



A PAUSE FOR THOUGHT

A DEVELOPING GATHERING ETHIC

By Steven Edholm & Tamara Wilder c)1998

A few years ago, we were gathering along the roadside when a woman who was driving by stopped to tell us that we had no right to "steal" nature from everyone else. We tried to explain to her that we were only selectively cutting a few fern fronds out of a very healthy densely growing patch and that we were not making a negative impact on the area, but she refused to listen. The possibility that we could utilize nature without destroying it was unacceptable to her and as she drove down her long driveway to her huge house made of redwood, situated where countless numbers of ferns had been decimated so that it could be built, we couldn't help but laugh cynically at the irony of the situation.

There has arisen an imagined separation between people and nature, one which often leads to a desire to isolate the natural world so that our bad habit of destroying things can't touch it. With wild areas of land being continually diminished by our ever encroaching development and population, it isn't surprising that people are fearful of wildcrafters or other people attempting to live with the natural world, instead of separate from it. Since very little in the modern economy is done sustainably, it's often hard for people to realize that it is possible to gather what you need in a manner which guarantees that the resource will be there in the future.

In order to promote better understanding, it's helpful to clarify and define the basic ideas of sustainably utilizing a wild resource-especially true when introducing others into the world of wildcrafting. Everyone's values and experiences are most certainly not the same, but we can still find some common denominators; wherein, instead of viewing the natural world as a possession to mindlessly consume, we can earn our rightful place in it by respectfully protecting and utilizing that which we need and want.

We don't intend to write this as a do's and don't's of harvesting (although it's likely to end up reading that way), but rather as a group of ideas which bring into consideration the many factors at play in developing a harvesting ethic. In the end, no one makes your choices for you. It's up to each of us to develop our

own values, to acquire the requisite knowledge to harvest sustainably, and then to apply that knowledge to the different situations which we encounter. We are more or less assuming that sustainability is a common denominator that benefits all, and if you can't agree with that, do the rest of us a favor and go jump off a bridge.

The basic core idea of sustainable wildcrafting is that you must leave more than enough for the plant to easily reproduce and grow. Since we are not the only factor that can affect a plant's life, the remaining population must be left in good condition to sustain further impacts. A secondary concept, having to do with aesthetics and the modern world, would

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From ABO ETHICS" by Alice Tulloch as seen in BPT #7

... Sometimes the influences of that consumptive and rushed lifestyle overshadow the lessons of the old ones. We need to take time to step back and regain our perspective on life's meaning, on how our conduct in primitive activities reflects our understanding of the deeper lessons of the ages.

In each skill we learn, there seems to be an element of right behavior... Those who collect plant materials also need to consider the consequences of their actions. Collecting rare or endangered species is unconscionable and prohibited. Loss of habitat and the pressure of range animals is continuing to deplete these plant populations.

Even the collecting of common plants may involve ethical questions. Many use food, tool and basketry plants survive on private property where laws of trespass apply. Obtain permission to enter such lands. Many primitives are chagrined to have to obtain permits for collecting on public lands, but these permits are a response to abuses that have occurred. It is reported that on the Klamath River drainage, a floral supply company, with a permit for a small amount of beargrass leaves, removed truck loads of whole bear-grass plants for exports. Due to the outcry of the local basket weavers who have struggled for years to protect this important traditional basket material, the company has now been denied access to many of the northern California national forests.

Another aspect of plant material collecting is respecting someone's territory, even on public lands. It is still common practice among many native people to cultivate certain plants year after year to encourage quality materials. Newcomers may not be aware of the effort, and unknowingly or uncaringly take the prime materials cultivated by others. Each person needs to develop his own sites, or ask permission of the cultivator.

be to make your impact barely noticeable to the casual observer and, where possible, improve the overall scene.

In today's modern world, we have more factors to consider than our ancestors did. With the encroachment of our human population, wildlands are constantly being adversely affected by loss of space, competition with introduced non-native species, development, pollution, toxic contamination, and loss of water tables; therefore, we need to take these factors into consideration before we do what would be sustainable under other circumstances. If we're not mindful, we could strike the final blow to a species on the verge of collapse. If our activity proves to be detrimental, then we need to be prepared to make the choice to do without so that the balance can survive. In addition, we can try to help these struggling plants and animals out. Lending a hand can range from tearing out competitive invaders to trying to keep toxic pollution and development at bay. Whatever it is, every little bit helps.

