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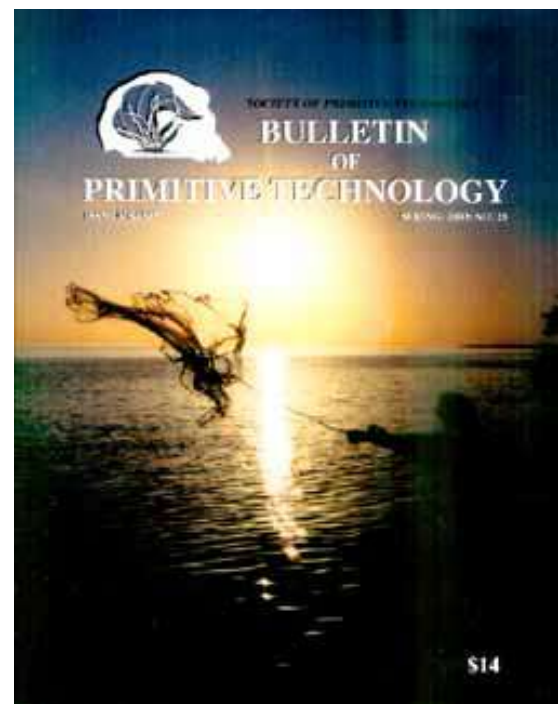
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- To promote the practice and teaching of indigenous life skills
- To foster communication between teachers and practitioners
- To set standards for authenticity, ethics, and quality

Benefits of annual membership in the Society:

- Subscription to *The Bulletin of Primitive Technology* (bi-annual)
- Networking with practitioners, researchers and thinkers
- Contact for research and scientific studies
- Notices for workshops and classes
- Literature reviews
- Tool and supply sources
- Free Classified notices in the *Bulletin* (20 words or less)



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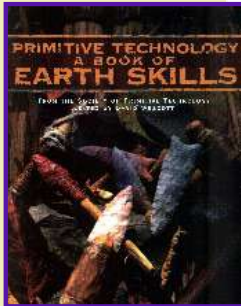
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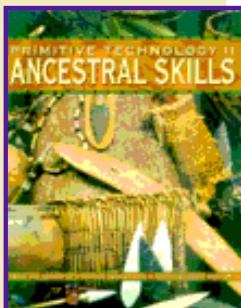
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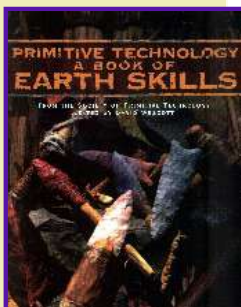
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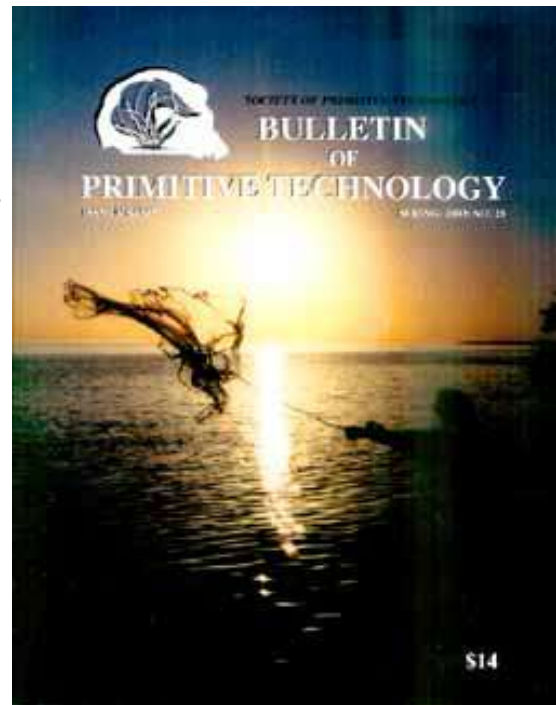
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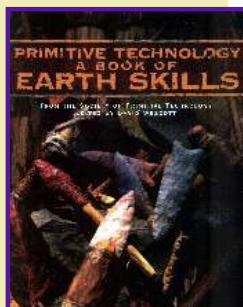


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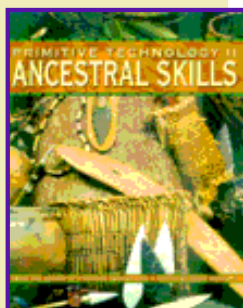
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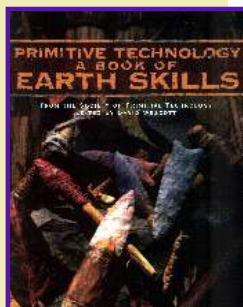
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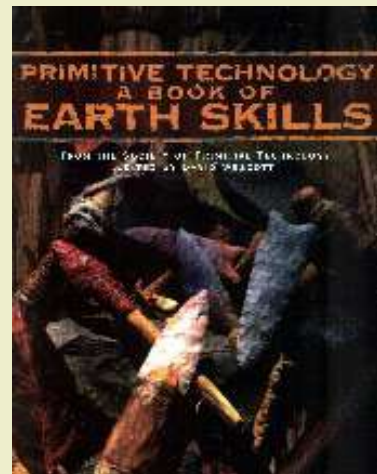
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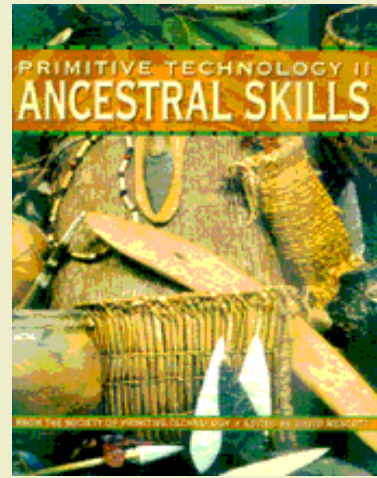
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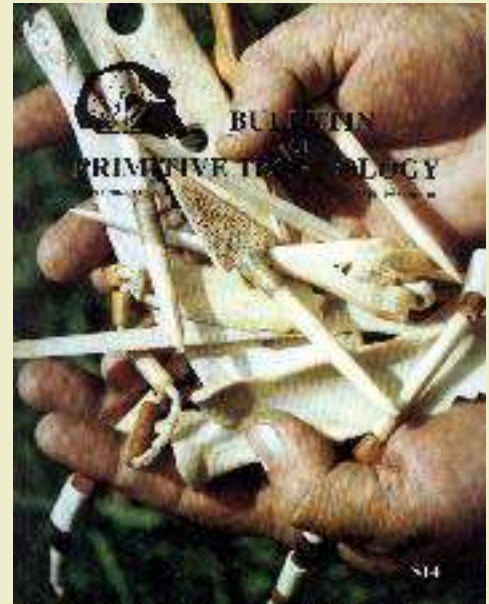
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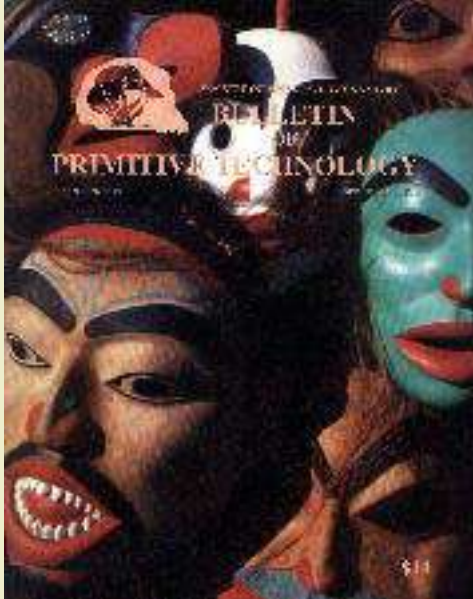
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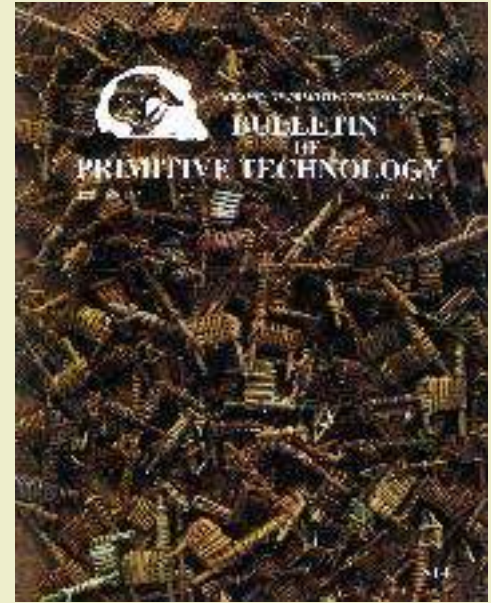
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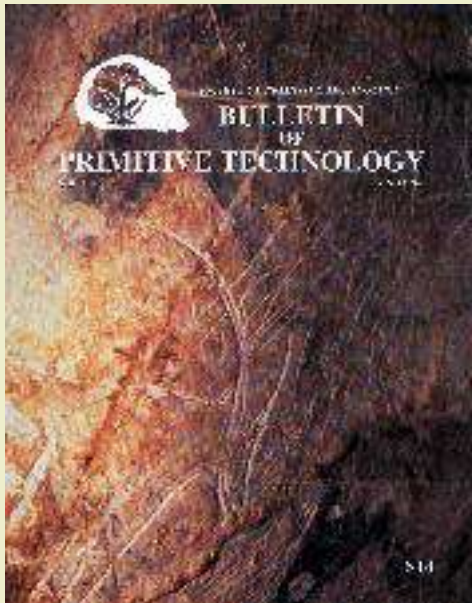
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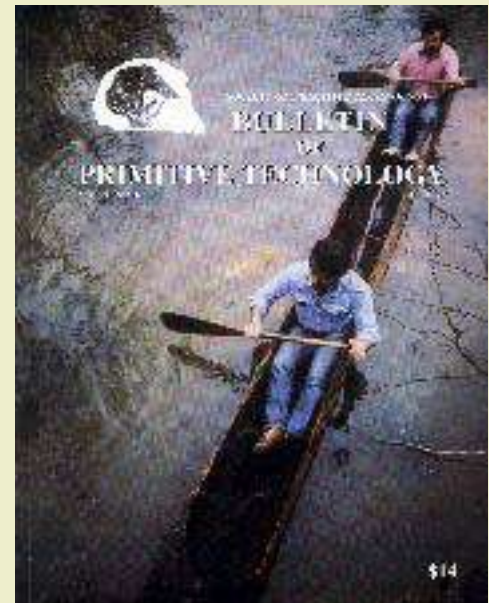
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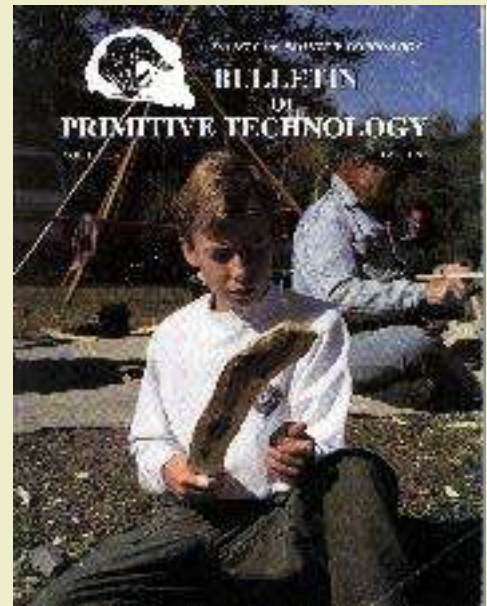
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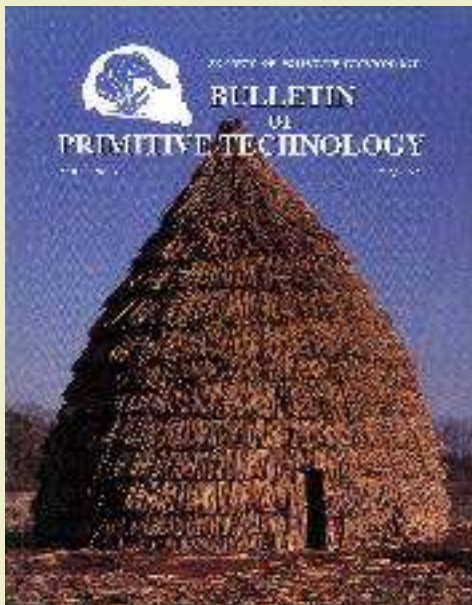
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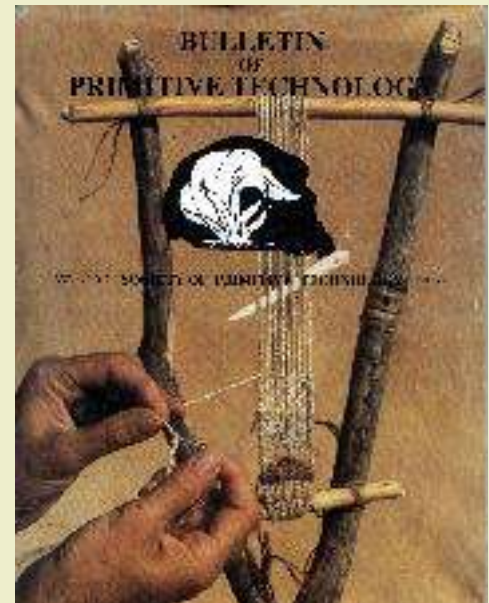


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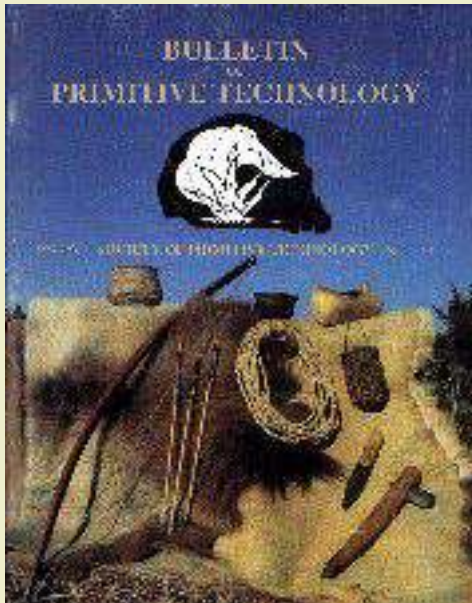
-A Cordage Backed Bow by Dick Baugh

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The Art of Nothing

by Thomas J. Elpel

Westerners who first met the Shoshonean bands of Indians in the Great Basin Desert typically described them as being "wretched and lazy". Many observers remarked that they lived in a total wasteland and yet seemed to do nothing to improve their situation. They built no houses or villages; they had few tools or possessions, almost no art, and they stored little food. It seemed that all they did was sit around and do nothing.

The Shoshone were true hunter-gatherers. They spent their lives walking from one food source to another. The reason they did not build houses was because houses were useless to them in their nomadic lifestyle. Everything they owned they carried on their backs from place to place. They did not manufacture a lot of tools or possessions or art, because it would have been a burden to carry.

We often expect that such primitive cultures as the Shoshone must have worked all the time just to stay alive, but in actuality these were generally very leisured peoples. Anthropological studies in different parts of the world have indicated that nomadic hunter-gatherer type societies typically worked only two or three hours per day for their subsistence. Like the deer and other creatures of the wild, hunter-gatherer peoples have nothing more to do than to wander and eat.

The Shoshone had a lot of time on their hands only because they produced almost no material culture. They were not being lazy; they were just being economical. Sitting around doing nothing for hours on end helped them to conserve precious calories of energy, so they would not have to harvest so many calories each day to feed themselves.



Today many of us westerners find ourselves fascinated with these simple cultures, and a few of us really dive into it to reproduce or recreate the primitive lifestyle. In our typical western zeal we get right into it and produce, produce, produce. We work ambitiously to learn each primitive craft, and we produce all kinds of primitive clothing, tools, containers, and art, and just plain stuff. True hunter-gatherer cultures carried all their possessions on their backs, but us modern primitives soon find that we need a pickup truck just to move camp! In our effort to recreate the primitive lifestyle we find that we have ironically missed our mark completely-- that we have made many primitive things, but that we have not begun to grasp the true nature of a primitive culture. To truly grasp that essence requires that we let go, and begin to understand the art of doing nothing.

Understanding the art of nothing is a somewhat challenging concept for us westerners. When we go on a "primitive" camping trip, we take our western preconceptions with us. We find a level spot in a meadow to build our shelters, and if a site is not level then we make it so. Then we gather materials and start from scratch, building the walls and roof of a shelter. We do what we are accustomed to; we build a frame house on a surveyed plot in the meadow. Then we gather materials and shingle our shelter, regardless of whether or not there is a cloud in the sky, or whether or not it has rained at all in a month.

Part of the reason we act this way stems from our cultural upbringing. Another part of it is simply because it is easier for those of us who are instructors to teach something rather than to teach nothing. It is much easier to teach how to make something than to teach how not to need to make anything. The do-something approach to primitive skills is to make everything you need, while the do-nothing method is to find everything.

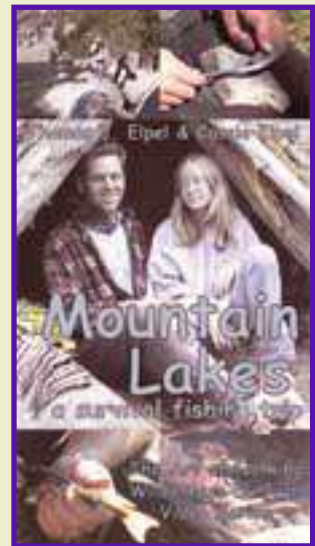
For example, the do-nothing method of shelter is to find shelter, rather than to build it. Two hours spent searching for a partial shelter that can be improved upon can easily save you two hours of hard-working construction time, and you will usually get a better shelter this way.

More so, the do-nothing method of shelter is to look first at the incoming weather, and to build only what is needed. If it is not going to rain then you may be able to do-nothing to rain-proof your shelter. Then perhaps you will only need to put your efforts into a shelter that will keep you warm, instead of both warm and dry.

There are many things, both small and large, that a person can do, or not do, to better the art of doing nothing. This can be as simple as cupping one's hands to drink from the stream, instead of making and carrying a cup, to breaking sticks to find a sharpened point, rather than using a knife to methodically carve out a digging stick. Hand carved wooden spoons and forks are do-something utensils that you have to manufacture, carry, and worst, that you have to clean. But chopsticks (twigs) are do-nothing utensils that do not need to be manufactured or carried, and you can toss them in the fire when you are done.

Henry David Thoreau wrote of having a rock for a paperweight at his cabin by Walden pond. He threw it out when he discovered he had to dust it. This is the very essence of a do-nothing attitude.

The do-nothing approach to primitive skills is something that you do. Doing nothing is a way of saving time and energy, so that you can finish your daily work more effectively. One thing that I have found through the years of experimental research into primitive skills, is that there is rarely enough hours in a day to complete all of a day's tasks. It is difficult to go out and build a shelter, make a working bowdrill set, set traps, dig roots,



make bowls and spoons, and cook dinner. Hunter-gatherer societies succeeded in working only two to three hours per day, yet in our efforts to reproduce their lifestyle we end up working all day.



Doing nothing is an approach to research; it is a way of thinking and doing. For instance, I do a lot of timed studies of various primitive skills: i.e.: how long does it take to construct a particular shelter? How much of a particular food resource can I harvest per hour? Can I increase the harvest using different gathering techniques? One thing I have noted is that it is only marginally economical to manufacture common primitive deadfall traps. It is time intensive; it adds weight to carry, and the traps often have short life-spans. The do-nothing alternative is to use whatever is at hand, to pick up sticks and assemble them into a trap, without even using a knife. Preliminary tests of this "no-method" have produced results equal to conventional, carved and manufactured traps, but with a much smaller investment of time.

Primitive hunter-gatherer type cultures were very good at doing nothing. Exactly how well they did this is difficult to determine, however, because doing nothing leaves nothing behind for the archaeological record. Every time we find an artifact we have documentation of something they did; yet the most important part of their skills may have been what they did not, and there is no way to discover what that was by studying what they did.

Nevertheless, what you will discover for yourself, as you learn the art of doing nothing is that you are much more at home in the wilderness. No longer will you be so dependent on a lot of tools and gadgets; no longer will you need to shape the elements of nature to fit our western definitions. You will find you need less and less, until one day you find you need nothing at all. Then you will have the time on your hands so that you can choose to do nothing, or even to go do something.

*Thomas J. Elpel is the director of Hollowtop Outdoor Primitive School in Pony Montana, and the author of four books, including [Participating in Nature: Thomas J. Elpel's Field Guide to Primitive Living Skills](#). **The Art of Nothing** was published in the Society of Primitive Technology's *Bulletin of Primitive Technology*, Issue #10, Fall 1995.*

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Primitive Living as Metaphor

Adapted from [Participating in Nature: Thomas J. Elpel's Field Guide to Primitive Living Skills](#)



Here in Montana I practice and teach classes on primitive or stone age skills--which is to say, camping with little or no gear. We build shelters that are warm and comfortable without a sleeping bag or blanket. We start fires by rubbing sticks together. We harvest and use edible wild plants, make baskets, and tan hides--that sort of thing.

Fundamentally, these are skills that allow us to discover nature by participating in nature. Instead of merely hiking through or camping in it, we can move in and become part of the process. It is an intimate way to learn about

nature by using it. For instance, just the process of using plants for food, medicine, and materials causes a person to become more aware. You learn about the specific properties of each plant, and you learn about the communities of plants and animals around each plant. As you collect these wild plants you begin to notice different soil types, and how the soils affect the plants growing there. Thus stone age skills are a great hands-on way to interact and discover nature. Yet, primitive living is even more than that. Primitive living is a metaphor that teaches us about ourselves and the world we live in.

A metaphor is often a story about life which is simplified into characters and settings of stereotypes and symbols. We learn simple lessons about life from fanciful stories about princes and princesses or Old Man Coyote. We may not be able to describe exactly what those lessons are or how they affect us, but the stories do nonetheless make change in our lives. In today's complex world, primitive living is like a metaphor, but it is better. Primitive living is a metaphor we participate in and act out. Life is simplified down to the bare essentials such as physical and mental well-being, shelter, warmth, clothing, water, and food. We go on an expedition to meet those needs with little more than our bare hands. As we quest to meet those needs we learn to observe, to think, to reach inside ourselves for new resources for dealing with challenging and unfamiliar situations. We build up our personal strengths, and at the



same time we interact with and learn about the world around us. In a story we can only join a quest in our imaginations. But in primitive living, we physically leave the contemporary world. We journey into the world of primitive stone-age skills, and we return with knowledge, wisdom, and strength to enrich our lives in contemporary society.



I experienced the power of this "participatory metaphor" when I was sixteen. I went on a twenty-six day expedition with an outdoors school, where we hiked 250 miles, ate little, and generally endured a lot. The personal strengths, the wisdom, and the ability to persevere that I brought back from that "quest" have helped me to be successful in contemporary life more than any other single thing I have done.

In a similar way, my wife Renee and myself went on a "quest" together, an adventure where we started in Pony and walked five hundred miles across Montana to Fort Union on the North Dakota border. That was a year before we were married. At the time we could not give a definitive answer as to why we were doing it. But looking back, I would say we were testing and building our relationship and our abilities to work together towards common goals,

before formally committing ourselves to a long-term relationship.

Thus, primitive living is a metaphor that brings out our inner resources. At the same time, it is also a metaphor that teaches us about the resources of the earth as well. You see, the person who carries in a lot of gear, from tents, to propane stoves, with the intent of living "no-impact", is, metaphorically speaking, living a lie. Such a person may claim to practice no-impact camping, but the truth is, the resources they pack in had to come from somewhere.

Our contemporary lives have become so removed from hand-to-mouth survival, that we sometimes delude ourselves into thinking our items of survival come from the store, rather than from nature. We think of ourselves as being somehow separate from nature. We think we can draw lines on the map and separate "wilderness" from "non-wilderness", but really, there is only one wilderness and only one ecosystem, and we are part of it. Like the deer eating grass, or the robin bringing materials back to build a nest, we all must use the resources of the earth to maintain our own survival. This is true whether we live in an apartment building in the city, or in a wickiup in the woods.



Primitive living allows us to practice living on a model scale. By "living" I mean that process of procuring our needs for physical and mental well-being, including such things as shelter, fire or energy, water, and vegetable or animal resources. In primitive living we are faced with these needs as realities we must meet. We are faced with the realization that in order for our lives to go onward, we must take from the world around us; like the coyote stalking a mouse, we must kill and use to survive. It is too easy to forget that in the contemporary world. We think resources come from the store, and we forget that there are impacts and consequences, throughout the ecosystem, from our every purchase, our every decision. In primitive living we face those consequences directly. We can see the effect of our needing to eat causing the loss of life of a plant or an animal. We can sense that by picking the berries from the bushes we may be taking someone else's meal. Primitive living is a metaphor that gives us an awareness of the true costs of living, no matter where we are.



The metaphor of primitive living can also teach us that it may be okay to take from the earth; that perhaps we do not need to feel guilty about our actions, only aware of them. The deer takes from the ecosystem and causes surprising impacts; it's presence causes successional shifts throughout plant and animal communities, destroying habitat for some and creating it for others. Similarly, the presence of humankind living primitive, today or yesterday, creates all kinds of havoc in the ecosystem. Groups of primitive peoples rewrote the ecosystem daily as they hunted and gathered for their needs, or torched the brush to drive the game out. Even an individual person displaces habitat, competes for food, and forces the animals to take new trails, all influencing successional communities. Perhaps our contemporary cities are not so different. They are still wilderness; only different successional plant and animal communities are favored

there. Primitive living, as a metaphor, can teach us that, like a bluebird eating a fly, perhaps it is okay to take from and alter the ecosystem. It is neither good nor bad, it is simply reality.

Of course, primitive living also reminds us that our link to the ecosystem goes both ways. We are participants in the ecosystem and therefore we have no choice but to take from it, and we will inevitably alter it, but also, for our own survival, we must maintain it. Our actions affect successional communities of plants and animals in the ecosystem, and we are included in those communities. Succession will forever be in a state of flux, for as long as life exists. Nature will continue on, ever changing, destroying habitats, and creating them. In the face of global climate change and ozone depletion, it is important that we consider what successional changes may mean for our own species.

Primitive living is a metaphor for living. It brings us face to face with our own survival. It brings out our inner resources for dealing with challenging situations, and it reminds us, that no matter what technologies we have, we are still an integral component of the ecosystem. Primitive living is a model for living that gives us the basic foundations, the very laws of nature, upon which all of our solutions, in primitive and contemporary living, must be built.

Adapted from [Participating in Nature: Thomas J. Elpel's Field Guide to Primitive Living Skills](#)

Hi Tom,

I was browsing through the bookstore at Northern Arizona University and saw your book "[Participating in Nature](#)" and picked up a copy. I have heard about it through the abo-grapevine and seen it on your site, but hadn't checked it out yet.

Outstanding book! I was particularly impressed by the fact that you go beyond presenting skills and share a lot of your own life-stories and anecdotes which added a humanistic side to the book (rather than simply being a how-to book like many others). The part at the end on how you got into primitive/survival skills was refreshing since I think that some authors have presented themselves as coming out of the womb knowing how to make a hand-drill fire.

A very well-rounded book that I plan on using in my own courses. I just wanted to say, Well Done. Hope you have a good summer. Maybe I'll see you at Rabbitstick.

*--Tony Nester
[Ancient Pathways](#)
Flagstaff, Arizona
(used with permission)*

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Artifacts and Ethics

History Belongs to Everyone

by *Thomas J. Elpel*

The artifact was slender and long, perhaps one and a half inches in diameter and fourteen inches long, tapering at both ends. Apparently a uniquely shaped stone for grinding grain on a metate, it had been shaped from a piece of hard sandstone through many hours of careful pecking with another rock. It may have lain in the sand below that overhang in the canyonlands of southern Utah for a hundred years, or perhaps a thousand. Either way, it was in mint condition as if its creator had just finished it and reached through a window of time to place it on my lap.

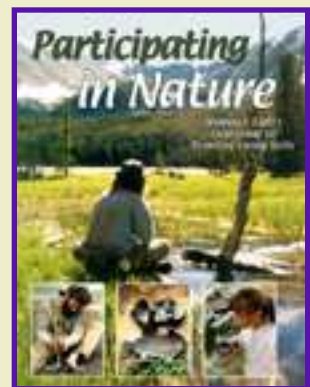
Whatever its history, it was on my lap, and it was my dilemma. According to the law I should have left it there and I should not have even disturbed it from its original resting place. Archaeologists and anthropologists need to study artifacts in context of their original locations. By examining artifacts where they find them, these professionals can piece together a story of the past and give a voice to these otherwise silent vestibules of time.

