leads us to a discussion of over-population which drives all other ecological crises. But generally, when discussing such topics with reporters, I attempt to steer the conversation into more practical here-and-now topics.

For example, there need not be an 8.0 earthquake, or a major flood, or widespread blackouts, in order to find reasons to learn about the benefits of wild plants.

According to data from the FDA, the nutritional content of most of the "common wild edibles" far exceeds that of the common domestic vegetables. This information can be found in Analysis of Food, published by the FDA.

Some examples of the great nutritional value of wild foods: purslane is the richest plant source of Omega 3 fatty acids. Dandelions are the richest source of beta carotene (more than carrots, pound for pound). Curly dock, regarded as an agricultural pest, is one of the richest sources of vitamin A. Lambs quarters – the leaves and seeds – is a rich source of vitamins and minerals. When you consume the greens, it is as if you are eating a natural "mineral tablet." Carob pods, common on Southern California streets, are about three times richer in calcium than the equivalent amount of milk. Chickweed – the bane of gardeners, including Martha Stewart who suggests you rid it from your garden as soon as you see it – is actually a vitamin C rich leaf which is delicious in salads. These are just a few examples!

Then there is the freshness factor. Even if you go to the most expensive health food stores, you cannot get food as fresh as you would if you picked it yourself in your own backyard wild food patch.

Not only that, quite a few people are amazed how flavorful and delicious a wild food salad can be. Commercially farm-grown food seems to have lost more and more of its flavor as the "scientists" seem more concerned about developing commercial crops that resist bugs and can be transported without bruising. Nutrition and flavor have taken a back seat to these more pragmatic concerns of the "food industry."

If these were not enough good reasons to learn about wild foods, there is also the good feeling that comes with knowing you are just a little bit more self-reliant. I began my own

pursuit of ethno-botany when I wanted to reduce the weight of the food in my backpack, and simultaneously wanted to experience first-hand how generations of people lived in past centuries. I could not help but smiling when I ate wild food meals, knowing that I "ate for free," and that the nutritional content was really higher than anything in the local supermarket.

The reporter's question reminded me of another question: How is it that a white man would starve by eating only rabbit, but that an Indian would not? The answer lies in how each ate the rabbit, since the Indian ate everything (except the pelt).

The same applies to whether or not there is sufficient wild food (and backyard food, for that matter) to feed everyone in the city. IF we plan to have food, and IF we know how to improve the soil, everyone in the city could certainly provide some of their food, all the time.

This means you plant fruit trees, not exotic ornamentals. This means you don't pave everything over. This means you forego the pointless front lawn for a combination vegetable, herb, and wild food garden. This means you quit tossing away all your kitchen and yard scraps, and begin making compost so you're constantly improving your own soil. It means you learn about wild foods, and you treat them not as "weeds" but as the valuable plants they are.

In Extreme Simplicity: Homesteading in the City (written by myself and Dolores Lynn Nyerges), we share our experiences over many years where we carefully harvested wild foods from the same areas. This was during a time when we went to several local farmers markets and sold bags of wild greens. We began our harvesting in April, and picked several gallons of wild greens several times a week. We never uprooted plants, but only pinched off leaves from the tops of the plants.

In this manner, we collected lamb's quarter, mallow, chickweed, nasturtium, miners lettuce, New Zealand spinach, tradescantia, hedge mustard, common mustard, and prickly pear cactus pads. We observed that all these plants did not die back as early in the season as did the same plants in adjacent wild areas. Each time we picked and pinched back these annual plants, we observed new growth. Where there had been one stem, there would be two, three, or five new stems now growing up. This means that we extended the life of these plants up to three months longer than had they simply been left alone.

So we extended the useful life of all the above annuals. In the case of the perennials -- the cactus, the New Zealand spinach, and the tradescantia -- they continued to produce tender new "spring growth" well into late summer. We were finding young cactus growth nearly-year-round, rather than only in the spring, as was normal.

At the very least, we learned from this experience that one can get four to five times the amount of food in a given plot of land by carefully collecting the plants, and never uprooting. An added bonus was that most of the plants so pinched-back also produced more seed than their totally wild counterparts.

#### PASSIVE AGRICULTURE

I've long heard of the land management methods of Native Americans, mostly by means of burning areas of land. When grass and oaklands were burned, for example, lower deadgrowth would be removed, there'd be a layer of ash-fertilizer on the ground, and harmful insects would be eliminated.

In the early 1990s, I was producing craft items from willow sticks and other woods, which required hundreds of pencil-thin pieces of willow every week. I would go into wild areas – areas where there was no irrigation, and areas which were overgrown and untended – and carefully prune these willows and other trees to produce my needed craft supplies. By the first season, I'd pretty much "staked out" all the local wild areas where I knew I could go and harvest. But I didn't just go and take. I went to these area with good tools, and I would carefully bring health back to these little patches of willow (or other native shrubs and trees). I began by removing all the dead wood. And being a trained tree-pruner, I could not just prune the twigs I needed. I could not resist doing some proper pruning --- I removed branches that were rubbing, or thinned out sections where there were too many branches for them all to do well, and I removed downward-growing branched.

Even though no one else went into these areas, my "regular" trees all started to look healthier and begin to put out new growth. With the dead wood removed, and the trees pruned, they began to receive more sun. I trampled down the dead branches and pruned branches as mulch for the trees. Sometimes, ground squirrels took those prunings and built nearby nests.

By the second season, I noticed that the best "new growth" was occurring on the trees I'd just pruned, NOT in the wholly wild areas.

A professional tree pruner told me that there is a scientific reason for this, that when a tree is cut, it sends out chemicals to that area to stimulate growth as a direct response to the cut. He didn't recall the name of that chemical, but he told me that the tree was saying "Alert! Limb under attack! Send reinforcements." He told me that this is why pruned trees can be so much more productive than wild trees, and this is precisely what was happening with the Native American's use of Passive Agriculture methods – even though they were mainly using fire.

I'd pruned so many hundreds of trees in my craft work that certain isolated areas actually began to look park-like, and were consistently the areas where the best new growth appeared.

I learned of these passive agricultural methods by studying how Native Americans used fire (and other methods) in their land management of Southern California. I have also experienced first-hand that precise and selective pruning and plant collection absolutely results in a greater yield for the fruits of the land. That I had the opportunity to share my learning and personal experiences to a modern Native American gave me great inner joy. This was my way to close the great circle of human experience, and to make a new friend.

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