Managing the natural world is not a new concept. Aboriginal peoples worldwide have long manipulated and altered their surroundings to make them more fruitful and comfortable. The ability to drastically alter our environment is one of the qualities which makes us human. Annual burning, pruning and coppicing, transplanting desired plants closer to living centers, discouraging pests, encouraging certain species, etc., are all widespread practices that have altered ecosystems in ways which have now been mostly forgotten. In some instances, we can actually play an important role in that balance. After all, we have always been a part of the natural world and our presence has certainly caused species to adapt around us. It is when we try to change our role of participant/caretaker to master that we begin to lose the understanding of how to sustainably reap the bounty that is offered to us.

Another factor to consider in the modern world is legal restrictions. If private property is respected, permission is asked, and things are left "better" than when they were found, the chances of people being helpful are greatly increased. State and National Parks and wildlife preserves have been established to protect wild plants and animals and even though we may disagree with the "no human interaction" policies, we can still recognize and respect the role they are playing in safekeeping important areas of land. Recreation areas are often so highly impacted by the immense number of people streaming through them that gathering in such areas may be detrimental and/or illegal. Many plants are also protected and even harvesting them in an "appropriate" manner may be against the law.

Roadsides can offer the modern forager an ideal place for gathering. The plants are going to be cut down anyway to keep the road clear, this cutting often stimulates lots of usable growth, and they are easily accessible. Just keep in mind that roadways are often sprayed with toxic herbicides and

that the runoff from the roadway is probably toxic in itself. Also, gathering in such locations may be illegal; so, watch out for the willow police.

Basic Concepts

When harvesting any plant material, rate of growth, population density, and reproduction patterns are the main concepts to keep in mind. The impact of harvesting on the general area also needs to be considered. The ability to work within the natural order, and therefore be able to continue harvesting in the future, depends on an understanding of what the plant likes, its role in the local ecosystem, what hardships it can easily overcome, and what might be deadly to it. As one accumulates more knowledge and experience, these decisions become more natural and intuitive.

Plants are divided into different groups based upon their growth and reproduction habits. Words like perennial, biennial, and annual describe the lifespan of a plant. Perennials have a life cycle of more than two years, biennials develop their roots and leaves the first year and their fruit and flowers the second, and annuals only live for one year. These classifications are not always set in stone and good or bad conditions can either shorten or lengthen the normal lifespan and reproduction pattern of a plant. Perennials can be either short or long lived and the difference may be one of many years. The terms deciduous and evergreen tell you whether or not a tree or shrub drops their leaves in the winter. All of these distinctions effect decisions on how and when to best gather the various parts of plants.

It's not uncommon to encounter competitive introduced species. While it might be desirable to eradicate many of them from the area, some are relatively non-invasive and/or so entrenched in the ecosystem that we may want to leave them.

Roots, Bulbs, Corms and Rhizomes



When digging bulbs, corms, rhizomes, and taproots, the individual plants are often killed. If the area is densely populated with a certain species then more can be harvested than if there are only sparse patches. Dense populations indicate

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that the species is well adapted to grow in that spot and can probably match fairly heavy harvesting, while sparse patches indicate that the species is having difficulty and heavy harvesting might set it back permanently. Rare single plants or any members of a rare/endangered species should obviously not be dug at all.

Even if an area can easily sustain heavy harvesting, the quantity and pattern of harvesting both need to be considered.

There are various rules to this idea. Some say that only 2 for every 10 should be taken or something along those lines. Other times it's to take 3 or 4 from every square foot. The actual numbers need to be adapted to each situation, but the basic idea is to thin out the thickly growing plants instead of completely decimating a single small area. Also, using a digging stick instead of a shovel is gentler on the landscape since, in ideal conditions, the tip of the stick slides right next to the root of the selected plant and allows it to be easily pulled up without disturbing the surrounding area too much.

The growth patterns of some species encourage a different approach. For instance, in digging sedge root for basketry, a selected area in a healthy patch is dug thoroughly and every suitable root down to 6 or 8 inches is removed. The sedge plants are then replanted and new roots grow very quickly, happily spreading through the freshly aerated soil; however, this technique should only be practiced in the late winter or spring when the plant is ready to start new growth and the soil is wet enough to encourage it.