The right thing to do was to put the artifact back. However, the moment that I set it down would have been the moment that someone else in the group would have gleefully picked it up and hauled it a thousand miles away to sit it on their bookshelf or to hang it on their living room wall, a piece of knowledge forever lost to the public.

I did not want the artifact on my own living room wall anymore than I wanted it on anyone else's wall. I would learn little from it, and humanity would learn nothing. To pack this unique and exotic artifact home for display would have degraded it from a voice of the past to just another testament of materialistic ego.

In context, or out of context, I felt that this unique piece should be kept in the public trust. I did not know what legal consequences I might face, but nonetheless, I decided to take it to the local state operated museum/archaeological center.

I first looked around the museum to ascertain that it was indeed a unique artifact. The museum displays had nothing like it. I cautiously queried the museum staff with hypothetical questions: "What if a person were in this situation.....?" I asked. When I felt certain that I would not be penalized for disturbing a historical site then I brought the unique stone in. I gave it to them and I marked the location of the site on a topographic map. This established a local context for the artifact, even if the immediate context was forever severed. More so, it established the site as a potentially valuable archaeological site in need of study by a team of experts.



The people at the archaeological center never acknowledged that I made the right decision. But they never said that I was wrong either. It is possible that since they worked for the state it would have been inappropriate for them to be informing people that it is alright to disturb historic sites. I decided that from then on I would do something to protect any artifacts I came across that were at risk of being taken or damaged.

*Thomas J. Elpel is the director of Hollowtop Outdoor Primitive School in Pony Montana, and the author of four books, including [Participating in Nature: Thomas J. Elpel's Field Guide to Primitive Living Skills](#). **Artifacts and Ethics** was published in the Society of Primitive Technology's *Bulletin of Primitive Technology*, Issue #7, Spring 1994.*

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ATLATL WEIGHTS

Function and Classification

by William R. "Atlatl Bob" Perkins

INTRODUCTION

Atlatl weights, both known and suspected, are a fascinating and frustrating subject. Based solely on the misinterpretation and lack of understanding surrounding them, and their occurrence in the archaeological record, debate and confusion as to their purpose has set them apart from most other artifacts.

There are a variety of atlatl weight types and suspected types found, interestingly enough, mainly in the United States. Their distribution seems to be contained within the forty-eight states with a little overlap North into Canada, and south of the Rio Grand River into Mexico. But generally, the political boundaries of the lower 48 United States hold most of the world's atlatl weights. As far as I am aware, atlatl weights do not occur outside North America, although atlatls most certainly do. Atlatls in a variety of styles are found more or less world wide. The earliest examples date to well over 20,000 BP in Europe, and the atlatl is still used today by natives of Papua, New Guinea and the Australian aborigines. But regardless of where atlatls are found, nowhere other than North American are they found with weights attached to them.

The confusion surrounding atlatl weights begins with the many theories as to their purpose. The most popular of these seems to be that they are a counter balance. This theory suggests that the weight acts as an adjustment to balance the atlatl and dart in the palm of the hand. Many other theories have been put forth, mainly based on the idea that the attachment of the weight would propel the dart a greater distance.

Experimentation with many of these theories tended to show opposite results until finally the theory of last resort, "hunting magic" was applied. When all else fails, its a charm, the owner believed the atlatl weight possessed "hunting magic." No doubt about it, some weights are quite beautiful and finely polished, and I am sure their owners even believed that they possessed magical power. That's just the way we humans are. We're weird like that. How ever, not all atlatl weights are beautiful. Many are rather crudely finished and some are merely rounded river rock. Even these could hold some special meaning to someone, but the "charm theory" just doesn't hold. Atlatl weights have a function, and that function has to do with their mass.

WEIGHT THEORIES

This brings us to the contradiction in the term "atlatl weight". More often than not atlatl weights are referred to in every descriptive term imaginable except - mass. To apply the term 'weight' to an object and neglect to report its mass would seem illogical to a thinking human.

There is also the confusion of what is an atlatl weight. This is more of a word game than a question of function. Several descriptive and functional names have been applied to known and suspected atlatl weights. Depending upon where you live or how you became familiar with atlatl weights you might refer to all weights in general as Banner Stones, boat stones, counter weights, bird stones, etc. This causes a great deal of confusion. Not long ago I was asking a friend of mine who lives in the East some questions on Banner Stones. Our discussion. became quite confused until we realized that I was talking about a very particular type of atlatl weight and he was trying to give me answers for atlatl weights in general.

The center of all this confusion lies with the dispute over the true purpose of the atlatl weight. In my studies of the atlatl and dart I have found that they possess a deceptively advanced technology. The basic technology, the mechanical foundation of the system, is the flexible dart. Over time, humans have tinkered and toyed with the system improving and refining it to a very high degree. There are many levels of technology which have evolved from the basic mechanical foundation. Just as modern rifles evolved from muzzleloaders, to breach loaders, to lever actions to automatics, atlatl weights in general represent one

very advanced level of atlatl and dart system technology. In fact, some weight types represent a higher degree of technology than others, a technology within a technology.

So how is the system improved by the application of a weight? Atlatl weights possess mass and when attached to an atlatl that mass affects the system. But contrary to popular experimentation you just can't strap a weight onto any old atlatl and expect a miracle. Atlatl weights do not possess a sufficient enough mass to significantly influence the speed at which an atlatl is swung in order to affect some degree of timing based on velocity. The fact that a weight increases the moment of inertia of an atlatl is just that, a fact. What good does it do? Why not make a thicker atlatl? And as far as a counter balance is concerned, that theory only applies when the atlatl and dart are at rest and not being used. The total system of atlatl and dart, with or without a weight, is fairly light, considerably less than one pound. The presence or absence of an atlatl weight makes no difference whatsoever as to how long or how steady an atlatl and dart can be held. A person can hold the system steadily, with or without the weight, for as long as that person can hold it steady. Which is about 6 minutes the last time I tried. After that, your arm cramps and falls asleep, making any at tempted throw ridiculously ineffective. So forget about it!

The purpose of the atlatl weights mass is to resist acceleration. In order to understand its function of resisting acceleration a review of the technological evolution of the atlatl and dart must come first.

ACCELERATION

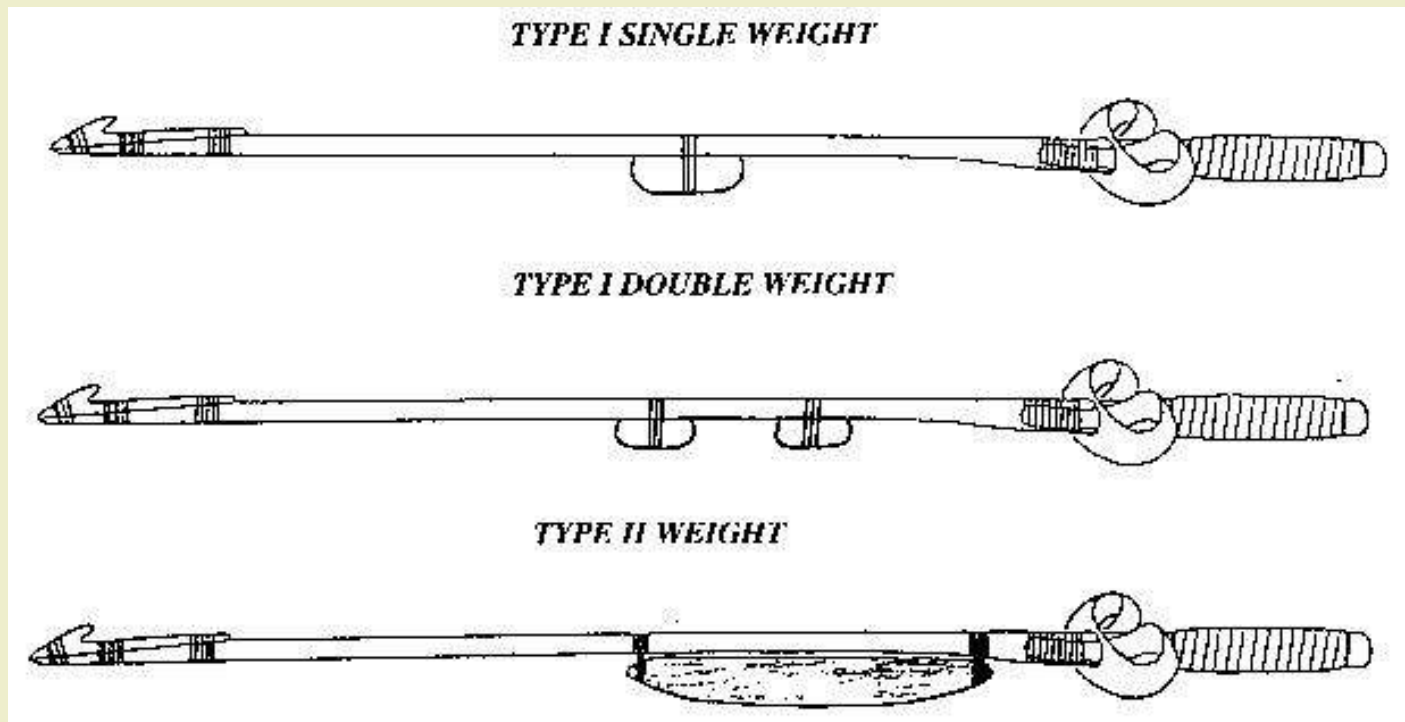
The basic mechanics of the system depend exclusively on the flexibility of the dart. When the dart is accelerated by the atlatl it flexes and stores energy like a spring. At some point during the swing, after the atlatl is no longer accelerating sufficiently to cause further compression of the dart, the dart then uses its stored energy to push itself away from the atlatl. This allows the dart a smooth separation between itself and the atlatl, giving it an effective and powerful launch.

One of the great evolutionary improvements to the system was superimposing flexibility into the atlatl. If this is incorporated successfully into the system, with the degree of flexibility of both atlatl and dart in a functioning relationship with one another, their function will be similar to that of a diver diving from a spring board. In this system the diver's legs are bent, like the dart, and store energy to be used to push away from the diving board. The diving board, like a flexible atlatl, is also bent back, storing energy to be used to push the diver away from the board. With the diver and diving board pushing each other away at the same time, the launch of the diver is considerably higher, smoother, and more powerful than if the diver had used a fixed rigid platform.

When the proper mathematical relationships of length and flexibility between atlatl and dart are achieved, the results are a long and noticeably flexible dart. But the atlatl on the other hand is, at approximately one third the length of the dart, short and somewhat stiff. The proper flexibility of an atlatl is rather subtle. The atlatl which is correctly flexed seems too stiff to be of any benefit. This is where the atlatl weight is applied to the system.

What atlatl weights accomplish in the system with the flexible atlatl is rather sophisticated and ingenious, representing a level of engineering skill which is impressive even by today's standards. Its mass, located approximately at the middle of the atlatl shaft, resists acceleration, (Newton's first law of Motion) and forces the atlatl to deflect further than is possible without it. This enables the atlatl to store more spring energy to be used to push the dart away from the atlatl. The weight's position along the atlatl shaft influences the amount and rate at which energy is stored and released. Therefore, the atlatl weight is a timing device influencing the amount and rate at which the spring energy of an atlatl is stored and released against the spring energy of a dart. That is its primary function. Its effects on the system are not so profound as to propel the dart to a noticeably greater distance or velocity, although higher velocities are achieved. (A longer atlatl will noticeably increase the velocity and distance of a dart at the cost of accuracy). When properly incorporated into the system, the atlatl weight improves the performance of that system in terms of

efficiency. Smoother, more controlled and powerful launches make for better accuracy. And ultimately it is getting to the target that counts.



CLASSIFICATIONS

Now that atlatl weight function has been firmly established, the problem of classification can be more easily addressed. Archaeologists have attempted to classify weights according to their shape and hafting technique. In this they have failed miserably. Not only have the same atlatl weights been placed in a category Type III by one archaeologist and a Class I category by another but some categories contain only one known example. This being the case I have laid down the framework for a new system of weight classification based solely on function and effect.

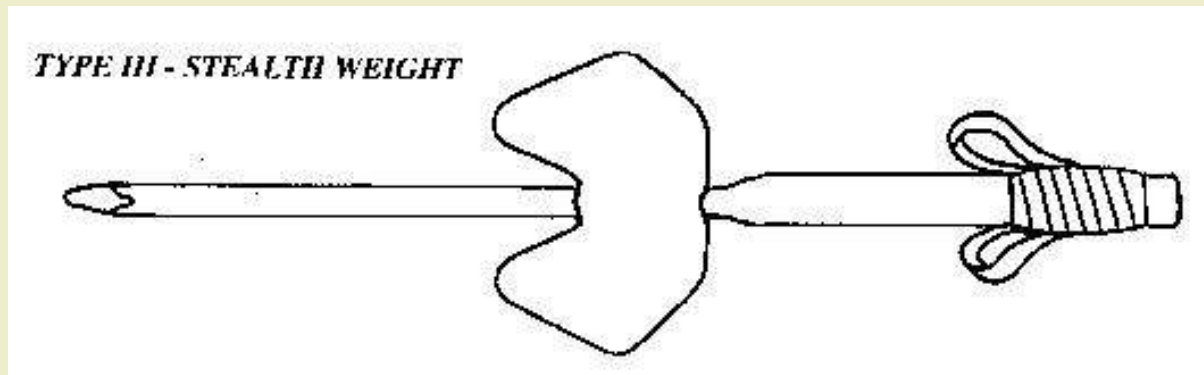
The basic atlatl weight, or Type I in Perkins' atlatl weight classification, is a single point mass weight with a mass of approximately 65 g. Mathematically a mass can be boiled down to one point where its influence is applied to the atlatl's flexibility. No matter how it is grooved, holed, shaped, or hafted to the atlatl its final position is that point at which its mass influences the mechanics of the system. Type I has sub-categories of multiple point mass weights. Type Ib would be two point mass weights whose combined mass add up to approximately 65 g. These would be located along the atlatl shaft to render a smoother response to the flex of the atlatl with distributed point masses as opposed to one concentrated mass.

There can be further sub-types with three and even four distributed point masses, but as the base mass of 65 g. is divided the influence of the smaller weights becomes increasingly ineffective.

The improvement over multiple point masses in the evolution of this particular technology is the Type II weight. Its mass of approximately 65 g is distributed along its length and, given its unique moment of inertia and method of hafting, influence the atlatl's flex at only one significant point. The Type II causes a finer, more precise response to the flex of the atlatl, accomplishing with one weight what was attempted with several.

This brings us to the most fascinating weight to be classified. The Type III stealth weight. More commonly known as a Banner Stone, there is some dispute as to whether they are atlatl weights or not. Based mainly on evidence from Indian Knoll, KY where Banner Stones have been recovered in context and in alignment

with atlatl hooks and antler handles, I believe that Banner Stones are indeed atlatl weights. Type III - stealth weights in fact. Their mass tends to be somewhat greater than other weights at approximately 80 g, but this can be resolved quite easily when the probable length of the associated atlatls is taken into consideration. Atlatls from the Western United States, which Type I and II atlatl weights tend to represent, are approximately 60 cm in length. Atlatls from the Eastern United States on the other hand, appear to have been somewhat shorter at approximately 40 cm. Not having the mechanical advantage of length, Eastern atlatls seem to have utilized greater mass in order to influence the flex properly.



Mechanically the mass of Banner Stones tend to influence the system like a Type I weight, but their shape has the interesting effect of silencing the noise caused by the swing of the atlatl. When a stick or atlatl is swung an audible "zip-like" noise is generated. It seems that when a Banner Stone is attached this noise is significantly reduced, generating more of a low frequency "woof" as opposed to the high frequency "zip" sound. One would think that because of the greater surface area created by the Banner Stone an increase in noise would result. But those who know physics will tell you that what might be expected is not necessarily what occurs.

THE EXPERIMENT

Since first discovering this effect I have demonstrated it to several people. At distances of anywhere from 5 to 15 meters I have asked observers to listen for a difference in sound levels between an atlatl equipped with a Type III stealth weight and an atlatl with only a Type I point mass. After three swings with each all observers reported a significant difference in that the stealth atlatl was noticeably quieter than the other. On the off hand chance that my observers were predisposed to report a difference in sound by being asked to "listen", I began asking subsequent observers to "watch" for a difference between the test atlatls.

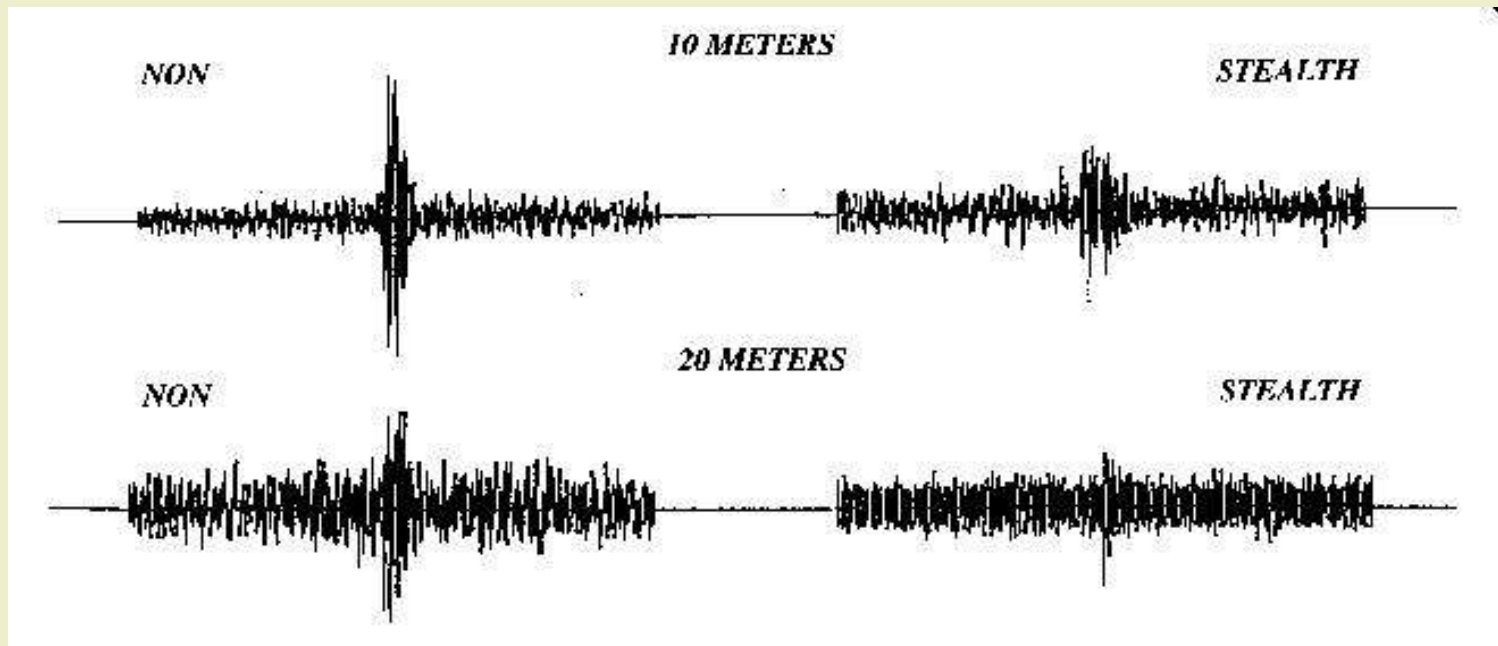
The fact that these observers were asked to watch for an effect as opposed to listen resulted in a tendency to be more hesitant when reporting what was noticed after having the atlatls swung in front of them. But again in all cases, they reported that the atlatl with the Banner Stone was considerable quieter than the other atlatl. This result suggested that the effect was so profound that observers, led to believe that they were looking for an effect with their eyes, none the less noticed an effect with their ears.

This type of experimentation being more qualitative than quantitative merely suggests rather than confirms the effect of sound suppression by the Banner Stone weight. That being the case I began to arrange for a low budget electronic sound test to be conducted at the 1992 Rabbit Stick Rendezvous. To my complete surprise, it was arranged to have sound equipment from Ricks College made available to me for this purpose. The equipment provided was so sophisticated that its technology has been available only within the past three years. The microphones, about three feet long and 4 inches in diameter could, on a calm day more, than likely detect the sound of a needle being dropped into a haystack.

For this experiment the same two atlatls were used as for the observational studies. Starting at 5 meters and increasing the distance five meters at a time to a total of 25 meters, each atlatl was swung three times

with and without the use of darts. A total of ten separate comparisons were made and recorded on magnetic tape. The five comparisons made shooting darts over the head of the technician handling the microphone were noted, for the record, as all traveling approximately the same distance. This was done in case it was suggested (as it subsequently was) that I was swinging the Stealth atlatl differently from the other atlatl.

All things considered, the deviation in throwing was held to an absolute minimum. In fact, I maintained a degree of consistency surprising even to myself, since I was concentrating on NOT hitting the sound man more than anything else during this portion of the experiment. None the less, it should be noted that all darts traveled over the head and landed behind this trusting sole at a surprisingly consistent height and distance respectively.



THE OUTCOME

The data recorded on tape was analyzed by computer and for all ten comparisons the Stealth atlatl registered significantly lower sound levels than the unsilenced atlatl.

Although a mathematical module of this effect has not yet been formulated, the focus of maximum sound suppression seems to be between 20 and 25 meters, indicating an effect known as superposition of sound waves. But no matter what the mathematics are, the effect is definitely present.

Although these experiments may not confirm that the effect of sound suppression was the purposeful function related to the shape of Banner Stones, they certainly go a long way to indicate it. And as far as the actual advantage of noiseless atlatls is concerned, I will leave that to other researchers to contemplate, since they no longer have the "counter balance" theory to consider.

*William R. "Atlatl Bob" Perkins lives in Manhattan, Montana. **Atlatl Weights: Function and Classification** was published in the *Bulletin of Primitive Technology*, Issue #5, Spring 1993.*

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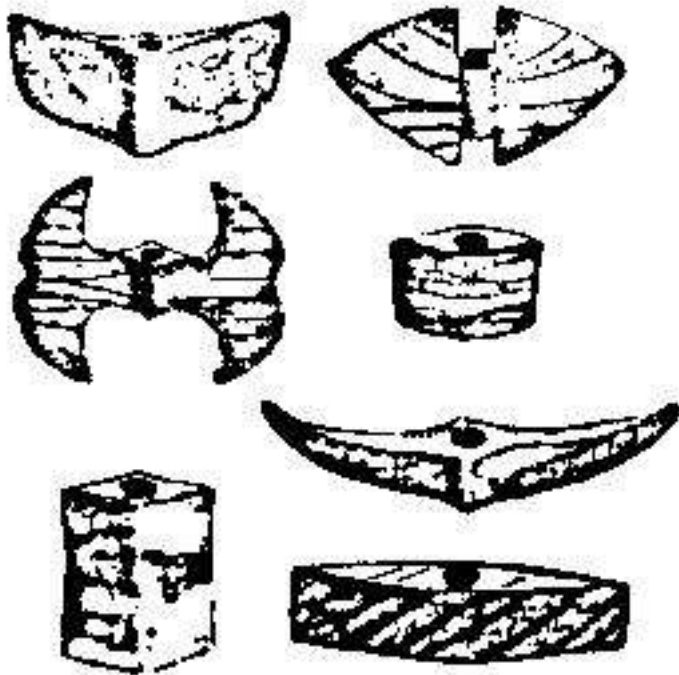
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Stealth Technology 1992 BC

by William R. "Atlatl Bob" Perkins, ©1992 AD

I've made the study of atlatls and the technology they represent my life work. Every time I think that I have learned or discovered nearly all there is to know about the physics of this most ancient of weapon systems, something new arises and I am humbled again by the obvious sophistication of the ancient mind. My first experience with this phenomenon was in 1988 while studying a western Type II atlatl weight recovered from a burial in the Great Basin. On a dark and stormy night a long-dead "master Atlatlist" reached out from beyond the grave and knocked me back as if to say, "Look, you're not so smart. We/I discovered this first. Don't confuse intelligence with education." I really felt as though someone from the past had spoken to me, for this Type II atlatl weight was the most advanced design I had yet studied.

Ancient people were every bit as intelligent as we are today. In fact if we were able to go back in time we would find a species as capable and intelligent as ourselves. Simply because we live in an age of super computers doesn't mean that we possess the license to label primitive technology as crude or to claim that every idea we come up with today is original. This is certainly the case with what I have discovered or, more correctly, rediscovered, about this ancient weapon system. Oftentimes we are only a conduit between the past and present, merely reporting what occurred long ago. Like an astronomer gazing through a telescope and witnessing some explosion far off in the cosmos which occurred long before hominids came down from out of the trees and walked upright, we can gain insight into our ancient past. From time to time, like the episode in '88, I get an idea, or hear a little voice, and again I am surprised and very impressed with the not-so-inferior technology of our predecessors.



Various Banner Stones of banded slate showing winged designs and hole placement.

This past spring at the Rivercane Rendezvous in Georgia, I was wandering among the variety of classes when a friend showed me a display of atlatls. One of the specimens had what is known as a Banner Stone on it. Having wondered as to the purpose for the design of the Banner Stone (other than as a weight), it was time to test a theory that I had held for years. I asked my friend to demonstrate the use of this atlatl for me. He swung two atlatls, one with a Banner Stone and one without, for comparison. It was at this point that the little primitive voice inside my head spoke out again. I demonstrated for my friend the discovery I had made, asking

him to listen to the difference in the swings. As I did this, I realized that the Banner Stone was not just an atlatl weight, but also an atlatl silencer. Before I go further with this theory, though, I think I should give a little background on atlatls, atlatl weights and the additional research which supports my theory.

The distribution of Banner Stones, as far as I know, is mainly east of the Mississippi River. They are generally made of banded slate, have a hole approximately 10 to 12 millimeters in diameter drilled longitudinally through them, and can be said to resemble butterfly wings. Whether or not they are atlatl weights is still of some dispute, but after considering the subject of Banner Stones and atlatl weights quite carefully, it is my opinion that they are precisely that.

Although some Banner Stones are quite massive and elaborate in their design and appearance they must be written off as symbols of power and authority. Banner Stones of this nature were certainly non functional as atlatl weights, just as royal scepters of historical times were non-functioning tools used as symbols of status and authority. Functional atlatl weights tended to be less elaborate and more in the range of 80 grams of mass.

Atlatl weights are not charms for hunting magic or some kind of counter balance, as some researchers have surmised. For anyone who has attempted to hold an atlatl--be it weighted or not--in the throwing position for an extended period of time, the counter balance theory is flawed. The theory suggests that the hunter can hold a dart at the ready for extended periods of time, being prepared to launch the dart if the opportunity

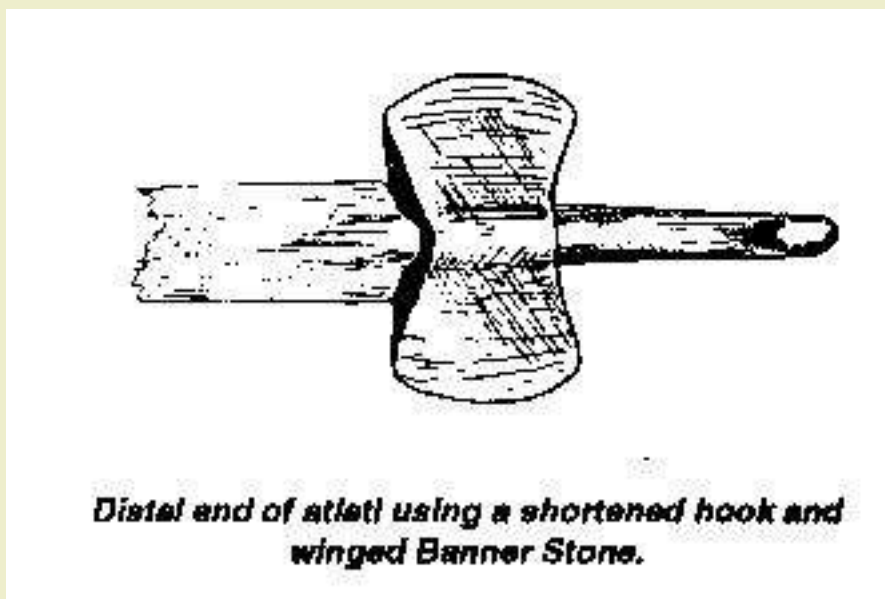
presented itself. The counter balance allows the hunter to compensate for the weight of the system mass through adjustments of the throwing hand. Experience dictates that one's arm will fall asleep, making an attempted launch ineffective at best.