Many bulbs and corms actually appreciate the aeration that digging gives the soil, and the whole patch may even stay healthier when kept from choking itself out. In some species, small bulbets break off during digging and quickly take off in the stirred up soil which has been freed from competitive roots. If they don't break off on their own, it's quick and easy to snap them off, drop them back into the hole, and cover them with soil. Along similar lines, if the plant has a ripe seed head, the seeds can be sprinkled back in the hole (they don't like to be buried in the bottom of a foot deep trench though, but rather just under the surface).

In the case of digging roots from trees or shrubs, pieces of roots or whole single roots can usually be cut without much

problem, but if too many are taken, the tree or shrub might not be able to recuperate itself. Most trees and shrubs have extensive root systems which grow well down beyond our reach, but those closest to the surface are the most active feeder roots and taking too many of them might be detrimental. Instead of taking all the roots from one tree or shrub, take some from one and some from another. Also, cuts which are made cleanly heal more

easily. Long rips and tears are both harder to heal and more prone to infection than clean small cuts. Replacing the soil or duff is also important so that the exposed roots aren't left to dry out.

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Leaves and Buds



Photosynthesizing leaves are a plant's source of energy; if all of them are removed it will have a difficult time of it. Generally, there are so many leaves on a tree that it is quite easy to get enough for most purposes without leaving a bare spot. In shrubs and trees or perennial and biennial herbs, the energy collected by the leaves is stored in the roots for the winter. In the spring, this stored energy emerges as buds and new growth. While many trees can overcome these new buds being destroyed by frost or eaten by insects or other animals, it's still best not to strip whole branches. Removing some buds is no problem so browsing selectively instead of grazing extensively in one spot is the best approach.

The young leaves of perennial herbs are often the most desirable for spring greens, and can usually be picked rather hard. Even so, try to take a few prime leaves from each plant

Rootstock Defined:



1. **corms** - solid bulb-like part of the stem, with dry papery leaf bases



2. **rhizomes** - underground stem. Distinguished from root by nodes, buds, or leaf scales



3. **bulbs** - thickened part made up of scales or plates.



4. **tubers** - a swollen underground stem tip, short congested part.

in the patch instead of taking all from one. Annuals, on the other hand, don't have large energy stores and are more dependent on the energy they are getting from their young leaves; therefore, they cannot be picked as heavily when young and be expected to live through such a trauma.

Flower Stalks and Flowers



Many flowering stalks are produced near the end of the plants growth cycle. Annuals and biennials will subsequently die while perennials will subsequently go dormant. If the stalks are harvested after the seeds have formed and dispersed and the plant has died or gone dormant, they can all be cut without a problem because the plant has already accomplished it's reproductive goal. Annuals and biennials depend solely on their seeds while perennials often reproduce through their roots, bulblets, or underground runners. When harvesting the flowers of annuals, the thinning out idea applies and taking too many from one area should be avoided. Some species, if harvested early enough, will produce either another stalk or more flowering side shoots before the season is finished.

Shoots and Withes (Nascent Growth)

Shoots and withes are the result of a tree or shrub's nascent growth, that's the fast, straight, non branching single years growth usually produced in response to the plant being damaged in some way. This type of growth is perfect for basketry, arrows, hand drills, and the like. Some shrubs create a lot of nascent shoots while others don't produce any at all and simply die if severely damaged. Many of the trees and shrubs which produce a lot of nascent growth are found along waterways and are already naturally adapted to being battered each winter. These can take very heavy cutting. To find lots of nascent growth, look in areas hit hard by some "disaster" such as fire, flooding, or clearcutting in the past few years to find a plethora of good shoots. In times of old when and where burning was practiced regularly, nascent growth was exceedingly abundant.