The true function of the atlatl weight is to force an atlatl to flex and store more energy to be released against the stored energy of a dart's flex. It's similar to a diver jumping off of a spring board. The diver and the spring board flex and then push away from each other, using their stored energy to achieve a smoother, more efficient launch. If you have ever watched a skilled diver perform precision dives, you noticed that he will adjust the fulcrum point of the board to increase or decrease the flex of the board as it relates to his weight and timing of the dive. The mass of the atlatl weight also acts as a timing device, bringing the spring of the atlatl into phase with the spring of the dart, so that all the energies release at the proper moment.

There are many variables to consider when studying atlatl weights in particular and the spectrum of variables greatly increase when considering the peculiarities of the atlatls associated with them. If indeed Banner Stones are atlatl weights then why is this particular and rather involved design used instead of the simpler "point mass" type of weight found in the West?

Atlatls recovered in the Western United States average about 60 cm in length and weigh approximately 60 grams, give or take 10 grams. Atlatls of the Eastern United States tend to be somewhat shorter, at around 40 cm. This difference in length is the first problem to consider in the Banner Stone question, and it is resolved rather simply when considering launch geometry, environmental conditions and the function of the atlatl itself.

First off, the length of the atlatl in general can be explained by the Theory of Launch Geometry. Launch Geometry simply states that for close range targets, a shorter atlatl is required, and as the distance from the target increases, the length of the atlatl should increase proportionately. The understanding of this theory and its mathematical underpinnings is supported by experiment and the discovery of multiple length atlatl systems which allowed the hunter to adjust the length of his atlatl as needed.



Environment plays a key role in determining the general length of the atlatl. The atlatls of the Eastern U.S. are shorter because targets present themselves at closer ranges due to

the ample cover of the deciduous forests. In the West, where the cover is sparse and the targets not as easily approached, the atlatls are generally longer.

Returning to the subject of atlatl weights, I would like to point out that their mass is directly related to the length of the atlatl being used. In order for the weight to function effectively its mass and location along the atlatl shaft must be carefully considered, not to mention the proper spring force of the atlatl itself, thus providing the ability to fine-tune the system. One reason for the increase in mass of eastern weights (80 grams+-) is that shorter atlatls associated with them require more weight to perform properly. The shorter spring requires a larger mass to force it to flex and store the proper amount of energy required for the system. Western atlatls require less weight mass (even though they possess the same spring force) because of the mechanical advantage of their length.

Everything adds up nicely, so far. But what I have explained up to this point is merely the logic of Banner Stones as atlatl weights for short atlatls. We have yet to explain their odd and rather involved shape. I believe that this is related to the environment and the target's proximity.

I started developing the theory of Banner Stones as atlatl silencers while reading about Stealth Bombers and how the shape of the B-2 Bomber causes radar waves to deflect around, rather than away from the aircraft. While its true that radar waves and sound waves are not the same thing, the math involved is similar. If a Banner Stone could deflect the air and sound waves around it in a similar fashion, it would be possible to silence the atlatl so that it could not be as easy to detect. This would be an asset to a hunter that is closer to the target, as is usually the case in the Eastern U.S.

The environment may play a role in the amount of sound produced by a swinging atlatl. The speed and clarity of the sound varies with the density of the air, its velocity being greater at sea level than at higher elevations. Humidity may also play a role in its velocity, since sound travels faster in water. It is sometimes humid in the Eastern U.S., providing a more efficient medium for-the propagation of sound waves.

I have tested this theory with both weighted and non-weighted atlatls at numerous events. Test audiences have included both past and present SPT board members. With backs to the tester and blind to the types of atlatls being compared (i.e., weighted versus non-weighted) there was a clear consensus that the specimen bearing the Banner Stone was obviously quieter. They were also asked to change position throughout the test. As the observers position changed so that the atlatl was to their side, the sound got louder. Their reports support what would be expected for the propagation of sound waves. The farther to the side of the target, the greater the sound level, indicating that a correctly shaped banner stone will direct the air flow to the sides and back of the weight, so that a minimum of noise is heard from the target's location. This is primitive stealth technology, without the modern cost overruns. Perhaps the pentagon should have contacted us first!

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*William R. "Atlatl Bob" Perkins lives in Manhattan, Montana. **Stealth Technology 1992 BC** was published in the Bulletin of Primitive Technology, Issue #4, Fall 1992.*

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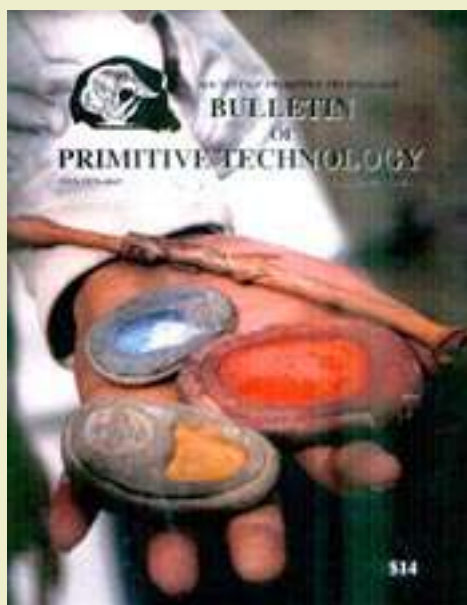
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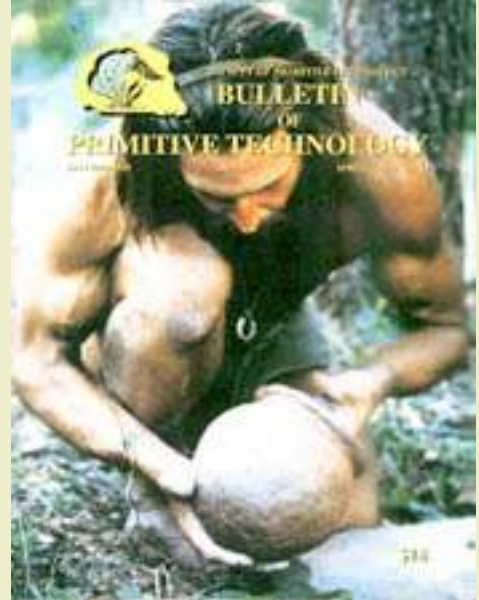


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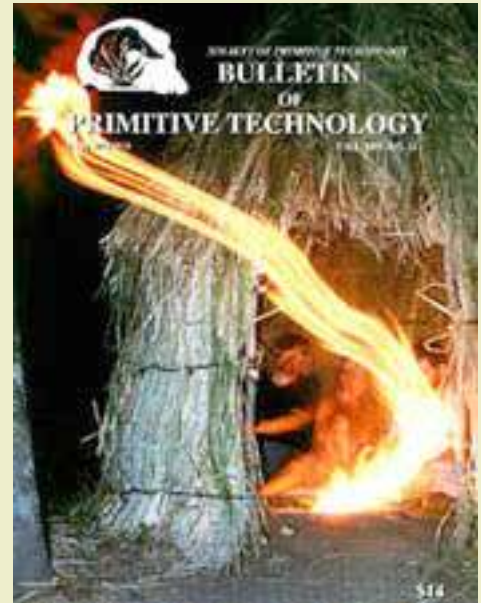
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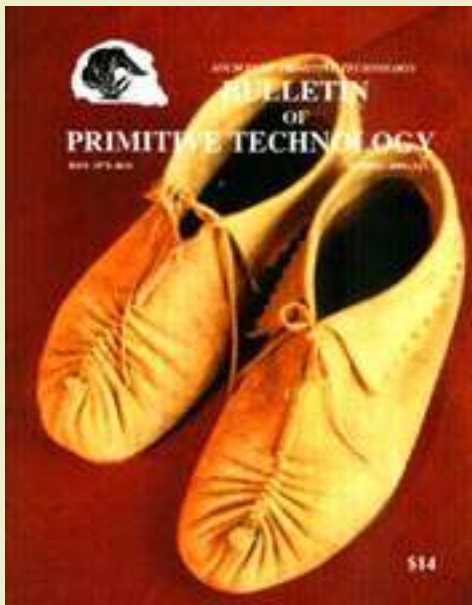
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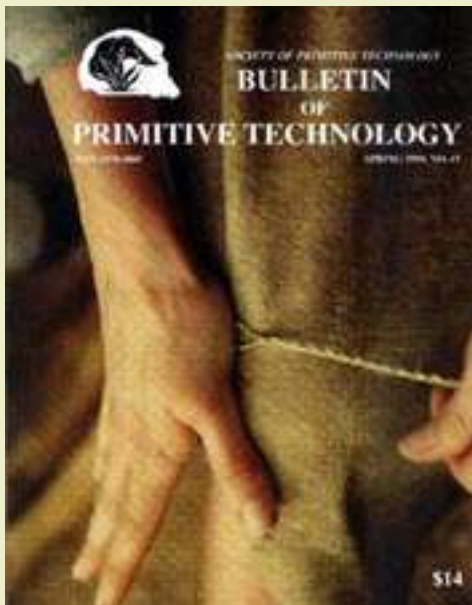
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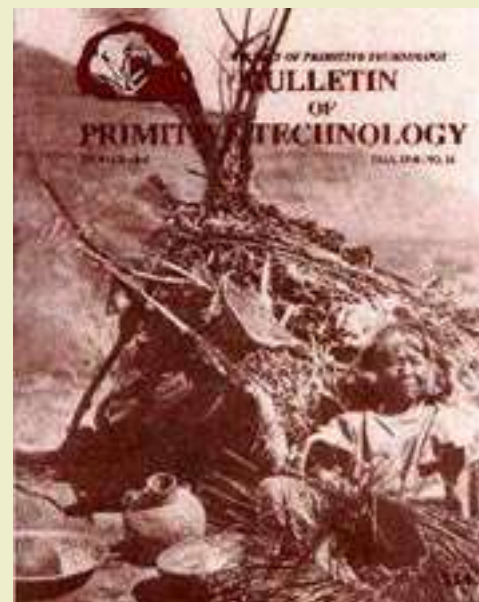
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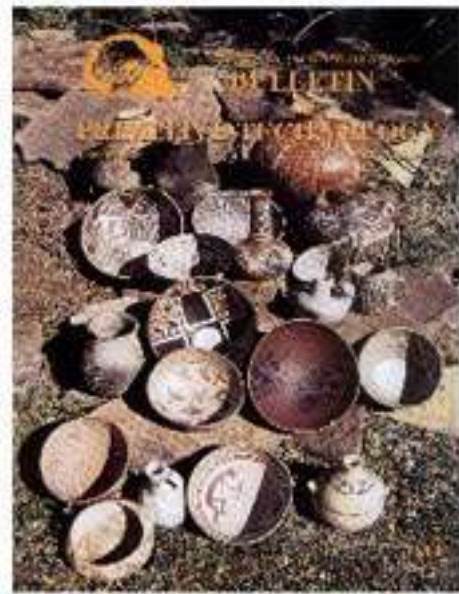
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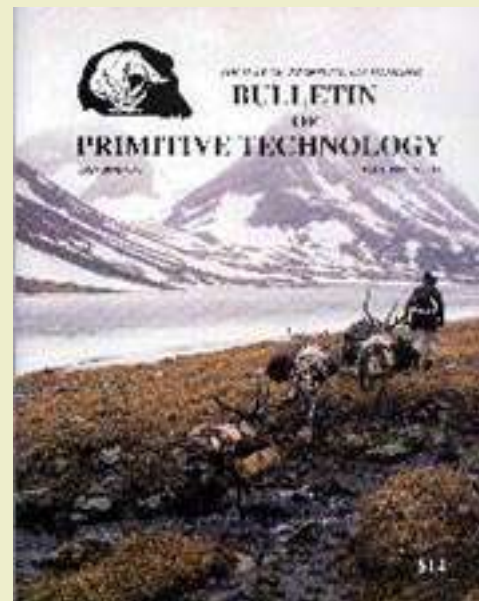
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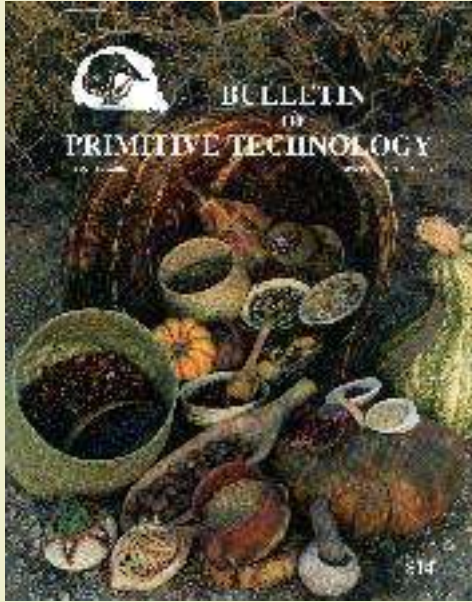
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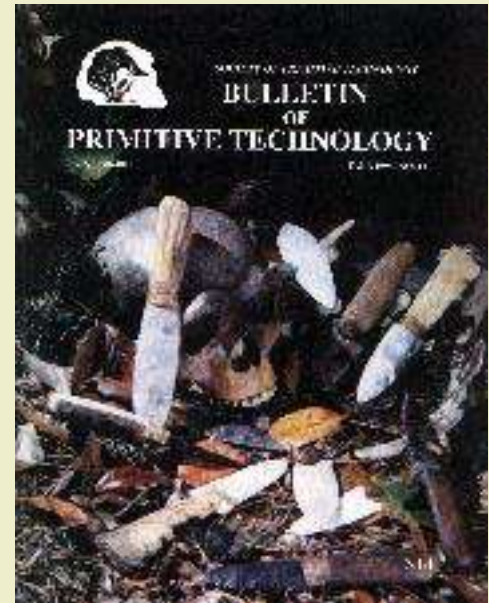
Spring 1997: SPT Bulletin #13: Foods and Cooking. Available



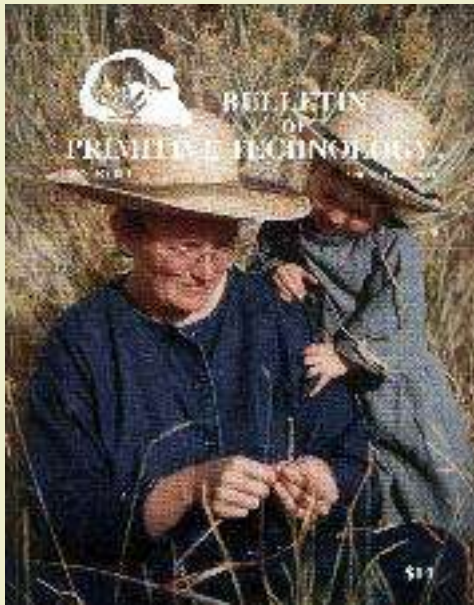
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Fall 1996: SPT Bulletin #12: Lower Paleo Tools. Sold Out

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Spring 1996: SPT Bulletin #11: Primitive Technology for Kids. Sold Out



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The Fire Plow © 1997

Adapted from [Earth Knack:](#)
Stone Age Skills for the 21st Century
Text and Illustrations by Bart & Robin Blankenship

There is magic in creating fire. Imagine taking your energy and focusing it enough to make something burn! The results of this effort are inspiring; the warmth of the fire, renewed feelings of capableness, and pure delight. By performing a task that your ancestors did daily, the simple movements, the honest effort, you also earn passage into that "deja vu" of a million years, that-connection in genetic memory to ages past. Creating fire is a powerful experience.

This journey of rediscovering fire, through which we have watched over a thousand people go, and have experienced ourselves, is more than enough reason to write an article on fire making, and to encourage you to go through the effort required to make your first fire. Fire may seem obsolete in our modern, urban lifestyles. After all, we have the thermostat, the oven, the electric blanket, the dishwasher, the hot water tank and the Bic. But don't fool yourself. No matter how we change the packaging, from electricity to propane, from coal to the Porsche pancake engine, from a diesel generator to nuclear fusion, we are still a fire based culture. There is that spark behind most everything we do.

There are many great projects and ideas in this *Bulletin* to enrich your modern lifestyle and broaden your possibilities on many fronts. There may be some ideas that change your life. But none of these projects are quite as ground shaking as creating fire! So pocket that Bic and give it a try. If nothing else-it's a tremendous ice breaker at your next party or a real show stopper when you go to light the Saturday barbecue.



This article focuses on the fire plow method, but whatever way you choose to make your Friction fire, you will need tinder and kindling. The coal you make with your fire set needs to be put into a tinder nest and blown into a flame. So gather your tinder and kindling first.



Here's how to make the tinder nest:

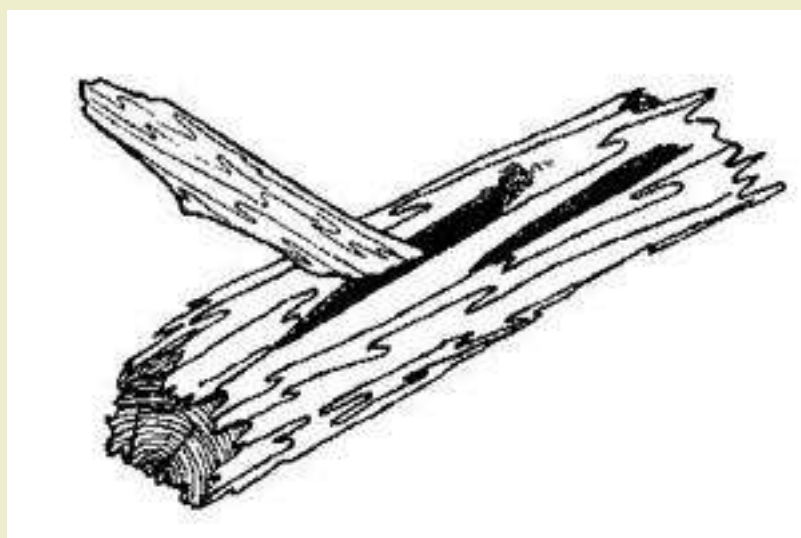
You can use dry grass, fuzzed up bark like juniper, sage, and cliff rose, inner bark of aspen and cottonwood, or in a pinch, tiny wood shavings. Generally, you want to fuzz up the tinder so it will ignite easily. You want it to be soft and pliable. When you fuzz up the tinder, little bits will fall down from your hands as fine dust. You will need to save this dust so work over a bandanna or something similar.

The best way we have found to work the tinder is to grab a length of it in both hands and move your fists round and round like pedaling a bike. This will soften the tinder that is between your hands. Move up and down the full length of your tinder. Then take some of this prepared tinder and tie a loose over hand knot in it. The diameter of this should be about four inches. Then stuff some tinder in this knot. It should look like a bird nest. The original knot of prepared tinder will hold the nest together. Keep stuffing the nest until it is dense. You don't want the coal to fall through the fibers and out of the nest, or have so little to burn it fizzles out before the flame begins.



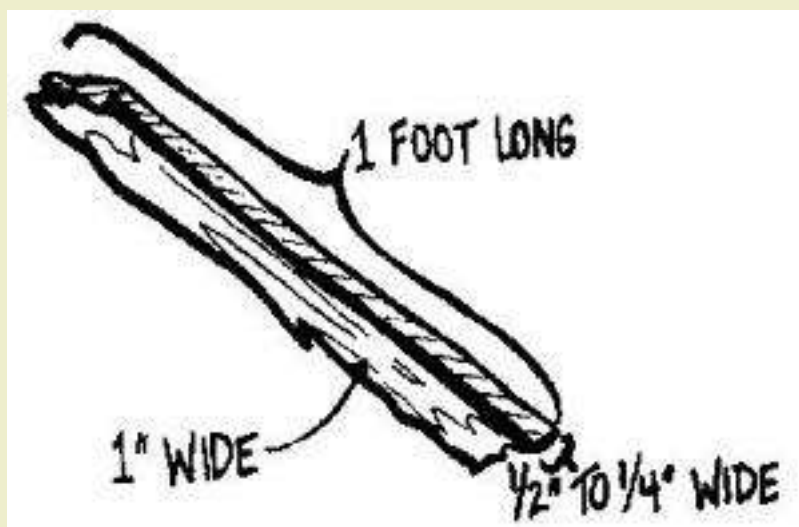
Collect the dust that has fallen into your bandanna and place it in the center of the nest. It will help if you first make a small hollow or depression in the center of the nest to contain the dust. As you pick up the dust you will notice that the finest particles fall back down onto the bandanna. This is what you want because you'll be packing finer and finer dust into the depression until the finest dust will be on the top, just where you'll place the eventual coal. Now make a small indentation in this dust for the coal and set the nest in a safe place where the wind won't blow it and you won't knock it around while making your coal.

One more thing before you start: check your kindling pile and make sure you have enough wood to get your fire established once you put your coal in the tinder nest and blow it to a flame. That tinder nest won't burn forever, you know. And in the aftermath of effort and the euphoria and exhilaration that comes once that tinder nest starts blazing, it's hard to make yourself jump up and dash around looking for scattered kindling. So do it now; before you start making your coal.



The Fire Plow

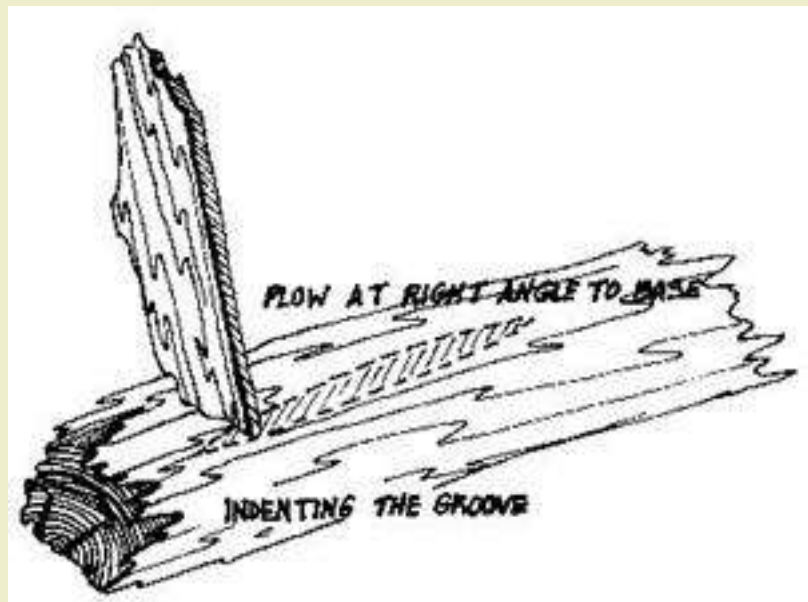
It doesn't get any more basic than this, unless you are chasing lightning around! Three hundred pound Polynesians have contests doing the fire plow method, but you don't have to be a Sumo wrestler to do this. However it does take intense effort. The first time we ever got this simple fire starting method to work, we had twenty 3rd graders and six adults to provide the muscle. Since then we have refined our techniques so that we can get it with two or three of us in damp weather, and solo, in under seven seconds if conditions are bone dry. It is the most primitive of methods, literally rubbing two sticks together. The beauty of it is that you don't need any tools to carve the wood. If you can break off a branch or a large splinter of wood and rub it against a log, you can be sitting around a warm fire while others are still whittling their more advanced fire sets.



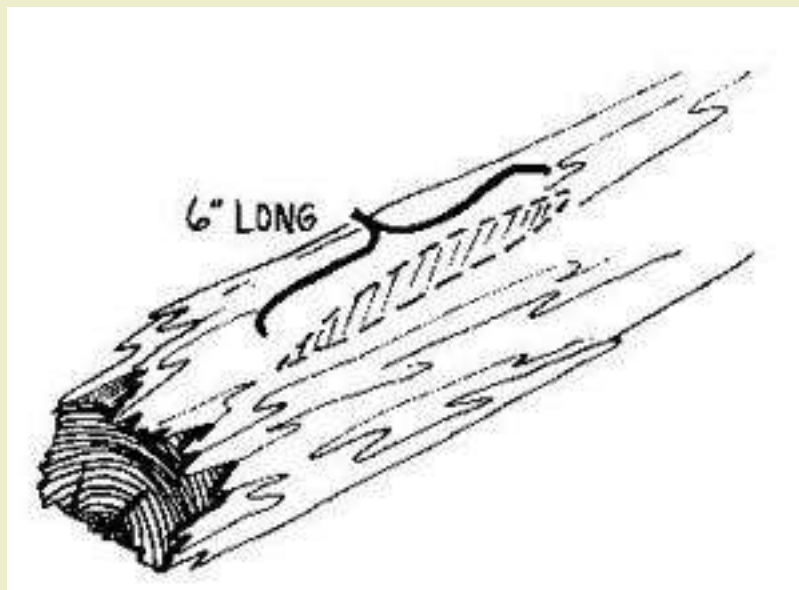
Our favorite woods for this method are cottonwood and sotol, (a type of big yucca). Both of these woods work well as plows, (the stick you hold and push) and bases, (the log you rub the plow on). Just remember the density of these woods varies greatly and it is best to have the base wood be harder than the plow so the groove doesn't get too deep.

To make the plow, take a stick that is a foot long and comes to a point. Make the first inch of the stick between half and a quarter of an inch wide. Some sticks will already be this shape, otherwise you can get the point like this with a knife or by rubbing it against an abrasive rock. The narrower the tip the more concentrated the heat, but the deeper it will dig into the log or base. And the deeper the plow digs into the base, the harder it will be to quickly push back and forth to get a coal.

The plow is used to make a groove in the base log of the fire plow set. The base can also be a stick, so long as it is at least two inches wide. Start off with the plow stick at right angles with the base. Push back and forth to indent the groove. If the base is a stick and not a log, you may have to flatten the base or indent this groove with a knife to keep the plow from slipping out. If it is a big log, Just start plowing slowly. Have one hand an inch from the tip of the plow and the other with the palm over the butt end. Work the plow back and forth



making a groove in the base six inches long. Once you have this groove made you are ready to lower the butt end of the plow and get to work. You need to lower the end of the plow so that the contact area between the plow and the base is greater. This dries out the woods and builds up heat without gouging too deeply into the base. Once the wood is really smoking and black dust is forming, raise the butt end of the plow to focus the heat on the tip. Go back and forth touching the accumulating dust at the far end of the groove every other time or so without obliterating this dust pile. Getting this subtle touch and retreat technique takes practice. Keep at it! You'll get the rhythm.



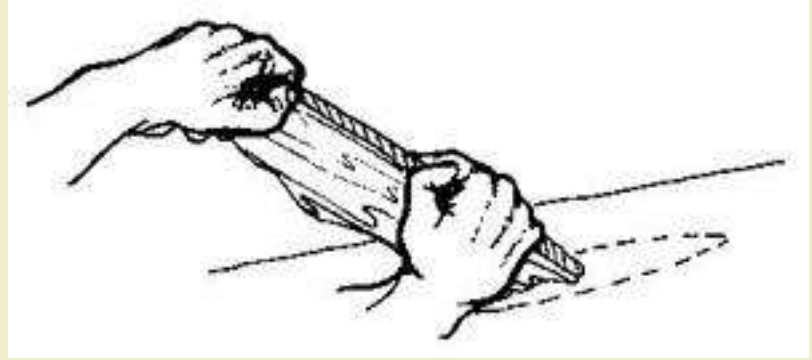
As you work the plow back and forth, sometimes a lip will form in the groove just before the place where the dust pile is accumulating. Each time you hit this lip you can be extinguishing a potential coal with the plow. Hitting the lip also hinders your momentum and decreases dust accumulation. If a lip forms in the groove, either move the stroke of the plow forward a little to break through this lip or move the stroke back so you don't touch it at all.

Speed and pressure are both important.