Coppicing is the practice of heavily cutting back a shrub which will readily stump sprout to create a proliferation of shoots for harvesting in the following years. The frequency of

coppicing depends on what size of growth you wish to harvest. In domestic plants, the length of time can range from 1 to 20 years. For smaller flexible withes like those used in basketry, plants are coppiced year after year; each cutting sets the plant up to grow another batch of shoots the next year. Keep this in mind before harvesting from a newly found perfectly maintained patch of basketry material somewhere. The person who cares for it is probably planning to return. Cutting back each year is essentially keeping the shrub from continuing its normal life cycle of growing larger and reproducing, but other than that is not usually detrimental if done selectively and, in some cases, may actually lengthen the plants life. Some plants don't react positively to continuous annual coppicing; so you may have to research, experiment, and observe to find out if its one of those that can handle it. In the wild, you can usually find naturally occurring nascent growth if you roam far and wide enough, encourage more by cutting it, and then plan to return in subsequent years.

Coppicing and other severe cutting are best done either in the spring just as the sap is rising (at which time the bark peels) or in late fall or winter when the plant is dormant (at which time the bark sticks). Clean cuts allow the plant to heal itself easily. Making a cut right above a bud encourages faster healing and helps keep infection from setting in.

Branches and Trees

Trees and Shrubs

trees - perennial woody plant with a single trunk from its base.

shrubs - a woody plant with multiple trunks from the base

When cutting larger branches, a thoughtful selective pruning job which leaves the tree in a balanced state is the ideal. Taking two or three main branches from one side is not very nice and leaves the tree with a lot to replace and heal.

When cutting off the ends of smaller branches it is helpful to the tree to cut back to a point where a branch emerges. In this way, the cut which the tree has to heal is located in a path already well traveled by the plants sap.

The area around where a branch emerges from a trunk is called meristematic tissue. This tissue has evolved to heal over dead or broken branches without letting rot into the rest of the tree. If you cleanly cut a branch right at the edge of this tissue, the chances of the tree successfully healing are that much better. Oak trees show this phenomenon very well. Look at one and note how the meristematic tissue forms an enclosing burl around a dead branch. Cutting extremely large or main branches often leaves too much for the tissue to heal over before rot sets in.

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if an entire tree is to be taken, it can sometimes be thinned out of an already crowded situation. Often, one can be found which is losing the battle for light and is on it's way out. Trees which grow along waterways frequently fall over and provide a good opportunity for the easy acquisition of a whole tree. When selecting a live tree for felling, rate of growth is an important consideration. Some species grow exceptionally quickly while others may take centuries to achieve any size, and more importantly, to reach bearing age and begin reproduction.

Trees are the regulating force of the forests as the density of their cover dictates what can or can't grow beneath them. Therefore, the removal of large numbers of trees can have drastic (although not always negative) effects on the area.

Lichens

Lichens are actually two organisms (an alga and a fungus) living in a symbiotic relationship with each other. They are generally very slow growing and, therefore, cannot easily replace themselves when picked. In some cases, a substantial number of fallen pieces can be collected from the ground.



Cork Oak (small branch).

Barks

The bark layer of a tree is more than just a protective skin. The inner cambium layer of the bark is what carries all the water and nutrients from the roots up to the leaves, a lot like our circulation system. If too much of that cambium layer

is cut, as in removing a piece of bark from all the way around a tree, then everything above that point is cut off from the roots and the tree will die if it cannot repair itself in a hurry. This practice is known as ringing and should be avoided if you want the tree to live.

When removing pieces of bark for basketry or what not it is usually necessary to take them from a live tree, but it is important to consider whether or not the tree can handle the gash put in its side. Many trees, especially from drier climates can heal and deal with such wounds incredibly well, while others seem to have a harder time of it. The wider and more close to a ring the wound is, the harder it is to heal. In many cases, it might be better to cut a branch or select and cut down a smaller crowded tree and remove all the bark from it instead of removing a big piece from a larger trunk. If you select a small tree or branch and remove the bark in one piece, it's amazing how wide a piece you can get from a relatively small diameter. Another approach is to look for downed trees which are not totally dead and dried out. Bark removal is easiest in the spring when the sap is up.

There are some trees like paper birch and cork oak in which the outer bark is easily separated from the inner bark. If the outer layer of bark is removed correctly, the cambium layer can be left totally intact and the tree will continue to grow even though the outer bark has been removed in a ring. Removing the outer bark leaves the tree scarred for life, but it's not likely that other trees will find it too unattractive to mate with. While the paper birch will never grow another layer of usable outer bark, the cork oak will; so, new cork is harvested every ten years or so.