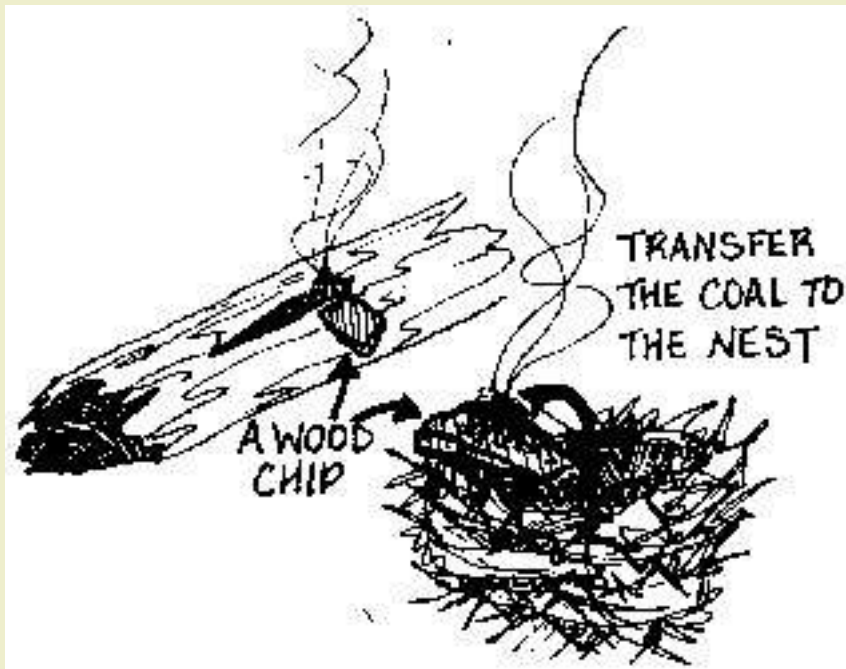
If you find the accumulating dust is big and flaky, or if the plow is really deepening the groove too quickly, use more speed and less pressure, or drop the butt end of the plow down to increase the contact area between the plow tip and the groove. This will fire harden the groove some so that it will wear more slowly, and get sufficiently hot without wearing too deeply. On the other hand, if you don't apply enough downward pressure, a shiny black glaze will form, impeding friction. Your plow will slide easily in the base

groove without making smoke. Stop and clean the glaze off of the plow stick and out of the base groove with a rough rock or put sand in the groove and plow through the glaze.

You will find that as you plow and work at touching and retreating from the forming dust pile, the groove will shorten up and you will be primarily using the half of the groove closest to you. If you allow the groove to get too short you will be spending all your time plowing tiny strokes back and forth and you will not be able to get enough



speed. Keep the groove at least three inches long even if you have to extend the groove toward you as you plow. The Fire Plow method is a sprint. If you start to slow down then switch and let someone else go at it. When you stop plowing and get ready to switch, always keep the tip of the plow buried in the dust so you don't lose heat.



If the groove gets so deep that it is hard to move the plow, you may shift your pressure forty-five degrees out to the side of the groove. This widens the groove instead of continuing to make it deeper. You can still get a coal this way without having to start a new groove.

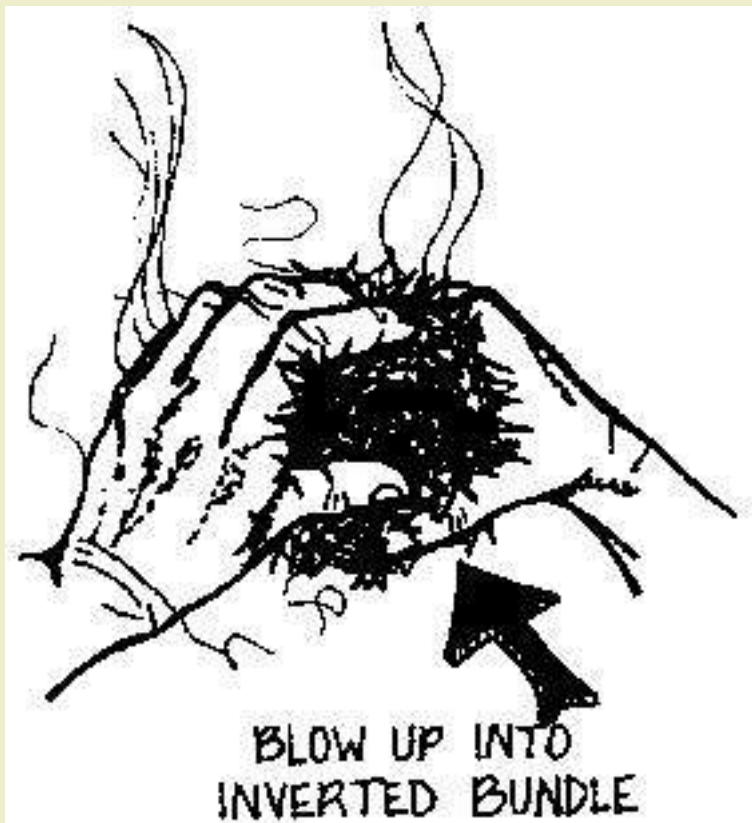
Once you get a coal with your fire plow set, you'll transfer it to your tinder bundle and blow it to a flame. Do this carefully enough to keep the coal intact. Fold the nest around the coal to keep the coal from falling out and lift the tinder to mouth level,

inverting the nest somewhat. This inversion allows the heat from the coal to rise into the dense mass of the tinder nest.

Blow gently on the coal, allowing it to consume the dust. As you blow, keep pinching the nest around the coal just enough to keep the coal in the nest while you tip the nest over and blow up into it. Don't pinch so hard that you put out the coal! As you're blowing, if sparks are flying all over, pinch the nest to surround and contain the burning tinder. If you don't close up the nest at this point the burning tinder may fall out of the nest.

Once the smoke increases, blow with more force. Turn your back to the wind so the wind will blow into the nest and keep the smoke out of your face. Keep blowing until the bundle bursts into flames. Sometimes, if the tinder is damp, it may have to dry out before it can flame. So hold off blowing a minute to let the tinder dry out and then resume blowing. If the nest is too small or not dense enough and falling apart, you may need to add more dry material around the smoldering nest.

If your fingers get too hot, grab the nest between two sticks. Holding a hot tinder nest in your fingers will make your fingers yellow and you'll look like a chain smoker. Besides, it hurts! The sticks or a tough piece of folded bark with the nest jammed into the fold are both good solutions. The burning tinder soon becomes a roaring fire. That is if you collected that kindling!



The fire plow lets you get your weight right over the area you are working and uses large muscle groups that were made for power. Its drawback is that the heat is dispersed along a groove and it usually takes power to get a fire. Still, this is a time tested method as well as a great work out. So rub sticks together in this fire plow method and enjoy the process of recreating a body that the human race has not known since Neanderthal!

*Bart & Robin Blankenship teach their [Earth Knack classes](#) in Crestone, Colorado. **The Fire Plow** was adapted from their book, [Earth Knack: Stone Age Skills for the 21st Century](#), and published in the *Bulletin of Primitive Technology*, Issue #13, Spring 1997.*

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Conquering The Darkness: Primitive Lighting Methods

by Benjamin Pressley

The archaeological record abounds with evidence of prehistoric cave exploration throughout the Midwest, Midsouth and Northeastern U.S. and throughout the world. Prehistoric people have went deep into the interior of the longest cave in the world. They gathered resources and sometimes just explored. During the latter part of the prehistoric period it is apparent that some caves became sacred places where ceremonies were held.

In many caves, such as Wyandotte Cave in Indiana, burned fragments of bark torches, bound with bits of cordage are found strewn along a path where chert nodules have been removed for stone tool making. Fragments of cane torches and bark fibers that have been burned are found beside bare footprints that are said to be 3000 years old or more in Mammoth Cave. Evidence is apparent that minerals were gathered by explorers of old such as gypsum, perhaps for paint and various sulfates. In Russell Cave in Alabama two black Bear humeri bones were found. They were cut, smoothed, hollowed and polished and were obviously used as hand held torches of some type.

How did ancient people light up the night or how did they conquer the rule of darkness in the cavernous depths of the earth? It is evident that indeed they did, for on cave walls all around the world they have left a legacy of artwork still spectacular even to this day to even the most hard-core of art critics. Magnificent frescoes depict a world gone by, yet never have seen the light of day.

Whether exploring a cave or needing to light a trail or camp in the dark, a knowledge of primitive lighting methods is a valuable survival skill to know. Intrigued by the possibilities of exploring yet another skill of the past I began my own experiments into ancient lighting methods, not to mention the usefulness of such a skill in a survival situation. Making light, like making fire requires drawing upon a practical understanding and skill with fire. As any good firebuilder knows, you must keep a constant supply of good, dry tinder, kindling and fuel on hand to nurture a fire, if you are to keep a fire burning. It is no different when using fire for light.

LAMPS

Lamps may be fashioned by pecking out a hollowed depression in a stone or using some natural container, such as a shell or a gourd. Pecking is done by striking a soft stone with a harder stone until the depression you need is achieved. A Quartzite or Diabase pebble will usually do for a tool for pecking. Soapstone or Steatite are probably the easiest stones to peck out a depression in. Hundreds of lamps have been excavated from Paleolithic sites in Southwest France, where some of the most spectacular cave art is

found, made of limestone and sandstone. Limestone is a good choice because it conducts heat poorly, so lamps of this material don't get hot enough to burn the user. Sandstone on the other hand conducts heat very well. Perhaps this is why most Sandstone lamps found archaeologically have handles carved onto them. Often, a rock may be found with a natural depression. Just make sure it is a closed circuit depression that doesn't have crevices where your fuel can run out and be wasted. Choices for basins to hold your fuel for your lamp are limitless, if you only think about what you have that can be used.



There are many choices for fuels and wicks that work very well with this type of lamp. Rendered animal fats as well as vegetable oils perform very well. Vegetable oil burns much cleaner and with less smoke than animal fat. Chemical analysis from Paleolithic lamps examined always revealed the use

of animal fats, never vegetable oils. Fat from seals, horses and cattle seemed to be used most. The consideration here is that the particular fat being used melt quickly and at a low temperature allowing the wick to absorb the melted fat by capillary action all the way to the burning end at a rate faster than the wick consumes itself. I find that a wick just long enough to have one end in the fuel, not coiled up in the fuel, is much more efficient, for fuel does not have as far to travel up the wick. You must also keep the flame from being drowned by excess fuel. Pecking out a slot for it to lie in while one end dangles down into the fat and the other end is lit works very well.

A wick may be fashioned by simply hand twisting a two-ply strand of cordage from Cedar bark you have stripped from the side of a tree, rubbed between the palms and fluffed up. If you have Cat tail down to cord in with it, all the better. Mullein leaves that have been rolled green and allowed to dry make a great wick. Jute twine also works as well as any type of corded wick. A wick may be as simple as lichen or a piece of moss that will absorb the fat as it floats. A wick that I like particularly well, that I use quite frequently, is Cat tail fluff. Steve Watts came up with this idea. Just pinch some dry Cat tail fluff off a dry, brown seed head and saturate it in your pool of oil in your lamp. Clump it together and pinch some of it above the surface of the oil and light it. Works great! You can also do this with a cotton ball, some vegetable oil and a tuna fish can, if your power goes out and you haven't got any candles. Alternatively, like the modern Inuit people still do, a piece of fat may be burned on a stone slab; fast, effective, but inefficient. I've even tried rolling a corded wick up in a ball of fat after saturating it. It works for a while but does not draw oil from the fat very efficiently. Rendering fat before it is used for fuel works much better. Fat may be rendered by two different methods: Frying the fat and draining off the oil before it

burns up or boiling the fat in water, allowing it to cool and skimming the fat off of the top of the water. As far as light goes, generally stone, fat-burning lamps generate less light than the average candle. Larger, bulkier wicks, though, do put out more light.

Pine pitch is very useful as a lighting fuel. Pine pitch is easily gathered as it oozes and solidifies on the trunk of injured Pine trees. It may also be gathered handily by cutting short lengths of River Cane, sharpen a point on the open end and leave the other end solid. Drive this gathering container under the bark of a Pine tree at an angle and into the cambium layer of the tree. You can come back at a later date with a container of useful Pine pitch. However, Pine pitch does smoke a lot and it will drip and seriously burn anyone unfortunate enough to drip any on their skin. In fact, I have even seen it burn through a leather shoe before. A stick coated on one end and built up by dipping the stick in hot, melted pitch and cooled, repeating this process till you have a ball of pitch built up on one end, much like candle making, and then lighting this mass and carrying it like a torch is NOT a good idea, for this reason. A better use for Pine pitch is mixing it in with some other fuel as a tinder to keep a fire going, whether torch or campfire. One very handy application I discovered from my early experiments is a combination of Cedar bark rolled up into a ball with fresh Pine pitch. This combination ball may then be placed in a lamp made of shell and is easily blown into a flame from an ember. It casts a lot of light and the compactness of the ball seems to slow down the rate of burning to the point I was getting 45 minute burns out of a golf ball sized piece. Rolling it in Cedar bark after kneading in fluffy Cedar bark also makes them not as messy to carry. These little balls are also great for fire starters under wet conditions. Adding Bee's wax into the mixture will keep the pitch balls soft and pliable, which may serve you better, for you can then pinch off small amounts at a time.

TORCHES

A torch I particularly like to use is a Hickory bark torch. I have seen this torch burn for as long as 2 hours. This torch is a combination of green and dry strips of hickory bark and a core of an easily combustible material that keeps a constant supply of tinder furnished to the torch. I use broom sedge for my tinder in this particular torch and bind it at various intervals, tight enough to keep it from burning up too quickly. It is lit easily with a small flame and can be blown on when more light is needed as it flares up. This torch performed very well for me in Langdon's Cave, near Wyandotte Cave in Indiana. Another version of this torch can be made by using lengths of River Cane instead of bark. If wide lengths of dry bark, such as are easily obtained from removing carefully from a Birch or Poplar tree, are available, just roll up a dried length and stuff it full of the tinder. You may find that the bark of the Birch may burn fairly easily without stuffing it full of tinder. I like the extra insurance, myself. Bark may also be folded accordion style and secured in between a split green stick and tied. This type of torch is used among the far northern people as a night fishing torch.



Strips of Bamboo or River Cane also work unbelievably well. To make one of these torches just bind up a bundle of Cane or Bamboo strips and light them. They require no additional tinder in the center. The tinder is the end of the torch beaten fine enough to catch up easily. It is these type of torches that were used extensively in the prehistoric past for cave exploration for there are blackened char marks on cave ceilings where as the torch burned it was necessary to knock off the charred end. Also short bundles of burned, bundled cane are found, apparently what was left of a hand held portion of the torch as it burned down too short to be held.



I have also used a mini torch made from an 8 inch section of Bamboo with another 6 inch section for a handle, open on both ends. Filling one end with melted pitch, does not work very well. When lit it will burn until it gets less than an inch below the lip of the Bamboo section and goes out, starved for oxygen. It also drips badly for all torches must be held at an angle and away from the body, to some extent. What I found that works better is to use Pine pitch that is full of pine bark fragments and heat it to the point that it is just clumpy or gather it fresh, not worrying about cleaning it out. After cutting the bamboo beat the end that will receive the pitch and bind it around the middle to keep it from splitting all the way down as you beat it. Take a stick and stuff this clumpy mixture in the beat up cavity and then further bind the section containing the pitch. This leaves 'vents' and when lit with a small

flame burns for a length of 45 minutes or more! A larger version of this torch may be made using a longer length of Bamboo and using less Pine pitch and mostly some easily burning tinder like broom sedge, Grapevine or other dry barks. I remember exploring Langdon's Cave with the Pine pitch mini torches, like prehistoric people of old. They left a trail of little lamps glowing behind us as if to light our way back and once when dropped in a puddle were easily re-lit by the flame from another torch, even when it was still wet! It was fascinating to explore a subterranean world lit with torches fashioned only from what nature had to offer. An adventure we all will not soon forget and will repeat in other caves. Another Bamboo torch that I really like was a design that Steve Watts came up with. A length of bamboo the length you wish to carry is cut and one end is cut as to leave an open end. A dry, Cat tail seed head is then saturated in oil. The open end of the Bamboo is then also half-filled with the same oil. The Cat tail seed head is then inserted into this end and lit. The dry Cat tail seed head acts like a wick and will draw oil from the reservoir and only partially burn itself as long as there is a reserve of oil. This torch works really well and burns safe and clean.

CANDLES

Of course, we could get into 18th century and modern methods of candle making, but there is much already written about this subject. One need only visit the local library if one is interested in this type of candle making. When I began my research on primitive lighting methods, I was surprised at how little there was written on the subjects of primitive lamps and torches. So, all that I have written is based on my own experimentation, primitive methods that one could use in a survival situation or methods that may have been used by prehistoric people. Some references are given below.



Cat Tail and Mullein seed heads perform fairly well as torches or candles when dipped in animal fat or Bee's Wax or Paraffin, allowed to cool and when lit burn like candles of sorts. The soft, pithy core of some plants work well as wicks or as candles. Plants that work well for this purpose are Mullein, Elder and soft rush stalks. The pithy center of the soft rush was once dipped in tallow and sold commercially as cheap rush-light candles. To make one of these 'rush-lights', pick tall, mature stems and cut them into sections the length you wish, one foot works well. Carefully peel away the tough outer part leaving enough at one end to hold the tender pith together. Dry these stems and

then immerse them in grease, melted fat or any suitable oil that does not evaporate. Set aside to cool and they are ready when you need them. A one foot length will burn for 10 - 20 minutes. During Medieval times, strips of enriched pine (fat lighter) were lit and held in the mouth for light to read by. Mullein leaves also make a great candle. Just roll them while green. Allow them to dry then dip them in Bee's wax or Pine pitch. Lay aside to cool and they are ready to light when needed. No wick in the center is necessary.

As with any survival skill, take time to experiment in advance. Try out some of these lights. Have fun with them and you will have a good working knowledge when you need it.

REFERENCES:

Need A Light? A very short insert from Sports Afield magazine, February, 1994 issue on the subject of rush lights.

The Outdoor Survival Handbook By Raymond Mears

Bear Bone Lamp, an article that appeared in the National Geographic magazine, March, 1958 issue, about the bear bone torch found in Russell Cave in Alabama.

Ice Age Lamps By Sophie A. de Beaune and Randall White, Scientific American magazine, March, 1993 issue.

*Benjamin Pressley lives in Stanley, North Carolina. Be sure to visit his website at [Windsong Primitives](#). **Conquering The Darkness: Primitive Lighting Methods** was published in the **Bulletin of Primitive Technology**, Issue #12, Fall 1996.*

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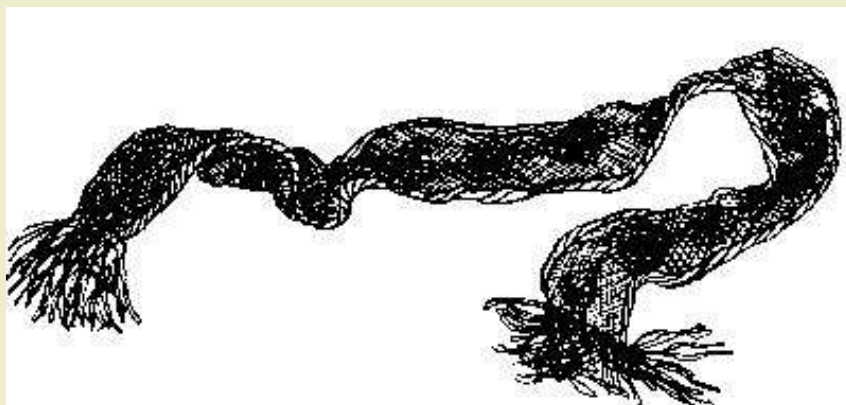
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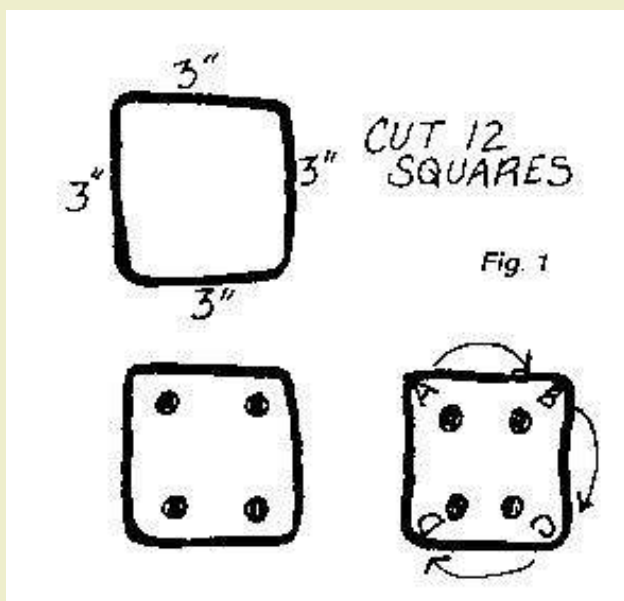
Adapted from [Earth Knack](#):

Stone Age Skills for the 21st Century
Text and Illustrations by Bart & Robin Blankenship

This is an ancient technique for making a strong strap quickly. A five foot strap can be woven in a couple of hours. You don't need a loom, only cards with holes in the corners, and about two hundred feet of cord. If you're cording it yourself, you need to get busy! The cards can be made of cardboard, leather, rawhide, bark, wood, fired clay, or even stone. Although not necessary, it can be very helpful to have a shuttle to hold the weft (the cord woven back and forth). You can use any type of netting shuttle. A very quick and easy shuttle to make is the spilt stick shuttle. Take a green stick that is about 8" long and 1 1/2" thick. Gently split each end about two to three inches. Wrap cord through the splits until they are full.



We are going to give you directions to weave a strap that is strong enough for pack straps, basket handles, tumplines, and saddle cinches. If you do a pattern like the one we are giving directions for, than it will be lovely enough for curtain ties, belts and other uses too. We will give you a pattern that takes 12 cards and 2 colors of cord. If you don't want a pattern in the strap, just use all one color cord. This strap will be five feet long, but you can make it any length you want.



First make the cards (Figure 1)

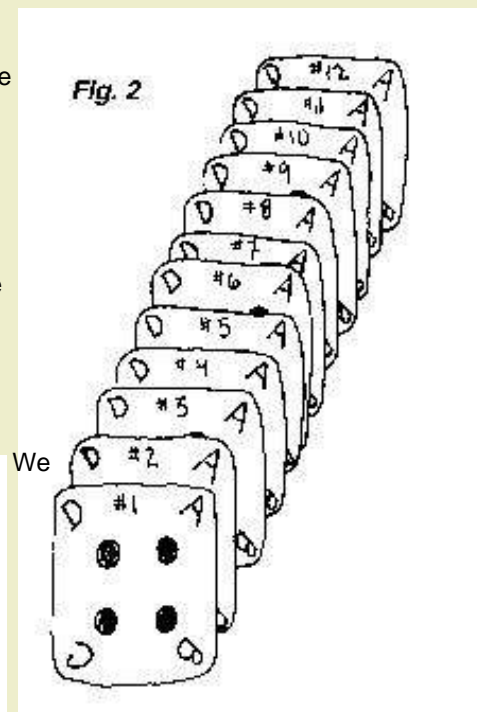
Cut three inch squares out of your chosen card material. The thinner the cards are, the easier they are to rotate in the weaving. Make a hole in each of the four corners of all 12 cards. Don't do this too close to the corner so you have room to label the cards in a manner that you can see the label as you work with the cards.

Labeling the cards is very important. Do it just this way. Lay all the cards in front of you and write the letter A in the top left-hand corner of each card. Now write B through D clockwise in each corner. When the letters are on the cards then number them 1 through 12 along the edge of the card between the letters D and A. Place all the labeled cards in a stack so the numbers are on the top, facing you, and so all the letters are aligned. Card #1 will be on top of the stack, closest to you, and Card #12 will be on the bottom (Figure 2).

For this example, you will need 48, six foot long, warp cords, the cords that go through the cards. Twenty-two cords will be of a lighter color and twenty-six cords will be of a darker color. We will use "lighter" and "darker" in our threading for a pattern description, so it will be helpful if you cut them this way. Lay the cords on the floor.

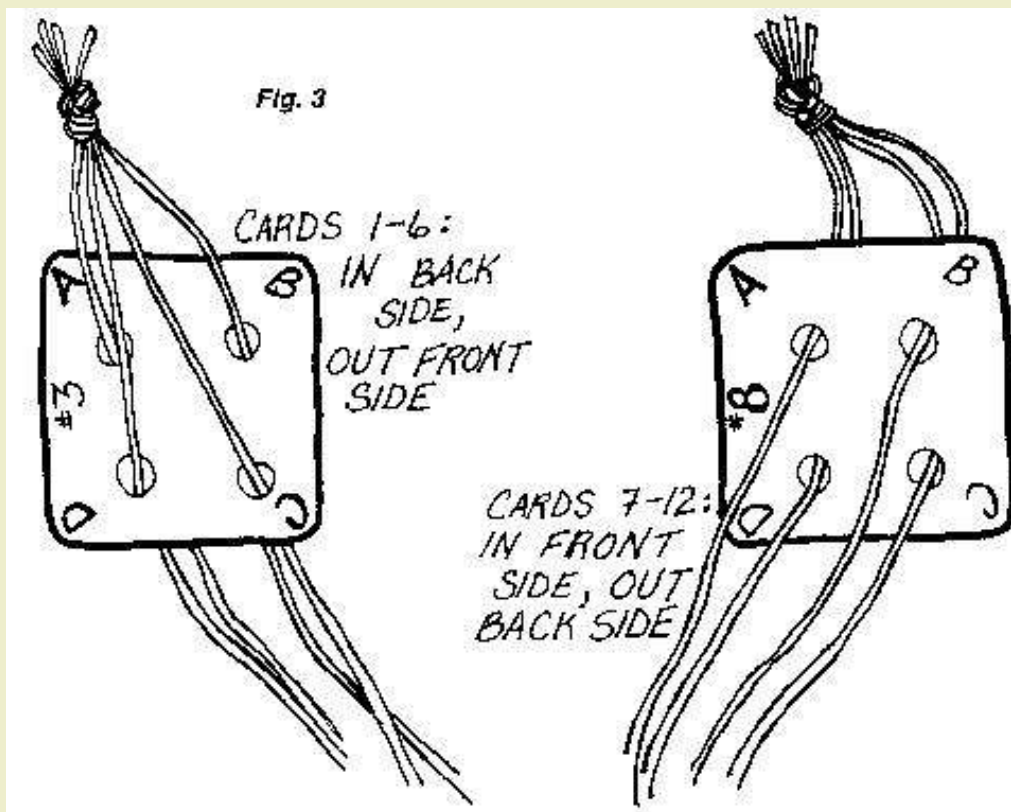
You are now ready to thread the cards

For clarity, in explaining how to thread the cards, the side with the letters and numbers is called the front side. The blank side is called the back. Hold the stack of cards in your hand with all the numbers on top. Turn the fronts of the cards to the left, numbers still on top, so you are holding the stack sideways. Cards 1 through 6 will be threaded from their back side and out their front. Cards 7 through 12 will be threaded from their front side and out their back (Figure 3). Having half of the cords threaded from back to front and the other half of the cards threaded from front to back gives a balanced strap, one that will not want to twist when it is finished.



We

have cut cords of lighter and darker color to make our favorite pattern that will give diamonds, arrowheads, X's, and other symmetric shapes depending on how you turn the cards. To get this pattern you need to thread lighter and darker cords through the cards in the particular order described below. If you don't care about the pattern, you can thread these lighter and darker cords any way you want to through the holes of each card to get a random pattern. If you have all the same color cord, thread the cards as described above and skip the threading directions for making the pattern. Remember, whatever you decide about pattern, each card must be threaded with all four cords going from the front to the back or from



the back to the front, in order for that card to be able to rotate properly.

The Threading Pattern

Remember to thread 1 through 6 from back to front Figure 4.

Card 1: All holes are threaded with a dark color.

Card 2: All holes threaded with light color.

Card 3: A with dark, the rest light.

Card 4: A and B dark, C and D light.

Card 5: A, B, and C dark, D light.

Card 6: B light, A, C and D dark.

Remember from now on you are threading from front to back.

Card 7: B light, A, C and D dark.

Card 8: A, B, and C dark, D light.

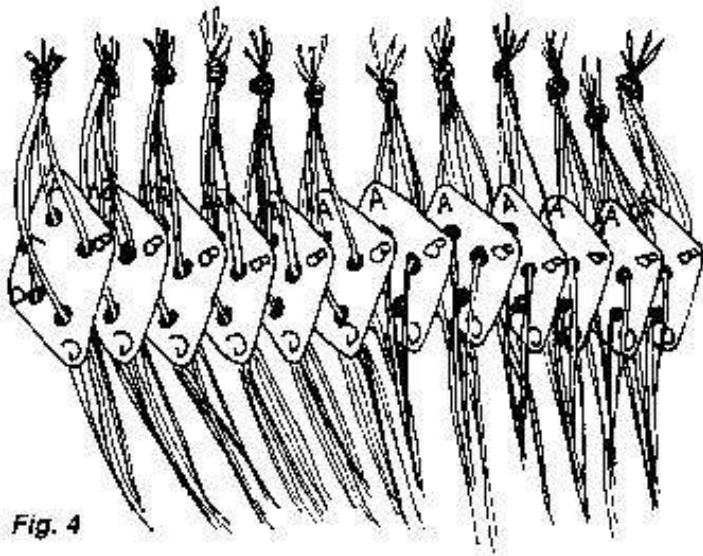
Card 9: A and B dark, C and D light.