Seeds, Fruits and Nuts



Generally, seeds, fruits, and nuts are produced in such abundance that it is no problem to gather as many as possible. There are usually tons of them and it would take a lot to adversely affect the other animals depending upon that food source. In lean years however, it's important to keep in mind that we are not the only living beings trying to survive. If the nut crop is exceptionally meager and you search out every last one you can find, are you robbing truly wild animals of a meal in stressed times? As humans, we have the ability to think way ahead and store up extra in times of abundance. When we don't totally depend upon our wild foraging, we can also make the decision to leave it to other animals when they need it.

Another thing to remember is that the seed, fruit, or nut is more than just a food source. It's the plants attempt to reproduce itself. While gathering and foraging, it doesn't take much time to plant some nuts in a good location, and that little effort helps to ensure that they will be there for others in the future.

Oftentimes, gathering activities help disperse seeds. When beaten from the heads, they will frequently avoid the container and be sent flying off to an area they wouldn't have otherwise reached. Seeds are often carried for long distances and end up getting dispersed by cleaning processes and small spills. Some are also adapted to pass through a digestive system before they sprout so you can become a walking seed bank and leave deposits all over the forest. By these means, the plants are successfully using us to help expand their range and promote their continued existence.

Dead and Downed Materials

There is usually an abundance of standing dead or dead and downed material in a forest: after all, this decomposing biomass is the foundation of the forest itself. While there is most likely plenty for the taking, keep in mind the invaluable services that dead trees and piles of dead plants provide for the plants and animals in the area. This habitat might be especially important in highly impacted areas or on the fringes of society. Many of us have a tendency to try and clear up the brush. There are a lot of pluses to making it easier to move around in the woods and when you need firewood or some other product, there's no problem with gathering dead materials. Just keep in mind that a decomposing pile of brush is both a valuable habitat for many creatures as well as a nutrient rich compost heap.

Philosophy

The above points may be preaching to the choir, but it's helpful to enunciate philosophies clearly in order to reinforce and define our own values and knowledge. Others can then understand what we're doing and may start to think about what they're doing. In many traditional cultures there are ceremonies and rituals that go along with harvesting and hunting. Whether it's vocalizing intention, asking permission, or offering something of value in return, they serve as a reminder to be conscious of the relationship and to give thanks to the life that is being taken or received. Still, empathy and respect are only half of the picture, and all the prayers in the world don't make for a sustainable harvesting ethic without a body of knowledge upon which to base your decisions.

Any ecosystem is a complicated interrelationship between all of the plants and animals which call it home. By paying a little attention to what they need and want, we can fairly easily become a positive part of that family. If we ignore them and selfishly fulfill our desires without giving thought or thanks to those that give us what we need, then we are cutting ourselves off from our roots and our lifeline.

In a world where the population is sky rocketing at a fatalistic rate, such concerns are obviously more pressing. One has to wonder if our grandchildren will not be thrown in jail or fined for the mere cutting of an arrowshaft, or digging of a lily bulb for food. Such laws are more and more com-

mon, leaving people like us with a distressing problem that to other "normal" people may seem like the necessary step that must be taken to preserve the remaining "nature". While there seems to be little for us to do to prevent this impending disaster (besides not overbreeding), a conscientious harvesting mindset can make you feel more at ease and increases your awareness of the world around you: for you can't harvest conscientiously without knowing how nature's order works.

Also, remember that the above points are really just some vague guidelines -the kind of stuff that we keep in mind when out cutting and gathering-which will be adapted to individual ethics and situations. If the ideas are generally followed then there should be no need to get overly uptight about every little detail. After all, we are still predators which take lives a handful at a time, and the natural order is extremely resilient and adaptive. If you go out trying to find the exactly right, straight-grained, long, branch-free bow stave that also fits into your predetermined idea of a light staved and over-crowded ideal tree to cut without making a mark on the ecosystem, you will be looking for a very long time! If you find an appropriate good one, just cut it! On the other hand, if it's one of only two yew trees left in the entire area . . .think again?