Card 10: A dark, B, C, and D light.

Card 11: All light.

Card 12: All dark.

After you thread each card, tie the ends of the four cords together in a knot. Push the card almost up to this knot. You should have almost six feet of cord between you and the card.



Take the knotted ends of all the cords and tie them all together with a strong piece of string around the bottom of all the knots. Tie this strong string to something solid at about eye level. Check your cards. Make sure they are all turned up the same way. This will insure the least amount of tangle. All the cards must be positioned with holes A and D on top, D in the left corner, and A in the right corner and the numbers center. Gently pull all the cards away from their knotted ends, toward you, to untangle the warp threads. It helps to have another pair of hands to untangle the cords as you pull the cards toward you. Pull the cards until they are one foot from the end of the cords. Comb this last foot with your fingers.

Pull the ends of all the cords together, under equal tension and tie the ends in an overhand knot. You can get the tension really equal if you slide the cards up and down a few times while pulling back on the ends before you tie the knot. Tie a strong string around the top of this knot and tie this end to another heavy object, a chair will work, or your belt. Whatever you choose, make sure it holds the warp cords under good tension. This makes it

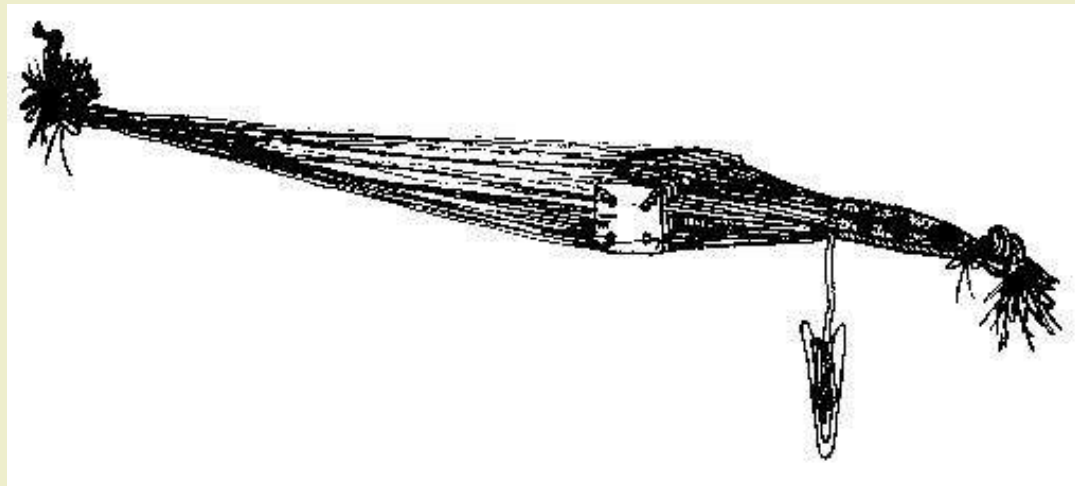
easier to weave.

You're ready to start.

Check your cards. Have the cards positioned with D in the left top corner, the number, center top, and A in the right top corner. This is the starting position for our pattern. Are they all the same? Good. Take all of the cards in your hands and turn them, all at once, one quarter turn away from you so holes A and B are on top. Slide the cards back and forth until the warp splits into two sets of cords. This split is where you will run the shuttle through the warp. When the split opens, use your hands to firmly pull the separating warps apart. Now pass the shuttle through this opening. Leave a foot of the end of the shuttle cord hanging out to the side. Turn the cards another quarter turn away from you. Holes B and C will be on top. Remember to slide the cards back and forth after rotating them in order to open up the split in the warp. Again, firmly pull this opening apart and pass the shuttle through. From now on, pull the weft tightly across the warp after each pass of the shuttle. If the weft is too loose you'll have big floppy loops on the edges of your strap. Turn the cards another quarter turn away. Holes C and D will be on top. Slide the cards, split the warp, and pass the shuttle through. Turn the cards another quarter turn away. Holes D and A will be on top again, with the numbers in the center. You have done a full rotation. You should begin to see an arrowhead with a light center pointing away from you.

Turn the cards toward you. If you always turn the cards away from you, the warp cords will get so twisted, that you can't rotate the cards. With the cord we have used, we can do about sixteen quarter turns, or four full card rotations in one direction or the other before we have to turn the other way.

The next four quarter turns toward you will give you another arrow head pointing in the opposite direction of the one you just completed. Together they will actually look like a large X. In this pattern this is the way you get X's. If you want two arrowheads pointing the same direction, then turn the cards eight quarter turns away from you when you start. If you want diamonds, begin the weave with four quarter turns toward you, and then do four quarter turns away from you. (This is two arrowheads with their base ends connected). These aren't your only choices with this pattern.



You can rotate the cards 5 or 6 or however many times you want in any one direction, and then reverse as many times in the opposite direction as you want. If you don't care about a sequential pattern, then you don't need to keep track of your turns forward or back. You can randomly turn the cards and do all the experimenting you want. Just remember to reverse them once in a while so the warps don't tangle.

The other side of the strap is also forming a pattern, sometimes more intriguing than the one you are watching develop. Remember, if the warp knot is tied to your belt, you will have to take up the new weave and retie it to your belt as you work up the strap. As you near the far end of the warp, you will run out of room to rotate the cards. When this happens, you are finished. Untie the upper knot, and remove the cards. Your strap is ready to use. You can braid or sew the ends to keep them from unraveling.

Bart & Robin Blankenship teach their [Earth Knack classes](#) in Crestone, Colorado. **Card Weaving** was adapted from their book, [Earth Knack: Stone Age Skills for the 21st Century](#), and published in the *Bulletin of Primitive Technology*, Issue #11, Spring 1996.

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On March 10, 1998 Larry Dean Olsen and Tom Brown, Jr. met for the first time in nearly 20 years. That meeting, planned for over a year, occurred at a Boy Scout camp near Boulder Creek, California. The meeting was requested by Larry and quickly agreed to by Tom as an effort to try to bring some peace to a divided primitive skills family. Their conversation during the day covered some of the contentious issues that trouble the movement, but much of the talk was the stuff of becoming reacquainted - shared stories, techniques and humor. At one point several of Tom's instructors demonstrated what may be the world's largest bow/drill set, with a drill that was six inches wide and five feet long. Toward the end of the day both men agreed to an interview conducted by David Purviance of Missoula, Montana. The complete transcript of that hour-long interview follows.

Interview with Tom Brown, Jr. and Larry Dean Olsen



Question: There will be several thousand people who will be interested in the fact that the two of you have met. Many will be pleased with the news, some will be puzzled, and even a few annoyed. But all, I think, will be greatly interested in what you talked about. Will you please summarize your discussions today.

Larry: Well, let me lead out on that maybe. I've been interested for a long time to lay to rest any thought or idea that I might be involved in a big controversy or vendetta of any kind that has to do with Tom Brown and myself.

There has been contention, there have been things said that were unverifiable, in my mind, and as I attended the Rabbitstick rendezvous and heard some of those things it just clicked in my mind that this needs to be put to rest. So I came here for several reasons, first of all, to bury the hatchet, which we did. And secondly to verify in my own mind who Tom Brown is, who he really is. And the stories I've heard and even the books he has written are not material to that judgment, in my mind. What's material to me is the character of the man that you are looking at. I feel a good spirit here, and I go by that pretty heavy. That's better to me than evidence of any kind that he can write about.

So whatever else there may be or whatever else anyone has said is now immaterial to me. I see a good man here who is doing good work and a good thing for the community that he works with. And that's what really counts.

Another reason I came was to learn a little bit about how Tom does what he does, what it is about the man that keeps people coming back and the charismatic way that he presents himself, and I've been impressed with that too.

Tom: That's saying something since I'm sick as a dog today.

Larry: Well, you can look through all of that. So that's why I came.

Tom: I have to echo the same thing, but to me I want to take it a step further in that, as you know, I've been seriously concerned with the route the Earth is taking. Things falling apart, frogs disappearing, as we've talked about, and I believe that everybody in the environmental movement and especially people who are so very close to the Earth such as abo people. People who are interested in aboriginal skills and going back to the Earth on a one to one basis like a child. We've got to set our petty differences and everything aside and look for a greater vision-something we can all work for instead of working against each other. A common theme, a common focus, which I think is staring us right in the face -- the total destruction of our planet, one way or the other. It has to stop with getting rid of all the rumor and innuendo and all the other crap that floats around. It hurts. No matter how much we pretend we are callous to it, and I know Larry has had some in his life, it hurts. And it takes away energy and your focus. We've got better places to put that energy and focus.

I learned more about Larry today. I am just in awe of his program. I have been since the first time I heard about it and the depths he's taken it to. I see a man who is very, very committed and very spiritual in his beliefs. It's not just a superficial approach to the wilderness, it's a much deeper approach.

Question: What do each of you hope ultimately will be gained from this meeting?

Larry: I would hope that the spirit of contention will die and that people will begin to look at the things that we are both doing in the true light that it should be. Which is that we are committed to helping people learn. Though there may be different styles of doing it and may be different directions that it goes over the years, it's still the same thing. It's a heartfelt interest in people and as Tom says, the Earth itself. I would hope that (the contention) would disappear now. And that even the most angry person, whoever that person may be, will reconsider and at least quit belly aching about it.

Tom: Yeah, get on to the battle. But I think that you look at the whole movement of people back to the Earth, it's so fragmented right now. Hopefully this kind of meeting and union here will pull a lot of people in to one mind and one heart, and one battle.

Larry: Yeah, you've got to get that story into the article about the two battle lines coming together and they stop and fight each other. That is really poignant.

Tom: How the old man put it to me was like a mess of people running to battle and on the way they're taking swings at each other and they're kicking each other and they're throwing each other down. They're still going to battle but they ain't ever making it there. Their energy is so spent, pointing fingers, and pushing and kicking and biting. They lose sight of the goal.

Question: The two of you made some plans today for the future. Can you talk about what plans you've laid that involve each other?

Larry: Well I'll tell you what I'd like Tom to do. I would like to extend the invitation to him to come to Anasazi and see what we're doing and spend some time out on the trail with me at



that place and also to come to a future Rabbitstick or Wintercount. And encourage some of his people to attend. Because I do think that we have a lot to offer and I think that if people can see Tom and get acquainted with him and feel the spirit that I feel that they will be ashamed of a lot of stuff they were thinking in the past. Regardless of what experiences they may have had in the past, that's no longer relevant. And it just needs to be put to rest and that's one way we can do that.

Tom: I'd like Larry to come out and see how we run things, different, of course, than he's done it in the past because each person has their own teaching method. And to understand me, my instructors, my teaching methods and the people that come to see me and realize in the final analysis that we're all doing the same thing. But just to realize we go about it a little bit differently. We want to stay in touch. We want to keep involved with each other, I think that's the bottom line. (**Larry:** I think so.) We want to keep a friendship that should have been going 20 years ago until today (**Larry:** Yeah) we've lost 20 years. I think we could be good for each other. I mean he's the only person I've been

able to talk to about burn out and how to raise your kids the right way. Who else am I going to go to? I think we can both help each other that way.

Question: Primitive skills practitioners have sometimes been criticized by environmentalists and those who espouse "leave no trace" philosophy as despoilers rather than protectors of the Earth. Is there any validity to these accusations or concerns?

Tom: Let me answer that one first. I love this one. There's the old survival philosophy which is, I think, the European way of thinking that the land is put here for our abuse and use, to do with as we wish. But I believe that a true survivalist is a caretaker of the Earth. Things must be harvested. Things must be adjusted and balanced. A survivalist put into a forest like this that is ailing, overgrown with trees killing each other off could actually be a positive effect, knowing what to take and when to take it. They are not just a caretaker, they're a healer. We're not a mistake from the Creator. We belong here and if we do this correctly as a survivalist, we are as important as the wolf is to the deer herd or the fox is to the rabbit population. And I know that Larry teaches that same thing, whenever you gather a plant, whenever you use a material, the Earth is put back as we found it but better. I believe that this attitude of "leave no trace" is like passing somebody wounded in the woods, saying hello and leaving. I look at the Earth as dying and it needs survivalists as healers. Instead of passing that person by, bandage the wounds. Fix what ails them and then go on.

Larry: I think if we lock up the Earth in the name of environmentalism, we've taken ourselves away from the Earth. And there's no hope for us. I had a little story I wanted to illustrate that with. I've often said to people who have challenged me on that when they say: "What are you doing to the land out there when you take these groups of people out on the land?" And I say, "Well the entire group, probably does less damage than one cow does in the same amount of time." Cattle, although they keep the grass down and keep things cleared out and everything, they can still be very destructive to water holes and that kind of thing, and we don't do that.

The good illustration of that is when I was teaching at Brigham Young University I used to take my classes out to a place called West Mountain and there was a hillside out there that was just lush with biscuit root and sego lilies and fritillary bulbs. There were seven or eight different bulbs you could dig out there. And I would take a class of 30-40 people at a time, and sometimes three or four sections of those and have a hundred people out there, all with their digging sticks, digging on that hillside. I pretty well let them randomly go through but always with the caution that if you are digging a little patch here, always leave two or three. Don't dig all of them, leave some of them. They were pretty respectful for that. Then I began to notice after the third year of doing this using this same area that every year they'd come up just as thick or thicker. And by the third year we began to notice that the bulbs were bigger and better. And after eight years of working that same ground every spring, we were getting that little thing they call the Indian potato that was usually about as big around as the joint in your little finger, they were now as big as onion

bulbs.

Then an environmentalist group contacted me and wanted to send somebody over to interview me, and they challenged me on the destruction of wild plants in the environment. Well the sego lily is a state flower of Utah so they didn't want us to dig any of those and I just had to say, well come with me. And I took them out there and showed them what had happened. Then I took them over to another place where that hadn't been done and showed them how they were there. And in fact as stewards of that piece of ground, we had actually improved, not only the ground itself by loosening it up, but we'd improved the size of the bulbs, we had improved the habitat that was there in many ways. And I really believe that man is the steward of the Earth and that we have that veritable command from the Almighty to take care of it and to, what did he tell Adam and Eve, till it, you know? Make it fruitful and improve it and I think that's just what we are doing. We tend it.

And primitive people generally do that, although we have to admit that sometimes they ran whole herds of buffalo over a cliff just to get enough to eat that day. There were lots of abuses even back then. But I think the Spirit of the whole thing is that things work in their natural process and that man is part of that natural process and we need to take up that.



Tom: We're finding now that the Native Americans used to set fires all through Yosemite and all the way back out to Yellowstone. So as soon as we got this idea that we know better what to do, no fires. Now it's a big tinder bundle waiting to happen. And we lose everything in a horrible burn. I believe firmly that a better name for a survivalist is a healer or a caretaker, a steward.

Question: Each of you has dedicated your whole life to the study and teaching of primitive skills, why are you so attracted to this field?

Tom: For me it's freedom. The best time I remember in my life was when I was 19 or 20. I was out in my parents' back yard in a pair of jeans, cut-offs, no shoes, no shirt. My mom yelled out the back window because she knew I had my nose on the ground, "Be back for dinner by six." I was -- the following June. To me survival is the ultimate freedom. This society can't offer it to you. To pull your car off the side of the road, and say to hell with you, I'm going back to Mother Earth and live there. And know you can take care of yourself or your family. Beyond that you are no longer an alien to your own planet- the backpack is some kind of a breathing device like a ball and chain. You can't go very far. You run out of provisions, you're back to society. And that's breaking that chain. I'm not saying, hey, go out all the time in survival. No, go camping and everything else, but when you've got the survival skills and you are no longer afraid of Earth Mother or the wilderness, then it's not a wilderness anymore, it's home. That's the lure, the mystery of those skills. Plus for me, it gets me in contact with something real in my life. Hey, I made this bow and arrow. I made that fire. I didn't go to a store and buy the damn thing. I don't need to. That self-sufficiency is something that is kind of lost in this country -- the mystery, the magic.

Larry: You just said it. It's the same for me. Other ways of saying that might be that as I grew up, I had this incredible thirst for discovery. And then I found that first arrowhead. I was telling some people last night I never learned to read until I was 12. And I couldn't get through Dick and Jane. I was social promotion all the way through the sixth grade. I sat on the back row and Miss Romaine just left me alone. But I found that arrowhead, digging a ditch for my uncle, and I just was so fascinated by that, I had it in my pocket, I'd stick my hand in there and I'd just touch it all day long and all weekend. I had memorized every little facet of it and when I got to school I got really brave for the first time in my life and I took it up and showed it to my teacher. And she just picked it up and handed it back to me and she says, "Class, class, Larry has something to show you, he found an arrowhead." And there I was in front of the class speaking. I didn't intend that. And I was so angry at her, I mumbled something and went back to my seat.

At 4 o'clock when school got out she was standing at the door when I came through to go home. She handed me a book and she said, "This is about the Indians that made that arrowhead." I took it home, threw it on the bed, went out and did my chores, came back, still angry, and picked it up and thought, well, it's about that arrowhead. And I got to the first page and struggled through the first sentence and then it grabbed me. And by morning I'd finished the book and I could read anything from that point on.

I went up to the Idaho State University a few months later and stole a book out of the library because I wasn't old enough to check one out. The name of it was Basin Plateau Aboriginal Sociopolitical Groups by Steward. It was an anthropological work on the Paiute Indians and I absorbed that into my system immediately, practically memorized the whole thing. So there wasn't anything I couldn't read after that. My teacher finally caught me reading that book inside my other book and she chewed me out, snatched the book up, started to walk up to her desk and started thumbing through it. She got this big surprised

look on her face and turned around and looked at me, and walked back and handed me the book and said, "well you can read this one."

For me, that act of discovery just hooked me and I was no longer interested in ball games, cars, I couldn't tell a Ford from a Chevy. I probably still can't. None of that meant anything to me.

Tom: See the beauty of that is you integrate that into your teaching. You integrate that same thing, that same discovery, and you develop it in your students and make them thirst for more.

Larry: Yeah. I just wanted to spend all my time out in the desert. That's all I lived and breathed for and I did. Consequently I didn't graduate from high school until a year late. And by that time the teachers and my counselor had told me that I should get a good job down at the coal yards and keep it. That was my best hope. That's true. That made me mad enough to go to college and become a teacher. I became a school principal, teacher, school bus driver, and part-time janitor all at the same time.

Tom: I hope you brought it back to the attention of that teacher.

Larry: You bet I did. That whole sense of discovery is pretty important to people. We think the world has been explored completely and I suppose people have walked just about everywhere now. They haven't discovered anything to speak of and it's all still there. It's to be found by every individual.

And survival, living off the land just accentuates your awareness of all of that. You have to know every twig and every boulder and rock and what it can be used for and you see things differently. You never look at a grove of trees in the same way again. And that's what I hope that my students pick up, is that it's not just scenery anymore. It's a livelihood and it's something that can really help you.

Question: I want to talk about the application of primitive skills. Do you see the possibility that in the future people might have to use primitive skills for their survival? Is that in fact the purpose of learning primitive skills?

Larry: A couple times a year I associate with a group of people whose sole purpose in life seems to be to become as proficient in primitive technology as they can get. And I've taken the opportunity to interview them. These are people who do this by choice, not because they were born to it. And in interviewing these people the reasons for them doing it are pretty similar but there seems to be several different branches of it. One of them is the idea that the world is going to pot, literally pot, and that nobody can think anymore. And that the day is going to come when all of our technology is going to fail us. And that they will have to go back to the primitive skills. I personally have a problem with that because we know too much now already. If we lost all of our technology, it wouldn't even

be a year before the minds of the people would gather together and recreate essential technological things. Even from the rubble that was left could be created a lot of things that would enrich our lives and not necessarily be Stone Age in doing it. So I think that's pretty impractical to think that way.

The other branch is the people who do it because it gives them a sense of security, just like Tom was talking about today. Just to know that without all of that packed-in finery, that you become dependent on, you could still exist. You are not dependent. You are an independent agent on the Earth with the free will to use the technology of the day to benefit us as we will, but not being afraid of being without it. And there's a lot of people who think that way.

The third (reason to study primitive skills) that strikes me is that people really enjoy it. They're just doing it for the fun of it. And it is fun. It's great.

Tom: I think Larry hit the reasons (for learning primitive skills). The principles of survival carry out into everyday life. You've heard me say, in survival you're sitting on a stump someplace, you're freezing to death, you're blaming the weather, you're blaming the time of year, you're blaming the instructor, it ain't going to do anything about it. You've got to make the choice to make it a heaven or a hell. You realize that in survival if you are freezing, you have two choices, build a fire or build a shelter or both. So when you bring this out into society, this survivalist attitude, you stop blaming society for your misfortune. If you don't like it, change it. There are a lot of little things in survival that teach you how to live in everyday life. Like right now, we're here sitting in semi-comfortable chairs. If we had to we could sit on the ground. Yeah, it's a little less comfortable sitting on these rocks but it ain't going to bother us if that's all we have. But we have the skills to make it better. You can go up and get some debris and sit on the debris, that kind of thing. Survival starts on a primitive level but it is an ingenuity that carries through every facet of society. What's an automobile leaf spring to one man is a hide scrapper to another. It's just the way of looking at things. It's applicable right now, that whole attitude. I can survive, I can make the best of things, I can make things better for myself. It's my choice.

Larry: And you don't have to be downtrodden and dirt poor and destitute in order to do it. (**Tom:** Exactly.) There's one other comment I wanted to make to the question are we going to have to survive with these primitive skills in society at some point in time. I don't think that we will, but that doesn't mean that we aren't going to reach a point in society at some near time when people are destitute and the thing does collapse on us and we've got tremendous problems. What I'm saying is that I think we now have the enlightenment and the ability that when that happens we'll solve those problems with a lot more technology than the Stone Age had. Although those of us who know the Stone Age skills will really treasure those and put them to use when it's appropriate. That's a safe feeling.

Just to add to that a little bit, the state of Washington hired me to come to Seattle one year to be part of a think tank. And the challenge for that year was to find ways to

evacuate the people of Seattle if there was an atomic bomb threat on the shipping yards and the military base that's there. They were trying to figure out how to get the people across those bridges off the sound and up over the mountains into those valleys beyond the mountains where they would be safe from fall-out. We had three days to sit and think and talk and there were four or five other men there that were brought from around the country. I mostly listened. I didn't have a whole lot to say about it.

But we came up with an evacuation plan. (After the civil defense people read our evacuation plan) they decided that the people in Seattle had reached such a state of helplessness that there would be no point in rescuing them. Their conclusion was, and there's official documentation on it even to this very day, seal the bridges and leave them there. They wouldn't know what to do when they got them to safety. So they said, tell everybody to just stay in your homes. That's the answer, trust us.

Question: To Native Americans before the coming of white people, their lifestyle and their religious beliefs were seamless; each based on a deep respect for the Earth. Today the practice of primitive skills or primitive technology is sometimes divorced from a spiritual grounding similar to what the Native Peoples had. What is the proper role today of these two? Should they be tied or should they be divorced? Or is that a decision that each person has to make?

Tom: Yeah, I think it's a decision that each person has to make. I believe the more time that people spend out (in wilderness), even people who have no faith at all, don't even believe that there's a God, put them out there for a couple of weeks, they'll suddenly realize there is a Creator. They have this whole spiritual contact.

Larry: They'll know that something is going on.

Tom: Yeah, yeah. I believe instead of finding out the hard way by putting yourself out there and realizing, wow there is something, to just get on with it and understand that it's part of everything and approach it that way. I don't believe you can separate one from the other, but that's my personal beliefs.

Larry: I feel the same way. I was brought up in a culture that is very sensitive and very spiritual and I've always had that and felt it, not that everybody lives it. And I think in aboriginal times it was the same way. The aboriginal ideal that we see the Indians today were that they were close to the Earth and they were very in-tune with things and that they had this spiritual connection. I think all of that is true in concept and precept. In practice, probably not as true. Because many of them were very vicious people and you don't learn to be vicious out there. That's not what you learn, you decide that yourself.

And the same with the white people that came out here. Some of them melted into the land, had their little farms, minded their business, tended things, made friends with the Indians and were just fine. Others came out wanting to destroy all the Indians so they'd

be out of the way and they wouldn't have to worry about them. It's a matter of where you come from. But I do believe that it's very difficult for a person to be out there for very long without realizing that something is going on. That all of this explanation, that it's all phenomenon of nature and it's all evolved over eons is just not a lot of hope in that. And it doesn't really make as much sense as they try to make it sound like. I think evolution is a process. I think it's really there, but it's not without guidance.

So being spiritual in the wilderness and using these skills-I see the skills as being a tool that builds confidence. It's not that the skill itself is so important. They're really pretty simple. And they're really something that anybody can figure a better way if they think about it long enough. But it's what it gives you inside that is spiritual that ties me to the tools. I guess it's an old Mormon concept that says that all things are spiritual. The Earth itself has its own Spirit and the people who are on it were sent here to work out something while we're here in this sphere, to have this experience for something really greater beyond. Not just to float around on a cloud and play a harp or anything but to really have an influence on eternity and eons of Earths. So the survival skills, living off the land, being close to Mother Earth and feeling of that Spirit is as much a part of my religion and my spiritual upbringing as anything I can think of. But I don't pretend to believe that everybody feels that way even though they're brought up with it, in any society. There are those who will exploit.

Tom: Larry's right. To me I look at the wilderness as God's temple, the Great Spirit's temple. We're always attached to the Earth. The umbilical cord is always there. To me it is also a gift, not only a place of worship but a gift. Anytime we do bad things to the Earth it's like spitting on that gift, showing absolute disrespect. And it's not only the Native American culture and many people that think like Larry and I do about this Spirit and skill and survival connection but it goes all around the Earth. Any culture that lives close to the Earth gets that same reverence, I think. But again, people are individuals, they make their own choices. I just think a non-spiritual approach is barely subsistence level survival because you are missing the bigger picture. You're missing a big part of yourself.

Larry: Well it's the Hollywood version. You look at the primitive caveman movies that have come out over the years and they are just brutes. They have no spirituality to them. And that's the way the world sees it. I don't think it was ever that way.

Question: How large would you estimate the Primitive Skills movement, if we can call it that, is? Maybe we can arrive at some kind of a figure by telling how many students each of you has had go through your schools or maybe you'd even hazard a guess to how many people are out there today that have gone through any school that teaches primitive skills.

Tom: Over 20 years, 25,000. Throw the military in there, probable 30,000.

Larry: I don't think I've had that many.

Tom: But then you've got to say, well each person reaches how many other people, it's an atomic reaction.

Larry: On the rehab trips that we've taken, I personally have had over 10,000. With Anasazi and the work we're doing now that I don't get directly involved in, there's been another 3,000 or so. So on that end of it there's that many people. And I'll guarantee you that 95% of those are in tune with what was taught to them then. They had a life-changing experience. Of the people that I have taken out because they wanted to learn the skills and they wanted to have the experience, maybe another 10,000. But that wouldn't be counting all the branches of it that are now in operation and they're all doing thousands. It would be impossible to come up with a number.

Larry: You know Tom, I decided that I really wanted to find the truth one time and I was bound and determined that I was going to learn the truth. So I went to a high mountain there in Idaho and found a cave and I sat in that cave for weeks. And I finally learned the truth.

Tom: What's that?

Larry: There ain't no bathrooms in a cave. (Laughter) That's a joke.

Question: The two of you are generally recognized as the fathers of primitive skills.

Tom: I think Larry more than me. I was still kicking around in the woods when Larry's book was out.

Larry: It doesn't mean you weren't learning.

Tom: I did the other route. I didn't go to college or anything. When I left Grandfather, I went and wandered for a decade, better than college. Yeah, it was learning, but still you started the whole thing at Brigham Young.

Larry: Probably as a movement is concerned, that's true. But I personally don't like the idea of being the father of a movement, for two reasons. Number one, I don't have any say about where it goes. And I am reluctant to have other people look at me in a way that would cause them to feel that I have some power over them or the worship thing. It's nice. It feels good to be in a position where people look up to you, but it doesn't feel good to be in a position where all of a sudden they think that you are the answer to their lives somehow. Because I am who I am and that will never be what a lot of people think they see. So I don't want the job.

Question: Are you encouraged by the interest that you have spawned over the past few decades?

Tom: In a nut shell, yeah.

Larry: Yeah, that feels good. And I think it feels so good that I'm hoping it will get me where I hope I go. I hope I make it. I've had a lot of really heartfelt good feelings from people when you realize you really have touched their life. I don't think there's anything that could compare to that.

Tom: Yeah.

Larry: And I've had that experience, or I've had that blessing just many, many times over and over. That feels good. It's almost like not having a job or a profession, it's like being something with someone. It's not work. I think that's what has kept me young all these years.

Tom: I see people that use the primitive skills whether it's the survival, tracking, or awareness, whatever the primitive skill, gets them closer to the Earth. That kind of environmentalist is real. It's a real child of the Earth. It isn't someone who jumped on the big green bandwagon and is going to ride out the latest fade. This is part of their lives now. What does my heart good is that this has been just a vehicle to get them there. I've been like a signpost or a stepping stone along their Sacred Path whatever it might be in life. And their environmental motives are a lot stronger, a lot deeper. They know themselves a lot better.

Question: Well let me pop that balloon with the next question. The two of you probably have taught 50,000 people and through your teachers many, many more. Still I'm sure you will have to admit that's a drop in the bucket of humankind. And today there are people, just go into a city and you will see them, who are totally unfamiliar with wilderness and are afraid of the dangers, real or imagined, of wild places. They never come in contact with the natural world. Is there any hope in trying to reach these people?

Tom: There's always got to be hope. And there's always an interest. I don't care how deeply it might be buried in somebody. You could pull out a bow drill in the middle of Fifth Avenue and 42nd Street and you will attract attention. There is something in a primitive skill that is magic. You got to have hope. Without hope you don't have the fuel for your vision. I think people are eager to get back in touch with something that is real after being surrounded, especially a deep city dweller, where everything is plastic and cement and games and smoke and God knows what. There's almost a hunger for reality, a hunger to get back to the Earth. Look how abused Central Park is on a nice sunny day, people just swarming to it like it's some kind of a medication. Yeah, it dwells, I think, in everybody. Johnny Muir even says it in his writing about how people hunger for it. Go ahead Larry, bail me out, or disagree with me.

Larry: Not much to disagree on. I just think what Tom said is it. The people you see in an inner city where they have no contact with nature, what's the hope of getting these people

in tune with it? I think in reality there's not going to be a whole lot of that happen. But everybody that I've ever met has had some thoughts on it. If you ask them what they think about it they don't have to pause and say, well I'm not familiar with that. They've already thought about it. Everyone wants to be quote self-sufficient, at least to the point of being able to take care of themselves if they needed to. Everyone desires that and I think everyone thinks about it. But they have nothing to base it on and that's the problem. Without the reality of the experience I don't see that a lot of them are going to actually get it, although it's still a desire as Tom says that they have. Everybody wants it. So I don't know.

Tom: Our role, Lar, is to get them out. In other words, entice them in and show them that there is a way.

Larry: Yeah.

Tom: That's why, I know Larry feels the same way, when you are tired from a trip and all of a sudden you remember, oh my God I've got to go give this lecture. It's not going to be a day off or two days off or whatever. But you got to do it because you may reach even five people in an audience of 200 that you'll motivate. And then they'll come out and get into the wilderness if not through me or Larry through someone else. And then they will go out and motivate more. It's that kind of consciousness that's got to run through the global society.

Larry: Umhum. You know, while you're on that. I think there's an even bigger group of people in the world who are not what we would think of as the New Yorker. They're generally third world poor survivalists. But they are living in societies that are so narrow in their traditions and their culture having such a grip, having such an influence in their lives that they really don't know how to take care of themselves except in that narrow way. And when disasters come, they seem to be the most helpless people.

And I think when these things do come down, it's not going to be modern society that suffers as much as all the third world poor. You look at the famine we had over in Africa a while back, that was just so pathetic.

I have had such a little taste of it, I really want to explore it more by going into a group of people who are really third world and show them some of the primitive skills that could actually improve their lives. It isn't something the white man is fostering on them that is made of plastic; it is something real that they can get out of their own back yard. (**Tom:** Right, yeah.) It isn't something that they have to save a lifetime to get enough pennies together to go buy somewhere. And I think they look for that. At BYU there's a thing called the Benson Institute. And their whole focus is to provide those kinds of things to the world. And they go into these third world countries, teach those people how to raise better tomatoes and better gardens and they do it without shipping in a lot of goods to them. They find ways to make compost on their own place to do it, ways to identify the native

plants that are around them that they can cultivate and put to use instead of selling them seed corn from the United States.

Tom: That's one of the dangers that hit so firmly on the head with survival. You get too narrow in survival, and any variation and you are in trouble. That's why you and I both teach a broad spectrum of survival, not just one fire-making device or one shelter or one trap, but several alternatives. So if this happened, okay, we've got this (other technology) to go with, and if that happens we've got this to go with. We have a broader understanding, the whole picture of survival. And that's why third worlders will tend to have these disasters.

Larry: Yeah. The Chinese are an example of that. I knew a man, a friend of mine, who was the head of the Oak Ridge Laboratories' Experimental Survival for World Problems in Tennessee. He was in China during the revolution. He was there as kind of an anthropologist helper to a village of people and he got caught in the uprooting when the Communists came in and said okay, all of you out of your homes, get on the road and start walking. And they walked them a couple of hundred miles to kill off everybody that wasn't fit. And then those that were left they took them out into the wilderness and plopped them down and said build a town. And that's how they dispersed the people and got control. He walked nearly a thousand miles across China. He nearly died of starvation himself and came back and was just the most interesting guy. But part of what he taught was that when aid finally came to those people that got outside of the Communist influence, the aid that came from the United States was in the form of wheat. They wouldn't use it because it wasn't rice. They wouldn't use it. They threw it away.

On the other hand I go to places like Peru and talk with people who are living pretty close to the Stone Age. Those people are there in desperation or they're there by birth and not by choice. And some of them would welcome the opportunity to step out of it and have some technology in their lives. But that's only a few. Most of the people that I've ever met that were true primitive people, were living that way by choice, just the same as we do. It's exactly the same thing. It's a way of life, they understand it, it feels good and they don't want to change it.

I met one guy who works for a big bus company. He's a business executive. We met him in a little town in Peru and he invited us to walk up to this little farm that my son owns there now and see the corn fields. And on the way back down, the rain started pouring, it was very steep mountainous country and he says, "let's stop by my mother's house." It was just a doorway in the street with these adobe walls. We went in there and here was this courtyard with little buildings built off of it. And there was the mother sitting under a shelter built in the middle of that courtyard cooking her food on a fire on the ground in a clay pot. Even though she was in a town, you stepped in there and you were right in the Stone Age. He introduced us and we sat there for over two hours and I just soaked up that woman's life. And I realized that she had at her fingertips outside that door all the technology that Peru has to offer and a son who has a college education who could have

taken her and put her up in a nice apartment, you know. But she refused to live that style because she grew up that way and that was her choice to stay there. And I thought that was pretty cool.

So there's just a lot of that. I think that maybe in the future I would hope that a lot of the people, in fact I know a lot of the people, in their interest to learn primitive skills, will also get into third world situations and begin to see what contribution they can make there. Some of them are doing that.

Tom: Yeah, definitely.

Question: Larry, through your Anasazi School that works with troubled teens, you've seen almost miraculous transformations through immersion in a primitive skills experience. Tom, I'm sure you, through the Tracker School, have seen the same. What is it about primitive skills that can reach to the very core of somebody and help to change their life?

Tom: I think it goes back to choice. Things people learn in survival they bring out into everyday life, (and they tend to make) intelligent choices, not following the gang or blaming their predicament on their alcoholic father and their drug-addicted mother and their street gangs, but make a choice to do something different, to be happy in life. That self-sufficiency, that independence, that power inside a person so changes them. The intimacy with something greater in life, the greater mystery changes them. There's not just one thing. It's getting them back to the purity, the simplicity that starts that seed, that plants that seed. But Larry would know better than I how the mechanism works because you've got kids that are pretty well beaten up.

Larry: Maybe I could best answer that by not answering it. I could tell a story instead. Probably most teenagers have in their top five reasons for living the concept that they have to have their friends. All teenagers have to have their friends. And those friends become far more important than the family. They become more important than their school. They become more important than living under the law. Those friends are it and they'll do anything those friends want to do.

When they get to us, they are suddenly without those friends. They're in a wilderness situation where their livelihood is dependent on their ability to learn the skills and their comfort is dependent upon their ability to really perfect those skills and improve on them. And that becomes the focus of life and there's no time for the casual friendships or the silly kind of friendships that they were so dependent upon before. And the friendships that do develop out there are built around saving each other's lives, meaningful kinds of things, and long periods of silence which teenagers do not have today. They get up in the morning and on goes the radio, earphones or whatever, and then they get to school and it's yak, yak, yak for five and a half or six hours. Lunchtime is a big clanking noise and then on goes the earphones at home and then TV at night and then they're in bed and

they haven't had any silence.

So what happens after they've been out on the trail and then the kids go home? I can call them up six months later and interview them or a year later and interview them. And one of the questions I always ask is have you changed your friends or what friends do you hang around with now? And it surprises me how many of them say, well, I don't particularly have any certain friends anymore, I just kind of hang around with everybody. They are no longer dependent on those friends. They are independent people and they can make the choices based on who they are and not what the crowd wants them to do. So I don't know if that helps answer that question or not. But that's what I see.

Question: Let me finish the interview with one last question. If you had the ear of the world today, if you were giving the state of the world address and everybody was tuned in, what would you want to say?

Tom: Oh boy. Simply, we've got to stop being a society of people that kill our grandchildren to feed our children. We've got to have people realize that we are at war and it isn't just in the neighborhood, it isn't just in one city, it isn't just in the United States, it's across the world. The Earth is a living entity, a spiritual entity, a gift. We might be on borrowed time. It's time to go to war. It's time to stop fighting with each other and go to war.

Larry: A good analogy. To the world, huh? I don't know if any of you ever heard of Dr. Hugh Nibley, he's a great environmentalist, but he's more than that, he's one of the great thinkers of the world. He went to Berkeley and as a young boy, he went to the furthest corner of the library and pulled off the first book and he never left the university until he was at the other end pulling off the last book. That kind of a mind. He could read a book in 15 minutes. He knows 42 languages. He's an Egyptologist. He can read the hieroglyphics in Egypt just like you can read a book. Just one of the really great minds and he just happens to reside at BYU. They've got him locked away in some basement somewhere and all he does is write. I'll never forget, one time I came in all grubby and dirty and I stripped off there at the college at the PE department and went into the showers. I was standing in the showers and here comes this ancient old man walking in there, and got into the shower. The shower was just a circular thing with showerheads coming off of it. And he stood on the other side of the post and was showering and we got to talking and he introduced himself as Hugh Nibley. So we got to talking and I asked him that same question you just asked.

I said of all the studying and all the brilliance that you have and the volumes of it--the guy has written a whole library of books. What is the cut of it all? What would you have to say if it was your last words? And he said, well, after everything else we can do there's really only two things that we can do. We can repent and we can forgive. And that was all he'd say. I've tried to live by that and figure it out all these years. But when you really get down to it, we have to repent of how we treat people and the Earth and we have to forgive

anybody that's involved in it from any level. Because until we do that, we can't reach their hearts. (**Tom:** Right.) I really believe that people are not all that bad. And if we can be pure ourselves, we can touch their heart and then the Earth will change.

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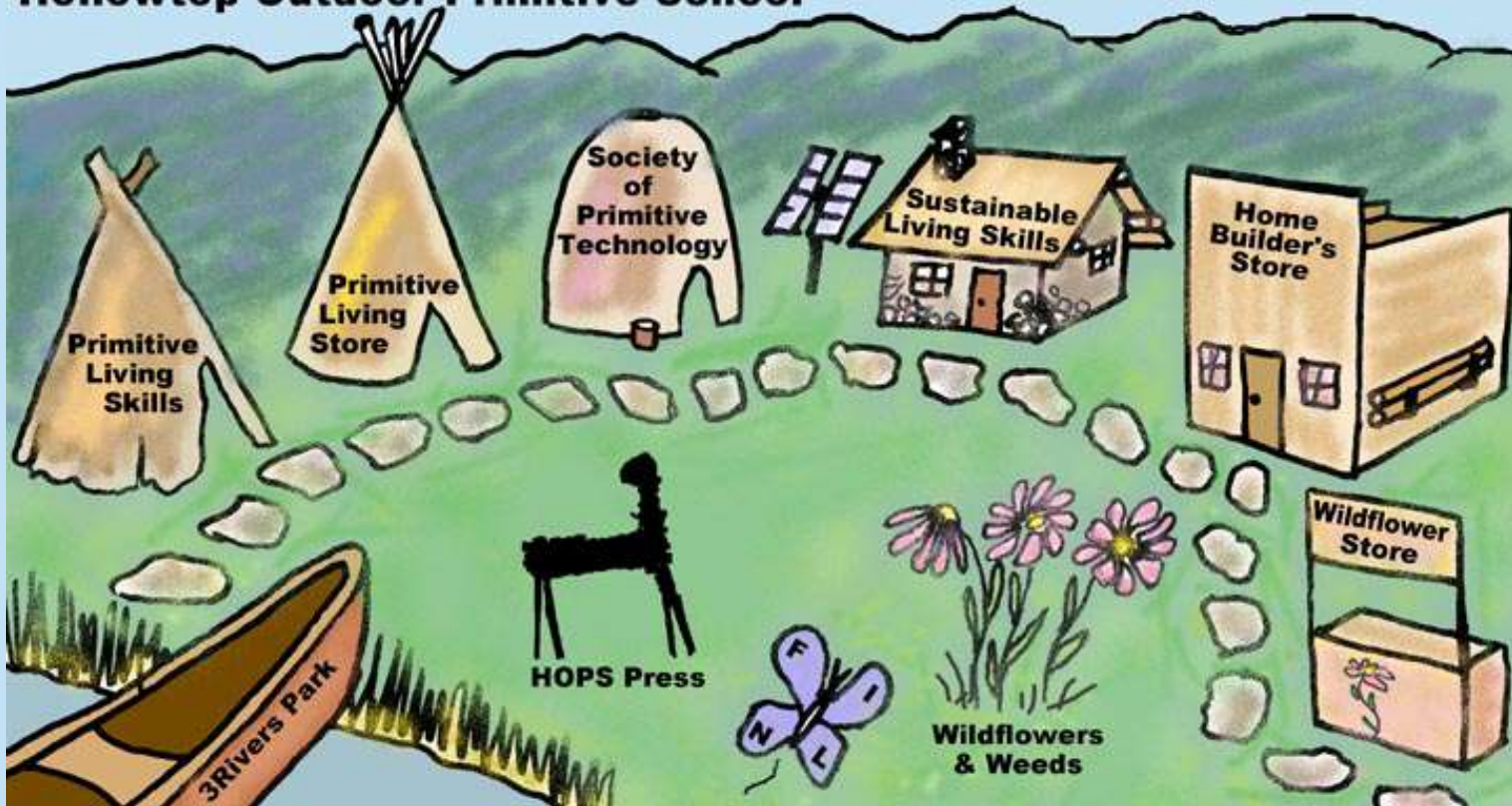
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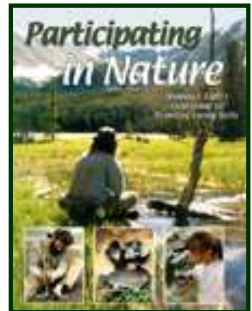
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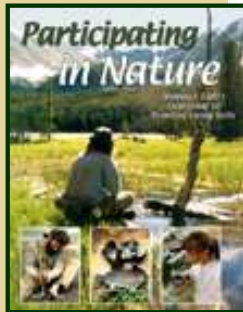
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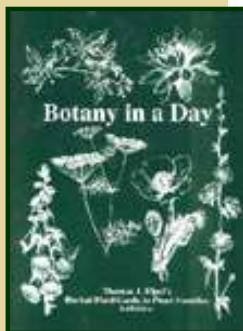
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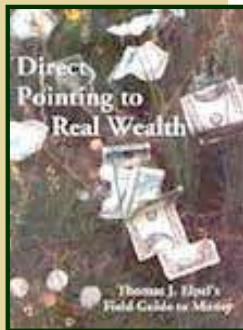
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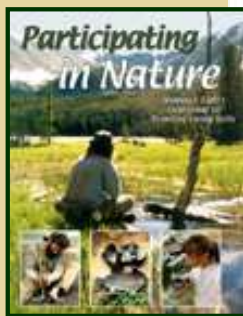
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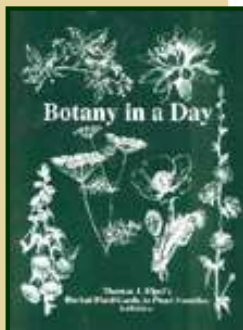
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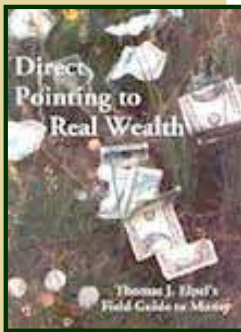
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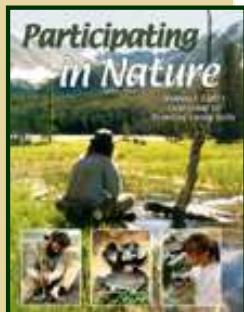
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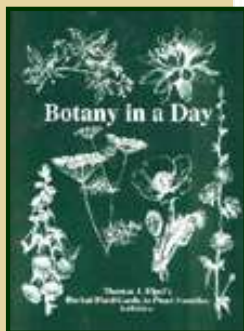
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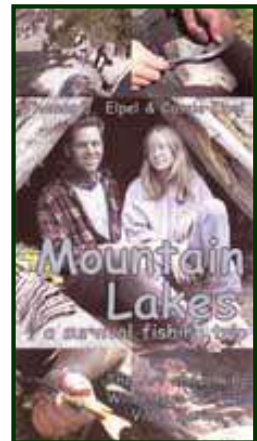
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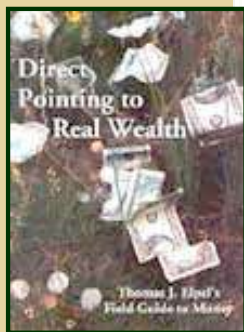
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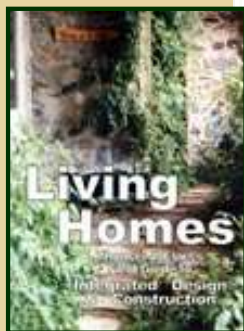
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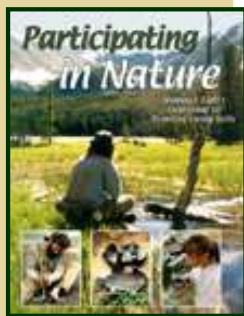
- The Art of Making Primitive Bows and Arrows** by D.C. Waldorf
- The Flat Bow** by Ben Hunt & John Metz
- Bows and Arrows of the Native Americans** by Jim Hamm
- The Bowyer's Bible, Volumes 1, 2 & 3** by Jim Hamm & Others
- Enc. of Native American Bows, Arrows & Quivers, Vol. 1 & 2** by Steve Allely and Jim Hamm
- Ishi & Elvis** by Jim Hamm
- Whitetail Tactics with Recurves & Longbows** by Jim Hamm
- Making Indian Bows and Arrows the Old Way** by Douglas Spotted Eagle
- Roving Handbook** by Errett Callahan
- The Atlatl: Primitive Weapon of the Stone Age** by Kris Tuomala
- Sinews and Hide Glue**



[Living Homes](#)

Braintan Buckskin: Books, Videos, Tools, & Finished Hides

- Wet-Scrape Books, Videos and Tools**
- Dry-Scrape Books, Videos and Tools**
- Braintan Buckskin For Sale**



[Participating in Nature](#)

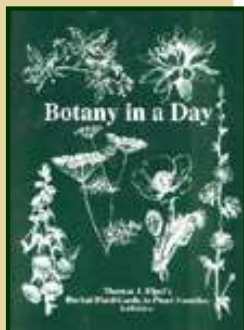
Awareness Books, Tapes, Resources and Perspective

(This is a combination article and book reviews.)

- Tom Brown Jr. Autobiographies & Field Guides**
- Jon Young Audio Tapes**
- Jon Young's Kamana Naturalist Training Program**
- Chris Chisholm's Wolf Journey Part One**

Also see these related pages:

- Jon Young Native Awareness Resources**
- Ingwe** by M. Norman Powell
- Hatchet** by Gary Paulson
- The Secrets of Natural Movement videos** by John Stokes

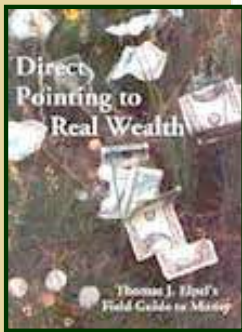


[Botany in a Day](#)

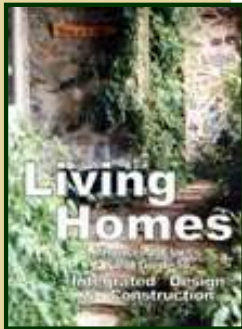
Bird Identification & Interpreting Bird Language

(This is a combination article and book/tape reviews.)

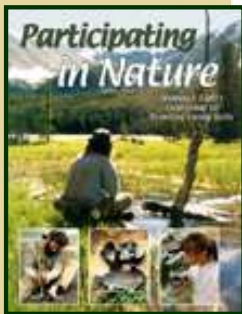
- Learning the Language of the Birds** with Jon Young
- Advanced Bird Language** with Jon Young
- Sibley Guide to Birds** by David Allen Sibley
- Sibley Guide to Bird Life & Behavior** by David Allen Sibley



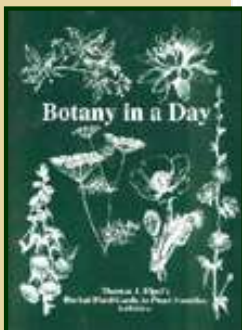
[Direct Pointing to Real Wealth](#)



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[Participating in Nature](#)



[Botany in a Day](#)

Books about Wilderness Schools

[-Aboman's Guide to Wilderness Schools](#) by Joseph A. Bigley

[-Shouting at the Sky](#) by Gary Ferguson

Tracking Books & Videos

[-Mammal Tracking in North America](#) by James Halfpenny

[-Tracking Elk for Hunters Video](#) by James Halfpenny

[-Animal Tracks](#) by Olaus J. Murie

Primitive Musical Instruments

[-Stoneware and Recycled Plastic Ocarinas](#)

[-Make Your Own Five Hole Flute from Recycled PVC](#)

Astronomy Books

[-The Stars](#) by H. E. Rey

Basketry

[-Barbwire Hearts](#)

[-Barbwire Baskets](#)

Note: Plant Identification Books & Videos, Herbal Books, Dandelion Resources, Mushroom Books and Wilderness First Aid

-Have All Been Moved to Our [Wildflowers & Weeds Store](#).

Dear Tom & Renee,

I was shocked when I opened my mailbox on Thursday and there were my [Advanced Bird Language](#) tapes. I just ordered them on Monday! Thank you so much for getting them out so quickly.

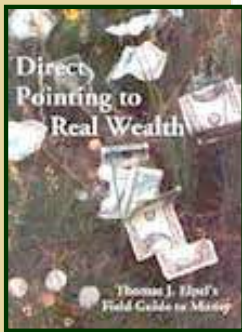
I also enjoyed the papers they were wrapped in --kudos to you for your recycling efforts!

*--Joyce D.
Golden, Colorado
(used with permission)*

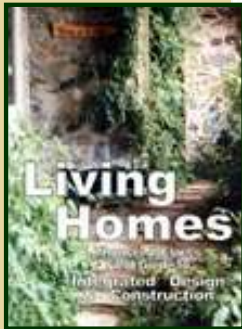
Hello Tom!

Just finished reading [Participating In Nature](#) and I loved it. I am a Tom Brown student, as well as a fan of Mors Kochanski and any other primitive skills authors I can find. Your book is very refreshing in that it reads as such a nice adventure story that teaches all along. There are also many ideas and skills that I have never encountered in other books and that is wonderful. I really enjoy the realistic approach to the philosophy of living well within today's society. Thanks!

*--Dale Kiselyk
A.K.A.: Nature Boy
Nature Boy's Wilderness Living and Survival Instruction
(used with permission)*



[Direct Pointing to Real Wealth](#)



[Living Homes](#)

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Order on-line with your Visa, Mastercard, or Discover. Simply click on the links to learn more about each product and enter the quantity you want in the little white boxes, then click the "Add to Order" button. We also accept checks and money orders. For orders by mail, e-mail, or telephone, you can still use the on-line shopping basket to tally the order and postage. Then print or copy the information and send it in to:

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PO Box 697
Pony, MT 59747-0697
406-685-3222
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Also See Our [Home-Builder's Store](#)
And Our [Wildflowers & Weeds Store](#)

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And Many More Creative
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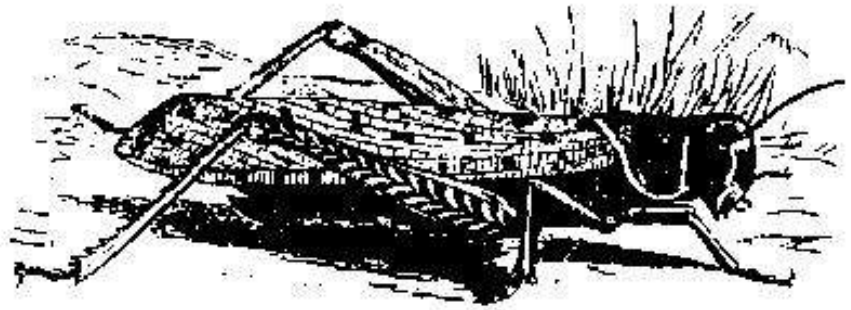
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& Edible Plants
Rangeland Ecology
Weed Control Alternatives



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(A non-profit, Montana corporation)

Web space provided courtesy of [Hollowtop Outdoor Primitive School](#)
Updated July 5th, 2002

[-Click here to Subscribe and to Order Back Issues-](#)

[An important letter from the Assistant Editor, February 1999](#)

Selected on-line articles from FINL back issues:

March 1998: [Fried Grasshoppers for Campouts or at Home](#)

November 1997: [Food Insect Festivals of N.A.](#)

March 1996: [Raising Mealworms](#) (including recipies!)

July 1995: [Allergies Related to Food Insect Production and Consumption](#)

November 1994: [Some Insect Foods of the American Indians](#)

March 1993: [Food Conversion Efficiencies of Insect Herbivores](#)

July 1992: [Large-scale Feed Production from Manures with a Non-Pest Native Fly](#)

November 1991: [They Ate What?](#)

November 1990: [Collecting Ant Pupae for Food](#)

July 1989: [Hunter-gatherers were sometimes very labor-efficient](#)

November 1988: [Commercial Availability of Food Insect Products in the U.S.](#)

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[Insect Books](#)

- [-Man Eating Bugs](#) by Peter Menzel & Faith D'Aluisio
- [-Creepy Crawly Cuisine](#) by Julieta Ramos-Elorduy, Ph.D.
- [-Eat-A-Bug Cookbook](#) by David George Gordon
- [-Entertaining with Insects](#) by Ronald L. Taylor




[Other Food Insects Sites on the Web](#)



This [SurvivalRing](#) site is owned by
the [Food Insects Newsletter](#).

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Questions about the Food Insects Newsletter?
Send e-mail to [Robert E. Diggs](#), Assistant Editor.

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--Sustainable Living Skills Home Page--**

Last Updated May 24th, 2003

"Prosperity in the 21st century belongs to those who seek profit in making the world a better place. Ecopreneurs will out-compete inefficient, abusive industries by starting green businesses that close the loop on wasted materials, energy, time, money and labor. They will heal wasted ecosystems and restore biodiversity at a profit while delivering useful goods and services to the public. Home-owners too, will profit by seeking ways to eliminate everything from high energy bills to mortgage payments--even eliminating the need for a regular job. But there is no need to wait for such a future to come, for the revolution has already started. The door is wide open, and anyone can walk the path to green prosperity, changing the world every step along the way."