All of this is surely a lot to consider, and leaves a newcomer with a load of plant knowledge to accumulate. But learning about the plant kingdom is truly a great thing that goes beyond the scope of practical utilization and making good

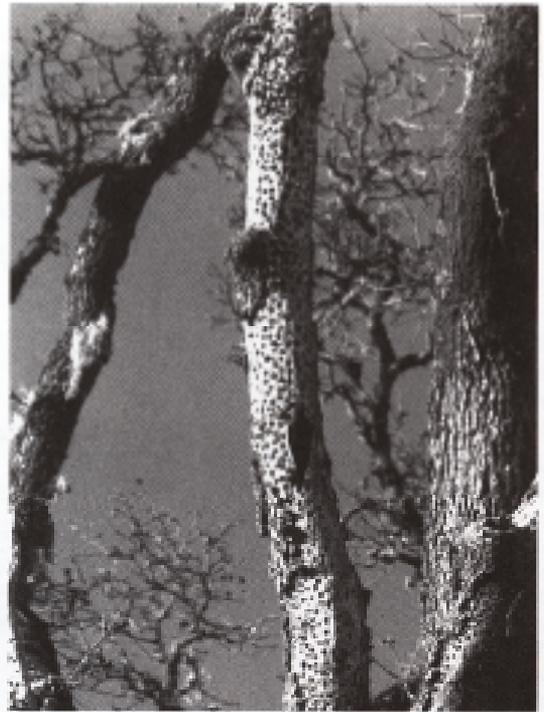


Photo 1: Dead, standing trees can provide valuable habitat for many different animals. Here, a California Acorn Woodpecker is tending its cache of acorns – each individually inserted in different spots throughout a dead oak.

harvesting decisions. The person who is solely a nature observer knows only the name of a plant and maybe where it grows and what eats it. The nature participant, on the other hand, learns these things and more. Can I eat it? What does it taste like? What is the wood like? What effect will my cutting that shrub have on the neighboring area?-and so on. These kinds of intimate bonds run very deep. When we see a hazel bush, we really know it inside and out and have hundreds of tactile and visual memories relating to its character. Seeing a plant that you know so well is like seeing an old friend, like-“Hey! It’s salsify, how the hell are ya. It’s been what . . .a year? Let’s do lunch!”

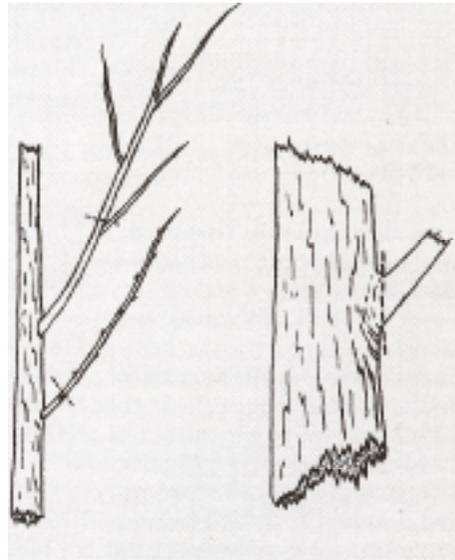


Photo 2: Peeling maple bark from a limb which was removed from a tree felled while clearing for a roadway.

The Safest Cuts

The familiar wrinkles at the base of a branch indicate meristematic tissue, which has evolved to heal over dead branches. It is more obvious on certain species and is usually more noticeable on older trees.

When harvesting young shoots, either cutting to a bud or all the way back to the meristematic tissue is the method most likely to prevent infection and allow for rapid regrowth and healing. On larger branching shoots and limbs, making the cut right above a branch or, again, all the way back at the main trunk or limb from which it grows helps encourage faster healing. Some species can generally tolerate totally random hacking, but it doesn’t take much effort to make good clean cuts instead of rude ones. Remember these same concepts the next time you prune your fruit trees.



Thanks to Margaret Mathewson for all the information shared with us over the past ten years. Many of these same concepts are covered in the section on plant gathering in her Ph.D. Dissertation entitled The Living Web. Contemporary Expressions of California Indian Baskets UC Berkeley: 1998. Steven and Tamara are the authors of Wet-scrape Braintanned Buckskin: A Practical Guide To Home Tanning and Use, with a Forward by Jim Riggs, 1997 (ISBN 0-9654965-5-4). Cost is \$19.95 + \$4 shipping. For a catalog, contact: Paleotechnics, PO Box 876, Boonville, CA 95415. Or call: (707) 793-2287 website: <http://www.paleotechnics.com>