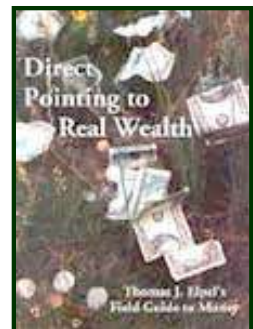
photos by Will Brewster

***--Thomas J. Elpel, author of
Direct Pointing to Real Wealth
and***

Living Homes: Integrated Design & Construction

Economics & Ecology Articles by Thomas J. Elpel:

- **ESCAPING THE JOB TRAP: It's a Matter of Time, NOT Money!**
- **Calories: The Currency of All Economies**
- **Wealth & Work: A Ten Thousand Year-Old Pattern**
- **Carbon Dioxide Quiz**
- **The Most Important Ideas of the New Millenium**



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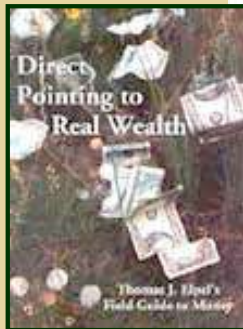
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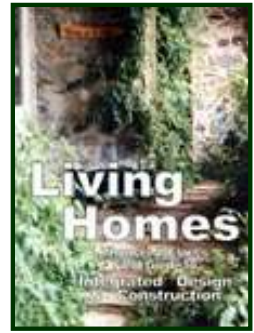
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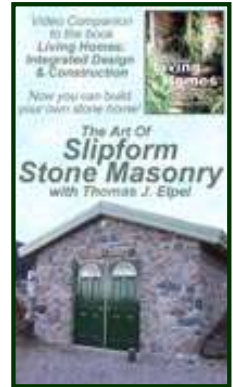
Stone Masonry Construction Articles and Resources

- [Stone Masonry Construction and Resources](#)
- [We built a Slipform Stone Workshop](#)
- [A reader builds a Slipform Stone Mansion](#)
- [A reader builds a Wilderness Cabin of Stone](#)
- [Slipform Stone Masonry: Class Information](#)
- [Tilt-up Stone Masonry](#)
- [Living Homes: Integrated Design & Construction](#)
- [The Art of Slipform Stone Masonry Video](#)



**Log, Timber Frame, Strawbale and Earthen Construction
Articles and Resources**

- [Log House Construction, Overview and Books](#)
- [Timber Frame Construction Books](#)
- [Strawbale Construction, Overview and Books](#)
- [Earth Construction Books](#)
- [Masonry Stove Overview and Books](#)
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- [Homestead Skills](#)



Question & Answer Pages

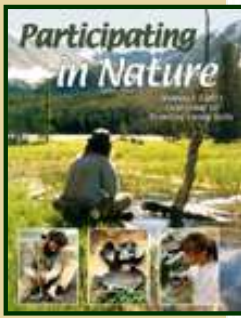
- [Questions about Buying Land](#)
- [Questions about Low-Cost Construction](#)
- [Slipform Stone Masonry Questions](#)
- [Tilt-Up Stone Masonry Questions](#)
- [Fireplace & Chimney Questions](#)
- [Log Home Construction Questions](#)
- [Strawbale Construction Questions](#)
- [Home Heating, Insulation & Energy Efficiency Questions](#)
- [Roofing Options Questions](#)

Go to the [Home-Builder's Store](#) for Alternative
Construction Books, Resources, and Schools.
(Stone Masonry, Strawbale Construction, Log Homes
Rammed Earth, Adobe, Papercrete, Earthships and more...)

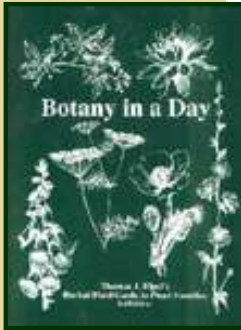
HOPS Press - The Thomas J. Elpel Field Guide Series

- [Participating in Nature:](#) Thomas J. Elpel's Field Guide to Primitive Living Skills
- [Botany in a Day:](#) Thomas J. Elpel's Herbal Field Guide to Plant Families
- [Direct Pointing to Real Wealth:](#) Thomas J. Elpel's Field Guide to Money
- [Living Homes:](#) Thomas J. Elpel's Field Guide to Integrated Design & Construction
- [The Art of Slipform Stone Masonry:](#) Video companion to *Living Homes*.

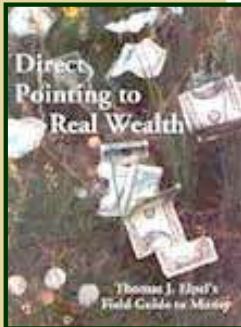
Looking to buy or sell land in Montana, Wyoming or Idaho?
Check out [American Conservation Real Estate](#)
for a truly ethical approach to the real estate business.
Be sure to watch the introductory movie!



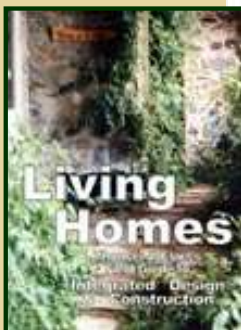
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Also check out the [Corporation for the Northern Rockies](#) and download their *Welcome to the West* guide.

[Other Sustainable Living Skills Links](#)

[More about Hollowtop Outdoor Primitive School, LLC](#)

I've just read your article [Building a House on Limited Means](#), and placed an order for your "Living Homes" book. I can't wait to receive it. My boyfriend, Jim, and I have almost identical aspirations for our own lives (right down to building a house into a hill, heating our water with the warmth of a woodstove, and eliminating the need for a 40hr/week job). Reading your article, I could hardly believe that there was someone out there that had similar dreams, and, better yet, made them come true! I knew it was possible!!

Thanks for the inspiration!!!

*--Erin Mulcahy
(used with permission)*

Hello-

Just ordered your [Field Guide to Money](#). It is a great book, I tried to get my library to buy it. They let me read a copy from Boise instead.

I've already used some of the principles in this book to get a job at Boulder Hot Springs at Boulder, Montana. I drive over once a month or so, and help them with their Organic food production. I visited Boulder H.S. in April, May and June - helping them learn to grow food in their new geothermal greenhouse. It's a great job. I utilize your ideas about closing waste loops and Wow! - it works great. Small input and RESULTS! Waste streams are so generous!

Thank You!

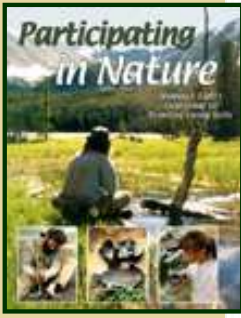
Sincerely,

*B. Goodrich
Sandpoint, Idaho
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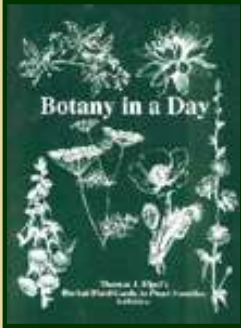
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Timber Framing | Earthships | Monolithic Domes

Earth Construction: Rammed Earth, Ceramic, Earthbag, Cob

Insulation Alternatives | Masonry Stoves

Links for designing and building your own Resource-Efficient, healthy home.

- Solstice -Good info on alternative construction, energy efficiency and renewable energy
- CSF: Earthfriendly and Self-Sufficient Architecture Discussion Board
- Country Home Design/BuildDiscussion Board
- Natural Life: Sustainable Shelter Links
- Center for Resourceful Building Technology
- E-Building Codes - International Building Codes
- Southwest Desert Sustainability Project
- Building with Awareness
- The Humanure Handbook On-Line

Home Planning and Design Books from Our Home-Builder's Store:

- The Real Goods Independent Builder by Sam Clark
- The New Independent Home by Michael Potts
- The Natural House by Daniel Chiras
- The Art of Natural Building by Kennedy, Smith and Wanek
- The Whole House Book by Pat Borer and Cindy Harris
- The Solar House by Daniel Chiras
- The Passive Solar House by James Kachadorian

Schools for designing and building your own Resource-Efficient, healthy home

- Institute for Solar Living / Real Goods (Near San Francisco, California)
- Solar Energy International (Nationwide Workshops)
- Institute for Social Ecology
- Virtual Mountain Wilderness School

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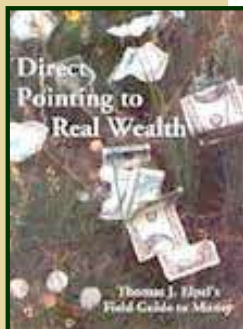
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Strawbale Links

- [U.S. D.O.E.: Strawbale Comes of Age](#)
- [C.R.E.S.T.: On-line Strawbale Construction Resources](#)
- [Surfin' Strawbale: Online Resources](#)
- [Burbophobia: An Excellent List of Strawbale Resources](#)
- [Strawbale Links](#)
- [STRAP: The Strawbale Regional Assistance Project](#)
- [Terra Home: Structural Frames for Arched Strawbale Homes](#)

Strawbale House Books from Our Home-Builder's Store:

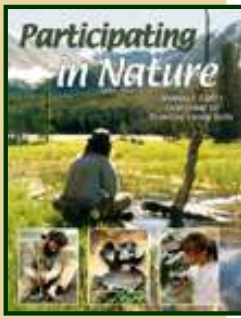
- [Strawbale Construction \(A Brief Overview\)](#)
- [Living Homes: Integrated Design & Construction](#) - by Thomas J. Elpel
- [The Strawbale House](#) - by Athena Swentzell Steen, Bill Steen, David Bainbridge & David Eisenberg.
- [The Beauty of Strawbale Homes](#) - by Bill and Athena Steen
- [Serious Strawbale: A Home Construction Guide for All Climates](#) - by Paul Lacinski, Bergeron Lacinski & Michel Bergeron
- [Straw Bale Building: How to plan, design & build with straw](#) - by Chris Magwood & Peter Mack
- [Straw Bale Details: A Manual for Designers and Builders](#) - by Chris Magwood & Chris Walker
- [Building with Earth and Straw](#) - by Bruce King, P.E.
- [Strawbale Home-Builder's Dreampack](#) - Be informed before you build!
- [Build It With Bales: A Step-By-Step Guide to Straw-Bale Construction, Version Two](#) - by S. O. MacDonald, Matts Myhrman
- [Strawbale Homebuilding](#) Edited by Alan T. Gray and Anne Hall

Strawbale Construction Schools

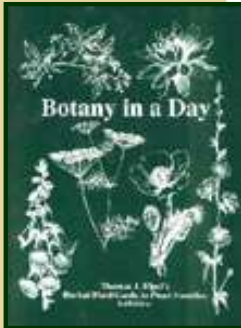
- [Institute for Solar Living / Real Goods](#) (Near San Francisco, California)
- [Solar Energy International](#) (Nationwide Workshops)
- [Sage Mountain Center](#) Whitehall, Montana.

Papercrete (Fibrous Cement) Links

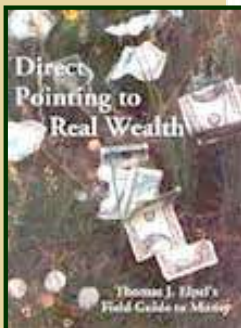
- [Building with Papercrete and Paper Adobe](#)
- [Papercrete News](#)



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Papercrete House Books

- [Building with Papercrete and Paper Adobe](#)

Stone Masonry Links

- [Kootenay Stone Masonry Training School](#)
- [Multi-Arc Tool for Masonry Arches](#)
- [Cultured \(Artificial\) Stone](#)
- [Masonry Advisory Council](#)
- [Stone World \(Trade Magazine\)](#)

Stone Masonry Books from Our Home-Builder's Store:

- [Stone Masonry Construction \(A Brief Overview\)](#)
- [Living Homes: Integrated Design & Construction](#) - by Thomas J. Elpel
- [Building Stone Walls](#) by John Vivian
- [Stonework: Techniques and Projects](#) by Charles McRaven
- [Building With Stone](#) by Charles McRaven
- [The Stonebuilder's Primer: A Step-By-Step Guide for Owner-Builders](#) - by Charles K. Long
- [Stone Mason's Dreampack](#) - Be informed before you build!

Stone Masonry Schools

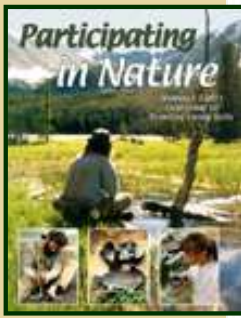
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Cordwood Construction Links

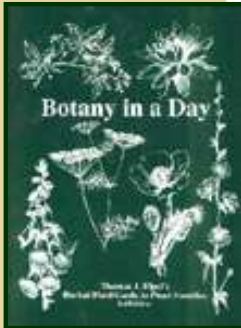
- [Cordwood Newbee Page](#)
- [Cordwood Message Board](#)
- [DayCreek.com--Cordwood Construction and More!](#)

Cordwood Construction Books

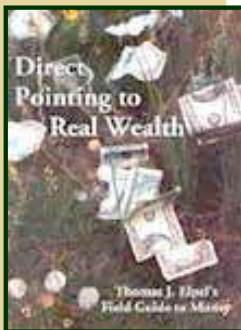
- [Complete Book of Cordwood Masonry Housebuilding: The Earthwood Method](#) - by Rob Roy
- [Cordwood Construction: A Log End View](#) - by Richard Flatau



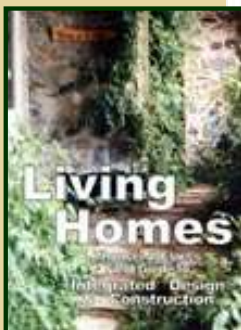
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Cordwood Construction Schools

- [Sage Mountain Center](#) Whitehall, Montana.

Log Home Links

- [Building a Log Cabin--Construction Photo Album](#)
- [Sunrise Productions Log Home Bookstore](#)
- [Linking Logs--Directory of Builders, Schools, etc.](#)
- [LogHomeLinks.com--Lots of Links!](#)
- [Log Home NetZine--On-line Newsletter](#)
- [Log House Construction Problems](#)
- [Skip Ellsworth Log Building Method](#)

Log Home Books from Our Home-Builder's Store:

- [Living Homes: Integrated Design & Construction](#)- by Thomas J. Elpel
- ["How-to" Build This Log Cabin for \\$3,000](#) - by John McPherson
- [Log Construction Manual](#) - by Robert W. Chambers

Log Home Building Schools

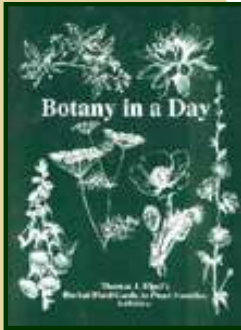
- [Island School of Building Arts](#)
- [Chapman Log Construction](#)
- [Great Lakes School Of Log Building](#)
- [William M. Lasko School of Log Building](#)
- [Okanagan University College](#)
- [Pine Top School of Log Building](#)

Timber Framing Links

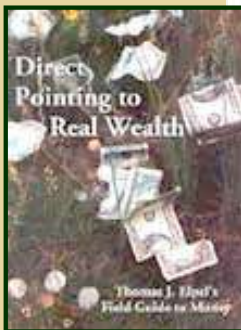
- [Joiner's Quarterly](#) Journal of Timber Framing & Traditional Building
- [Timber Framing Magazine Online](#)



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Timber Frame Construction Books from Our Home-Builder's Store:

- [Timber Frame Construction](#) - by Jack Sobon & Roger Schroeder
- [Build a Classic Timber-Framed House](#) - by Jack Sobon
- [A Timber Framer's Workshop](#) - by Steve Chappell
- [Out of the Woods](#) - by Pat Borer & Cindy Harris
- [Timber-Framer's Dreampack](#) - Be informed before you build!

Timber Framing Schools

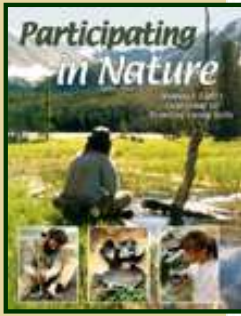
- [Fox Maple School of Traditional Building](#) Brownfield, Maine.
- [Heartwood School](#)

Earth Construction: Rammed Earth, Ceramic, Earthbag, Cob, Cast Earth, Adobe & Mudbrick Links

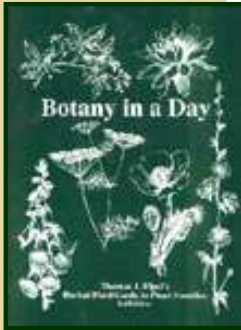
- [David Easton's Rammed Earth Works](#)
- [Ramseal International: Products and Repairs for Rammed Earth and Terra Tiles](#)
- [Rammed Earth Construction with Photos](#)
- [Micander Rammed Earth Construction-Good Photos](#)
- [Burlington Construction, Inc.-Good Photos & Text](#)
- [Kindred Rammed Earth, Inc.](#)
- [California Institute of Earth Art and Architecture -- Earthbag Construction](#)
- [Cob Email List-Server](#)
- [New Mexico Adobe and Rammed Earth Building-Code](#)
- [Earth Building Foundation, Inc.-Rammed Earth Technical Information](#)
- [Kindred Rammed Earth, Inc.](#)
- [Moladi Snap together, reusable forms](#)
- [Rammed Earth Construction-Australia](#)
- [Mud Brick Construction-Australia](#)

Earth Construction: Rammed Earth, Ceramic, Earthbag and Cob Books & Videos

- [The Rammed Earth House](#) - by David Easton and Cynthia Wright
- [The Rammed Earth Renaissance \(Video\)](#) - by David Easton and Cynthia Wright
- [Building with Earth and Straw](#) - by Bruce King, P.E.
- [Ceramic Houses and Earth Architecture](#) - by Nader Khalili
- [Building with Earth](#) - by Paulina Wojciechowska
- [Cob Builders Handbook](#) - by Becky Bee
- [The Hand-Sculpted House](#) - by Ianto Evans, Michael G. Smith, and Linda Smiley



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- [Kleiwerks: Cob, Slipstraw, Earth Plaster, Bamboo](#)

Earthship Links

- [Earthship Biotecture-resources, designs, and workshops](#)
- [Earthships: Useful Overview](#)
- [Earthships Landing: Pictures](#)
- [Another Earthship Landing: Pictures](#)
- [Earthship Lane](#)
- [Allen and Pat Gooch's Earthship \(New Mexico\)](#)
- [Dennis and Gerry Weaver's Earthship \(Colorado\)](#)
- [3rd Millennium Construction Society \(B.C., Canada\)](#)
- [Vic Cook's Giant Earthship \(Indiana\)](#)

Earthship Books Available Through Amazon.com

- [Earthship: How to Build Your Own - by Michael E. Reynolds](#)

Monolithic Dome Links

- [Monolithic Domes](#)

Insulation Alternatives

- [Good Shepherd Wool Insulation](#)
- [Air Krete-Cementitious Foam Insulation](#)
- [The Association for Better Insulation](#)
- [New & Alternative Insulation Materials and Products](#)

Masonry Stove Resources

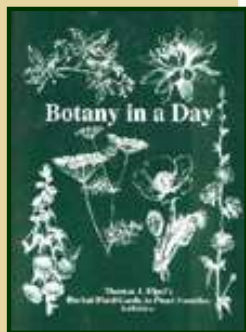
- [Masonry Heater Association](#)
- [Temp-Cast Masonry Heaters](#)
- [Maine Wood Heat Co., Inc. - Masonry Stove Kits and Plans](#)
- [Peter Moore Masonry, Inc. - Contractor in Vermont](#)
- [Consumer Energy Information Briefs: Masonry Heaters](#)

Masonry Stove Books from Our Home-Builder's Store:

- [**Masonry Stoves: A Brief Overview**](#)
- [**Living Homes: Integrated Design & Construction**- by Thomas J. Elpel](#)
- [**The Book of Masonry Stoves** - by David Lyle](#)

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Thomas J. Elpel's

Wildflowers & Weeds Home Page

Updated March 12, 2003



"Many people are familiar with the square stems and opposite leaves of the plants in the Mint Family. I like to start my classes with a discussion of the mints because this pattern is so well known.

"What people don't realize is that similar patterns exist for other families of plants as well. You only need to learn about 100 broad patterns to recognize something about virtually every plant from coast to coast across the northern latitudes.

"In a two hour plant walk we typically start with the Mint Family, then progress through the Mustard, Pea, Parsley, Borage, Lily, and Aster Families, so that every student can easily recognize these common families representing several thousand species.

"I've had people tell me they learned more in that two hour walk than in an entire semester of botany in college."

--Thomas J. Elpel, Author
Botany in a Day

Now with 300 pictures on-line.
Wildflower Photo Gallery
Identify your Wildflowers!

Want to learn to identify 45,000 plants today?
Be sure to read my on-line article
Learning to Identify Plants by Families

New! Join an On-Line Discussion of Botany in a Day

Wild Edible Plants
Forager's Harvest: Wild Foods Newsletter
Edible Wild Plants Questions & Answers

Mushroom Photo Gallery
A photo album of mushrooms I have found.

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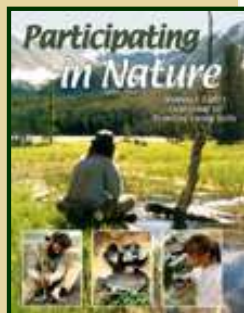
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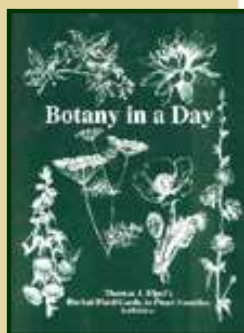
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Participating in Nature



Botany in a Day

Desertification and Noxious Weeds

What is a Weed? What is a Noxious Weed?
Why Should we be Concerned About Noxious Weeds?
Is There Any Hope?

The American Sahara

--The New Desert Beneath Our Feet--
Brittle and Non-Brittle Environments
Succession in Brittle Environments
Weed Control by Grazing with Sheep
UPDATED! Weed Control by Trampling with Horses
Desertification News Briefs

Weeds You Should Know
Profiles of Invasive Weeds



Jennifer and Frieda cuddle
with a wooly weed eater.

The Pony Millsite
A Disaster We Could Have Prevented

Wildflowers & Weeds Links

Dear Tom,

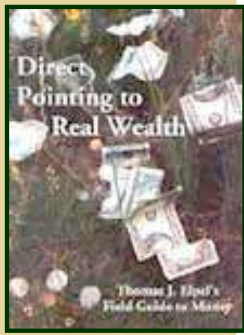
My husband brought me a copy of Botany in a Day and I wish I'd had it when I started my love affair with wild plants! (Of course, you weren't born yet...) This is THE best-laid-out teaching guide to plants I have ever seen, and my library of botanical texts is in the 100's! I plan to use it as a textbook for serious students of botany.

I wish we had something equivalent for Missouri, although your estimate of 75% species occurrence of western species in Missouri is quite valid. We are quite the ecosystem-crossroads here! Steyermark's Flora of Missouri is wonderful but enormous and unwieldy, and our Dept. of Conservation and Dept. of Natural Resources folks have good general field guides for beginners. But your book is outstanding! Keep up the excellent work!

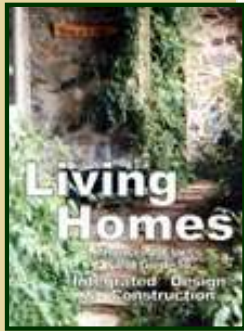
*Most sincerely,
Laurie Lovell, aka Wild Plant Woman
(used with permission)*

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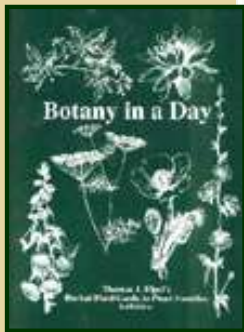
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**Thomas J. Elpel's
Hollowtop Outdoor Primitive School, LLC**

The Wildflowers & Weeds Store

Updated August 10, 2003

Click on any link to learn more about the product.

Most items ship within 24 - 48 hours....

except when we are out in the woods for a few days!

Take a look at our [Environmental Record](#) in business.

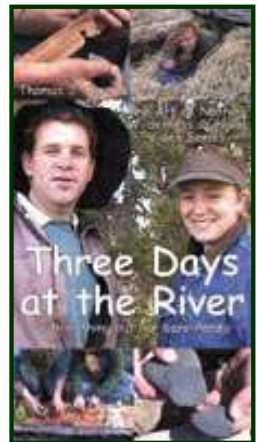
Unique Books & Videos by Thomas J. Elpel

- Botany in a Day**: Thomas J. Elpel's Herbal Field Guide to Plant Families
- Participating in Nature**: Thomas J. Elpel's Field Guide to Primitive Living Skills
- Direct Pointing to Real Wealth**: Thomas J. Elpel's Field Guide to Money
- Living Homes**: Thomas J. Elpel's Field Guide to Integrated Design & Construction
- The Art of Slipform Stone Masonry** Video Companion to Living Homes

**The Art of Nothing Wilderness Survival Video Series
with Thomas J. Elpel & Special Guests**

(Recorded on quality recycled VHS video tapes.)

- 3 Days at the River** with nothing but our bare hands.
 - Mountain Meadows** camping with almost nothing but the dog.
 - Mountain Lakes** a survival fishing trip.
- (All three videos include segments on harvesting and eating wild plants.)



Plant ID Companions to Botany in a Day

- Plants of Pacific NW Coast** by Pojar & MacKinnon,
- Plants of the Rocky Mountains** by Kershaw, MacKinnon, Pojar
- Golden Guide to Wildflowers of N. America** by Frank D. Venning
- Newcomb's Wildflower Guide** by Lawrence Newcomb
- 7 Plant Videos + Master Tape** by Mors Kochanski

Wild Edible Plant Resources

- From Crabgrass Muffins to Pine Needle Tea** by Linda Runyon
- Guide to Wild Foods and Useful Plants** by Christopher Nyerges
- Exploring Common Useful Plants of the U.S. (video)** by Christopher Nyerges
- Dining On The Wilds Edible Plants Videos** by Kramer & Goude

Herbal Guides & Wilderness First Aid

- Medicinal Plants of the Pacific West** by Michael Moore
- Medicinal Plants of the Desert & Canyon West** by Michael Moore
- Medicinal Plants of the Mountain West** by Michael Moore



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Help us Secure the Rivers!

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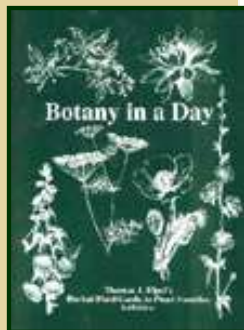
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[-Kids, Herbs, & Health](#) by White & Mavor

[-Medicine For The Outdoors](#) by Paul S. Auerbach, M.D.

[-Rogers' Herbal Manual](#) by Robert Dale Rogers

Mushroom Identification & Edibility

[-Mushrooms Demystified](#) by David Arora

[-All That the Rain Promises](#) by David Arora

[-Mushrooms of NW North America](#) by Helene M.E. Schalkwijk-Barendsen

[-Growing Gourmet and Medicinal Mushrooms](#) by Paul Stamets

All about Dandelions

[-The Dandelion Celebration](#) by Peter Gail

[-Dandy Blend Coffee Substitute](#)

Grassfed Livestock, Range Ecology & Resource Management

[NEW! -Why Grassfed is Best!](#) by Jo Robinson

[NEW! -Salad Bar Beef](#) by Joel Salatin

[-Holistic Management](#) by Allan Savory

[-Creating a Sustainable Civilization Video](#) by Allan Savory

Natural Science Books

[-The Evolution Book](#) by Sara Stein



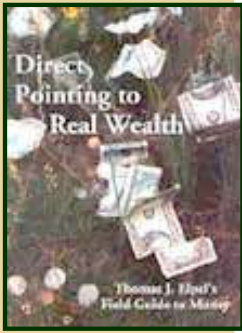
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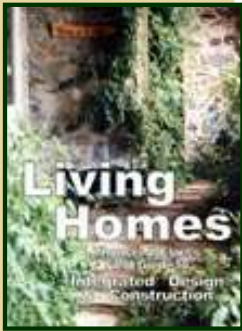
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Direct Pointing to Real Wealth



Living Homes

16th Annual Rabbitstick Primitive Skills Conference

September 14-20, 2003

Near Rexburg, Idaho.
(Map available with registration.)



Rabbitstick is the primitive skills gathering that started them all! It is a chance for new participants to meet some of the top instructors in the nation for world-class instruction in the primitive arts and wilderness survival living. For returning participants it is also a family homecoming--an opportunity to re-unite with friends and colleagues while continuing to expand their knowledge. Many of the participants and instructors have been returning to Rabbitstick for more than ten years... there is always so much more to learn and experience!

Rabbitstick includes workshops from expert authors, instructors, and practitioners in the field of primitive survival and primitive technology, on such topics as: edible, medicinal and constructive plants, wilderness medicine and self-help, buckskin and rawhide crafts, wilderness living skills, flintknapping: basic to advanced, primitive instruments and games, pottery and fiber work, advanced weapons and compound tools. There is even a comprehensive program skills program for kids!

Rabbitstick is held every September in southeast Idaho on 400 acres of river, meadows and sloughs filled with wildlife and abundant natural resources for primitive living skills.

Also join us for the **World Open Atlatl Contest** at Rabbitstick, September 13-15th, 2003. Formerly held in Wyoming, the World Open Atlatl Contest has a brand new home at Rabbitstick, and Backtracks is pleased to continue this long-held tradition.

For more information, and to register, please contact:

Backtracks, LLC
PO Box 905
Rexburg, ID 83440
208-359-2400
dwescot@aol.com

Winter Count Primitive Skills Conference

February 16-22, 2003

50 miles south of Pheonix, off Maricopa Road.
(Map available with registration.)

Join us for the 8th Annual Winter Count Gathering. If you follow the trail of the "ancient ones" and practice their arts and skills you won't want to miss this years event.

Come learn the "old ways" technologies: fire-by-friction, flintknapping, pottery, brain tanning, useful plants, primitive weapons, natural fiber arts, primitive instruments and games, compound tools, wilderness living skills, tracking, containers, evening campfires and more! Backtracks has invited the top specialists, teachers and artisans in primitive technology to attend this gathering in order to share ideas and methods, as well as spread the arts through hands-on workshops to people such as yourself.

Cost: \$245 pre-registration (\$275 at the gate). The fee covers camping, two meals per day, and instruction. Additional materials fees may be required for some classes. Please No Drugs, Alcohol, or Pets!



Also join us for the **Desert Classic Atlatl Contest 2003** at Winter Count February 21-22, 2003. This event is open to the public. We encourage everyone to come and learn how to throw an atlatl dart, or compete with the rest of the world in the WAAISAC Contest. Be a part of this great new (OLD) family sport and joins us in the desert this February.

For more information, and to register, please contact:

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3Rivers Park

Canoeing, Rafting, Fishing
Hiking, Bicycling, Horseback Riding
Hunting, Camping, Bird Watching, Wildlife Viewing

-A Place for People-

Updated April 8th, 2003

At 3Rivers Park, our mission is to work with private land owners to increase public access along the rivers while preserving open space and productivity in the surrounding farms and ranches. The primary focus of our work is in finding creative ways to purchase recreational and open space easements from willing sellers. Recreational easements thus acquired are to be managed by 3Rivers Park for sustainable use by the public.

A Vision for the Future
Perspective from Thomas J. Elpel

My parents were both native to Montana. Every summer they brought us kids back here to be close to the extended family. For those three months each year we were constantly out hiking, fishing, picnicking, camping, and occasionally floating. There were no real boundaries at that time. Public and private lands flowed seamlessly

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Help us Secure the Rivers!

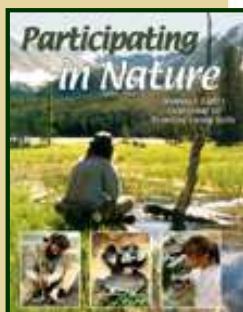
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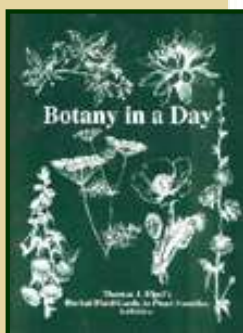
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together through fields, across hills, and down rivers. Montana was a wonderland where it seemed that you could hike or fish or camp just about anywhere and private property was not an issue, as long as you didn't abuse it.

Our family moved back to Montana full time when I was twelve. In junior high and high school in Bozeman I spent much of my free time out exploring the local farm fields. Through the growing season I learned to identify wild plants and collected edible greens and berries. I practiced my stalking skills on the local deer just for the thrill of watching them. Through the winter I skied those same fields and tracked the deer, rabbits, foxes and skunks where ever they went. But Montana has changed since then.

The first "No Trespassing" signs were a disconcerting novelty. The first subdivisions on prime farm fields were an even greater shock and an outrage. But that was just the beginning of a shockwave that spread across southwest Montana, sprouting signs and subdivisions up like mushrooms in the strangest of places. It became impossible to predict when or where the next one would pop up.

But what we have seen so far is just the "tip of the iceberg" compared to what is coming. We can reasonably expect to witness a population explosion across the region from about 100,000 people today to more than a million later this century. While it is true that we cannot turn back the clock to what once was, at least we can give forethought to creating a more desirable future.

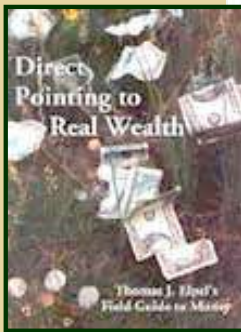


I would like to see the children of all generations have the opportunity to leave the television and video games behind, to get out and explore the natural wonders that surround us. Unfortunately, it is difficult for kids or families to get out when the surrounding wild niches are developed into little ranchettes or locked away behind "No Trespassing" signs. Existing public lands are too far away for easy access after school, and winter snows reduce access even more for non-skiers. What we especially need is access to wild places in the heart of the valleys where people can recreate and enjoy the Montana outdoors at any time of the year.

Our rivers, the Gallatin, the Madison, and the Jefferson, are the greatest corridors of wildness through the valleys, and the logical choice for an accessible recreational park. 3Rivers Park is our vision to create a better tomorrow for this special part of the world, to insure that the future will be a fun place to live for our children and our children's children.

Clearly it will take more than our lifetimes to complete the park, but it is our goal to purchase open space and recreational easements along these great rivers, piece by piece as they become available from willing sellers. It is our vision that the park will one day encompass the entire length of the Jefferson, Madison, and Gallatin Rivers outside of federal lands.

While we have great Dreams for 3Rivers Park, we are a fledgling organization, just getting started. If you have the inspiration, time or money to contribute to this Vision, then let's work together! We can be reached at:



[Direct Pointing to Real Wealth](#)



[Living Homes](#)

3riverspark.org
PO Box 697
Pony, MT 59747-0697
Vision2100@3riverspark.org

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Useful Resources

[NEW! Maps of the Project Area](#)
[Directory of Land Trusts Operating in Montana](#)

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Hollowtop Outdoor
Primitive School, LLC

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Stone, Log & Strawbale
And Many More Creative
House-Building Books,
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Wildflowers & Weeds

Plant Identification
& Edible Plants
Rangeland Ecology
Weed Control Alternatives



Thomas J. Elpel's

Hollowtop Outdoor Primitive School, LLC

What's New on all our websites?

I hear that many of you return again and again to check out what's new on our websites. So I am now listing updates here for easy access. Updates are kept on this page for approximately one year. Thanks for stopping by!

September 2003

What's New in the Primitive Living Store:

NEW! -Volume 3 in the Art of Nothing Video Series

Mountain Lakes: a survival fishing trip

August 2003

What's New in the Wildflowers Store:

NEW! -Why Grassfed is Best! by Jo Robinson

NEW! -Salad Bar Beef by Joel Salatin

July 2003

What's New in the Primitive Living Skills Store:

NEW! -Sotol Fire Plow Fire Sets!

NEW! -Welcome Back to the Stone Age Video with Woody Blackell

What's New on the Primitive Living Skills Page:

NEW! -Three Primitive Skills Articles by Storm

June 2003

Wildflowers Store

Plant & Mushroom Guides
Holistic Management
Grazing Resources
Books & Videos

3Rivers Park

A Place for People
Help us Secure the Rivers!

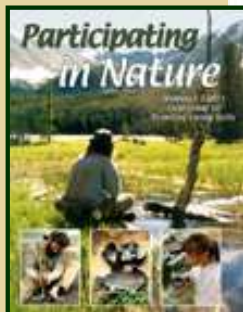
What's New?

See what's new
on all our websites!

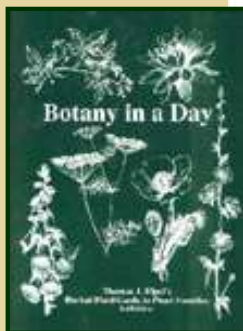
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Primitive School, LLC
PO Box 697
Pony, MT 59747-0697
406-685-3222
E-mail Contact Page**



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Macintosh computer!



Participating in Nature



Botany in a Day

What's New on the Primitive Living Skills Page:

NEW! Harrison School 8th Grade Camping Trip
"-Return to the River-"

May 2003

What's New on the Sustainable Living Skills Page:

NEW! -We've Gone Solar!

NEW! -Lots of Home-Building Question and Answer Pages!

04-03-2003

What's New for April:

NEW! -Iodine Crystals for water purification

03-06-2003

What's New for March:

NEW! -Genuine Braintan Buckskin

NEW! -More Home-Building Books, plus Question & Answer pages

NEW! -Canoe Craft: Woodstrip Construction by Ted Moores

NEW! -Exploring Common Useful Plants of the U.S. (video) by Christopher Nyerges

02-13-2003

What's New for January-February:

NEW! -From Crabgrass Muffins to Pine Needle Tea by Linda Runyon

NEW! -Building a Birchbark Canoe by David Gidmark

NEW! -Indian Fishing by Hilary Stewart

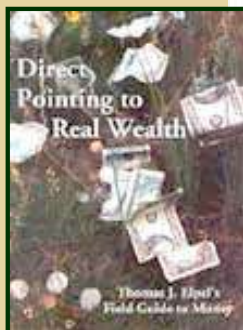
NEW! -Thebes Points & Their Variants Video by D.C. Waldorf

NEW! -Ishi & Elvis by Jim Hamm

NEW! -How to Make Indian Bows and Arrows the Old Way by Douglas Spotted Eagle

NEW! -How to Make Primitive Pottery by Evard Gibby

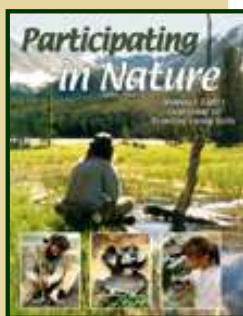
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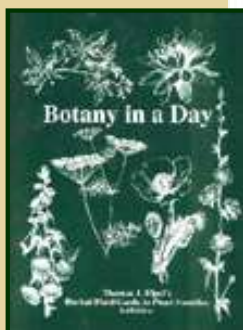
[Direct Pointing to Real Wealth](#)



[Living Homes](#)



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What's New for December-January:

- [-NEW! Barbwire Hearts](#)**
- [-NEW! Dry-Scrape Tools for Hide Tanning](#)**
- [-NEW! Lots of Home-Building Books](#)**
- [-NEW! Genuine Mongolian Gers \(yurts\)](#)**

12-06-02

What's New in the Primitive Living Store:

Bow-Making, Primitive Archery & Atlatls

[-NEW! Sinews and Hide Glue](#)

12-03-02

What's New?

We built a new Main Menu

[Check it out!](#)

11-29-02

What's New?

We added a whole new domain!

www.wildflowers-and-weeds.com
with new menus throughout all the websites.

11-20-02

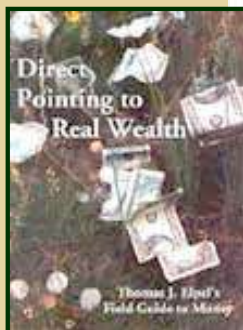
What's New in the Primitive Living Store:

Unique Books & Videos by Thomas J. Elpel

[-NEW Edition! Participating in Nature](#)
with 50 more pages and 150 more photos.

11-03-02

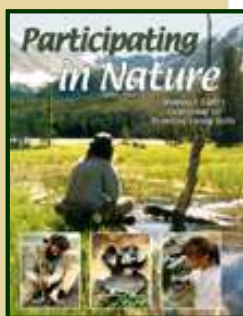
What's New at the HOPS Store:



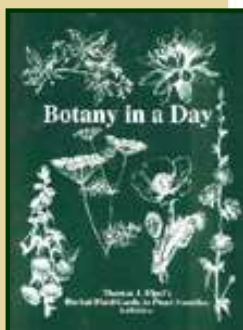
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Awareness Books, Tapes, Resources and Perspective

-NEW! Hatchet by Gary Paulson

10-13-02

What's New at the HOPS Store:

Flint Knapping Books & Videos

NEW! -2003 Flintknapping Calendar

Awareness Books, Tapes, Resources and Perspective

-NEW! The Secrets of Natural Movement videos by John Stokes

What's New on the Primitive Living Skills Page:

An update to [Thomas J. Elpel's Class Schedule](#)

09-10-02

What's New at the HOPS Store:

Unique Books & Videos by Thomas J. Elpel

-NEW! The Art of Nothing Wilderness Survival Video: Mountain Meadows
with Thomas J. Elpel and Melvin Beattie

07-23-02

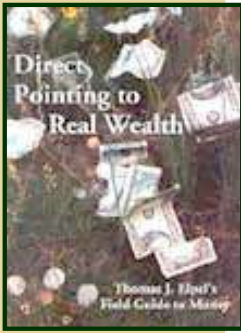
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Unique Books & Videos by Thomas J. Elpel

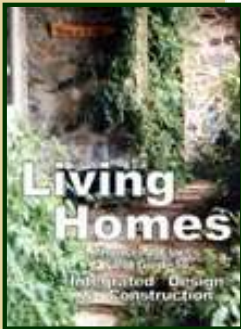
-NEW! The Art of Nothing Wilderness Survival Video: 3 Days at the River
with Thomas J. Elpel and Felicia Elpel

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-E-Mail Contact Information-

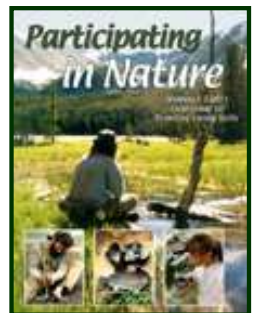
General Inquiries flutesong@hollowtop.com	Customer Assistance orders@hollowtop.com
--	--

-These e-mail addresses are occasionally changed to evade spammers.-

Please Note: We receive a steady stream of e-mail questions from web surfers all over the world, on topics as varied as these:

- What woods work best in my area for starting a bowdrill fire?
- Is it better to insulate the inside or outside of my basement walls?
- What is this plant with pink flowers in my back yard?
- Are there any insects in the U.S. that are poisonous to eat?
- Can we build a log house with green wood?
- How can I go about starting my own wilderness survival school?

We also receive many e-mails and phone questions from newspaper and magazine reporters researching stories, as well as inquiries from a variety of television programs. We continue to do our best to respond to your questions to the best of our abilities. However, given the volume of letters we receive, we are not quite as timely as before in our responses!



Keep in mind that **computers, the internet, and people all make mistakes.** If we don't answer your e-mail, then there is a chance that it never arrived here. Also please make sure you are sending it with the correct e-mail return address, as we have spent a lot of time answering some questions, only to find that the e-mail addresses they came from were invalid. Any e-mails with attached viruses are deleted without being read or responded to.

Our responses are prioritized first to our **customers** with questions about orders, pricing, billing, or shipping. Expect to hear back from us within a day or two usually, unless we are away from the office. Of course, you can also call us at **406-685-3222** or write to us snail-mail at the address below.

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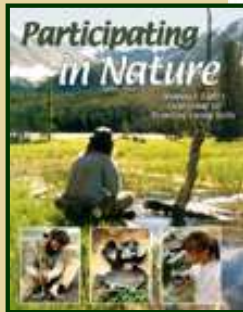
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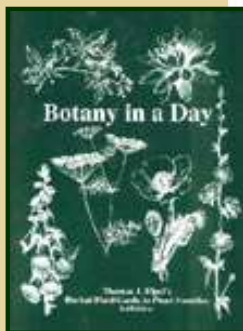
flutesong@hollowtop.com



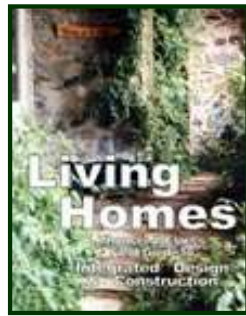
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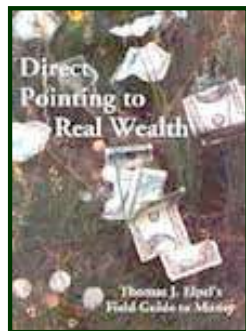
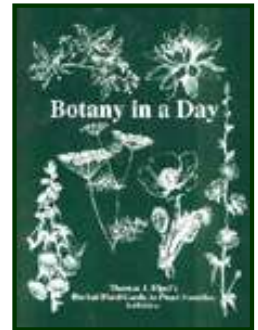


Botany in a Day



We are slower at responding to how-to questions about **primitive skills, plant identification** or **home construction**, mostly because a single inquiry can take a few days to mull over the question, and an hour or more to answer it. But we will answer your question as long as we feel qualified to do so. At the very least we will try to steer you in the right direction. Expect an answer in 2-4 weeks on these type of questions, potentially longer during summer months.

We are slowly in the process of creating some question and answer pages on the website to avoid answering the same questions again and again. As a courtesy to us, please read Tom's books (shown here) before asking questions, so that we do not have to spend so much time on subjects that have already been covered in-depth. Any topic you still have questions about after reading Tom's books is definitely fair game, and we will bend over backwards to answer it thoroughly.



The questions we are most likely to delete without any reply at all are the ones about **edible insects**, such as "what types are poisonous?" or "what is the nutritional content of grasshoppers?". Although we are the web host for the **Food Insects Newsletter**, we really know next to nothing about the subject ourselves (we would like to learn more). Please contact The Food Insects Newsletter directly for any questions you have for them.

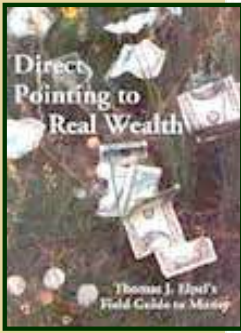
For questions to the **Society of Primitive Technology**, please use the contact information on their web page. Thanks!

Thanks to Cindy for providing the link to the e-mail encoder. It translates e-mail addresses into numerical code to insert into the html to help trip up robots that are seeking e-mail addresses to send spam to.

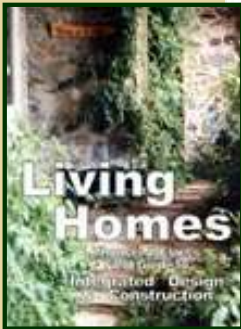
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flutesong@hollowtop.com**

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Welcome to Society Of Primitive Technology ...

Objectives of the Society: - To promote the practice and teaching of indigenous life skills - To foster communication between teachers and practitioners - To set standards for authenticity, ethics, and quality Benefits of annual membership in the Society: - Subscription to The Bulletin of Primitive Technology (bi-annual) - Networking with practitioners, researchers and thinkers - Contact for research and scientific studies - Notices for workshops and classes - Literature reviews - Tool and supply sources - Free Classified notices in the Bulletin (20 words or less)

Thank you for visiting.



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See also...



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Our Price: **\$10.00**



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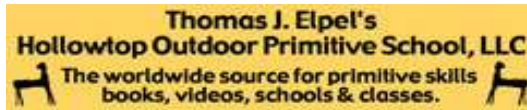
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October - 2003						
Su	M	Tu	W	Th	F	Sa
			1	2	3	<u>4</u> (3)
5	6	7	8	9	10	<u>11</u> (2)
12	13	14	15	16	17	<u>18</u> (2)
<u>19</u> (1)	20	21	22	<u>23</u> (1)	24	<u>25</u> (1)
26	27	28	29	30	31	

[Week 1](#) [Week 2](#) [Week 3](#) [Week 4](#) [Week 5](#)



Welcome to the HOPS, LLC On-Line Calendar of Schools

This user-friendly database will help you to search through the class listings of primitive wilderness survival and nature awareness schools across North America and the world. The calendar is best viewed at 800 x 600 resolution or higher. You can search by dates or location, by the type of class, or by keywords. Also be sure to see our [Directory of Primitive Skills Schools](#).

I would especially like to thank **John Canan** of [NatureBuzz](#) for his work in developing this calendar.

Funding to maintain this calendar and our extensive website is provided through the sale of my books, pictured below, plus the many other unique books, videos and resources we stock. So, if you like the calendar, please be sure to take a tour of the [HOPS Store](#). Enjoy!

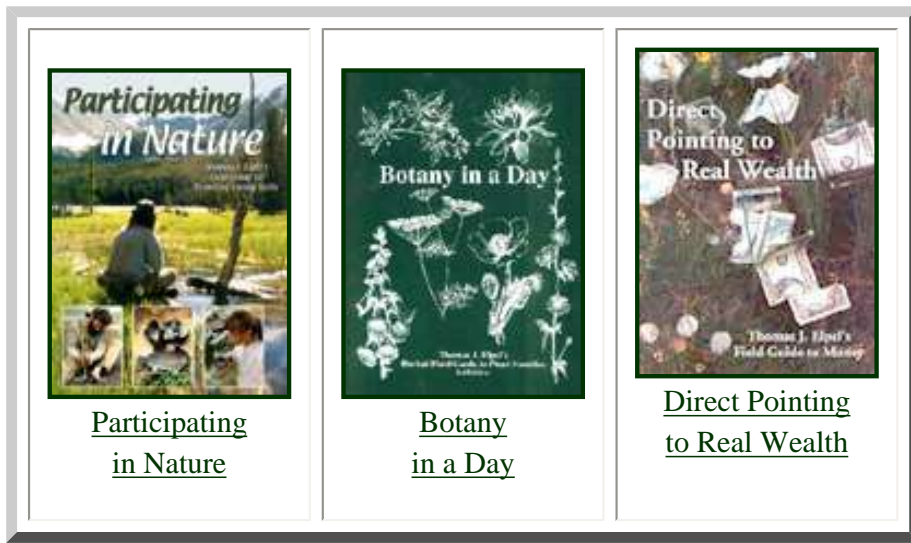
--Thomas J. Elpel

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HELP

Access Level: user

For comments or questions, contact [Calendar Administrator](#)



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Stone, Log & Strawbale
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**Thomas J. Elpel's
Hollowtop Outdoor Primitive School, LLC**

Directory of Primitive Wilderness Living & Survival Schools

Those of us who live and breathe ancient skills and nature awareness are often faced with a dilemma when we make the decision to share with others what we have learned. We are people who are passionate about what we do. We believe in living close to the earth, and we teach from the heart. The dilemma is that in order to share these earth skills we have to jump feet first into the modern world of business... we have to spread the word about who we are and what we have to offer.

At HOPS we are working to more effectively get the word out about the many talented individuals, couples, and families around the country who want to invite you into their lives to share what they have discovered. In essence, it boils down to "economies of scale": by working together we can reach out far more successfully than if we each try to do it all alone.

There are many of us around the country now, tucked out-of-the-way in backwoods canyons, or making camps and practicing skills in thick tangles of brush along the edge of suburbia. Collectively we have more classes in more locations than ever before, so you can always be assured of finding the specific instruction you want.

**Also see our directory of
[Primitive Living & Nature Awareness Schools of Europe](#)**

Check this out!

Search for primitive survival and nature awareness classes with the
Hollowtop Outdoor Primitive School
[On-Line Calendar of Schools](#)

Wilderness Schools Across North America

Most of these schools are part-time "hobby" businesses. Year-round schools are

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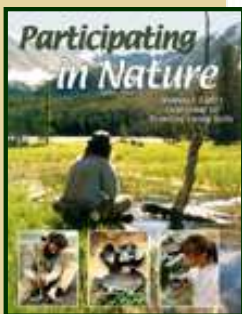
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listed in capital letters. **Please Note:** We are continuously updating this page, adding or deleting schools and updating contact information. (We update it about 20-30 times a year, every year!) If you find an error please send a note to us through our [E-mail Contact Page](#). Thanks!

Schools of the United States

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Primitive Skills Gatherings

Internships, Employment & Work Exchange Opportunities

Schools of Canada & Mexico

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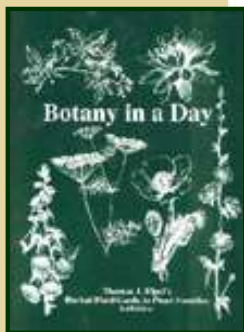
Alabama

<p><u>Primitive Outdoors</u> Brian Curnel 416 Hay Drive, Suite D-7 Decatur, AL 35603 256-303-3016 Brian@primitiveoutdoors.com</p>	<p>Check this out! Search for primitive survival and nature awareness classes with the Hollowtop Outdoor Primitive School On-Line Calendar of Schools</p>
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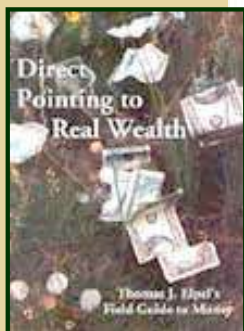
Arkansas

<p><u>Cedar Creek Nature Studies</u> Randy & Susie Teague 1796 Cedar Creek Road Hot Springs, AS 71901 501-262-0567 ccns@cedarcreeknaturestudies.com</p>	<p>Check this out! Search for primitive survival and nature awareness classes with the Hollowtop Outdoor Primitive School On-Line Calendar of Schools</p>
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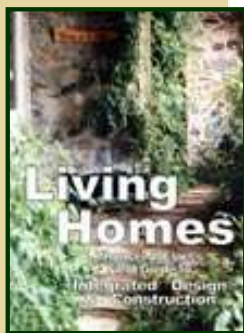
Arizona



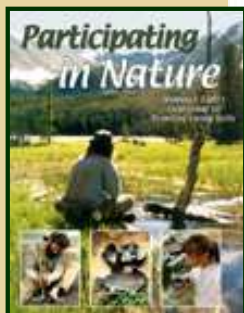
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Flagstaff, AZ 86004
928-774-7522
anester@attglobal.net

Aboriginal Living Skills School, LLC

Cody Lundin
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Prescott, AZ 86302
520-636-8384
abodude@aztec.asu.edu

Reevis Mountain School

Peter Bigfoot
HC 02, Box 1534
Roosevelt, AZ 85545
520-467-2675

Raven's Way Traditional School

Vince Pinto
PO Box 16367
Portal, AZ 85632
520-403-5085

Arizona Outdoor Institute

Dave Ganci
4753 Gloria
Prescott, Arizona 86301
928-778-2567
canyon@hotmail.com

Native American self-Awareness Institute

Dr. John Standingbear Hoopingarner & Molly Swan
2422 N. 72nd Place
Scottsdale, AZ 85257
480-970-8811
stbrtewa@aol.com

The Desert People Wilderness School

Danny August
Three Points, AZ

Willow River Wilderness School

Randy Kinkade
141 W. Forrest Feezor
Corona, AZ, 85641
520-360-6868
randy@willowriverwildernes

California

Earth Skills

Jim Lowery
1113 Cougar Court
Frazier Park, CA 93225
661-245-0318
earthskills@anamorph.com

School of Self Reliance

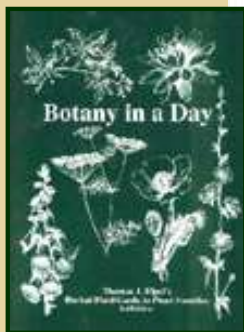
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contact@self-reliance.net

Oldways Workshops

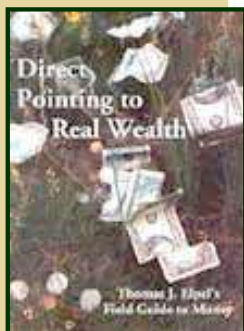
Norm Kidder
Sunol Regional Wilderness
PO Box 82
Sunol, CA 94536
925-862-2600
svisit@ebparks.org

HEADWATERS OUTDOOR SCHOOL

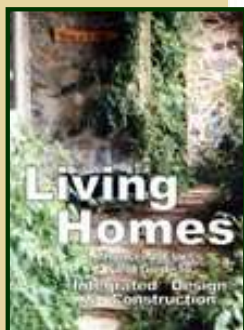
Tim Corcoran
PO Box 1698
Santa Cruz, CA 95061-1690
831-423-3830
info@hwos.com



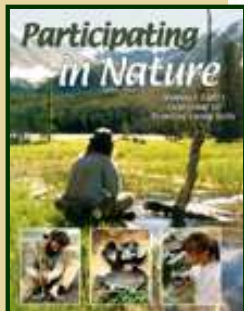
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Earth-Heart
Malcom & Deborah Ringwalt
PO Box 926
Topanga, CA 90290
310-967-1336
mail@earth-heart.net

Colorado

Earth Knack
Robin Blankenship
PO Box 508
Crestone, CO 81131
719-256-4909

BOULDER OUTDOOR SURVIVAL SCHOOL

Josh Bernstein
PO Box 1590
Boulder, CO 80306
800-335-7404
bernstein@boss-inc.com

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Nature Knowledge
"Mountain Mel" Deweese
1825 Linden Street
Grand Junction, CO 81503
907-242-8507
mtnmel@youwillsurvive.com

Wilderness Institute of Survival Education
Don Davis
8415 Coyote Run
Loveland, CO 80537-9665
970-669-9016
dondavis@frii.com

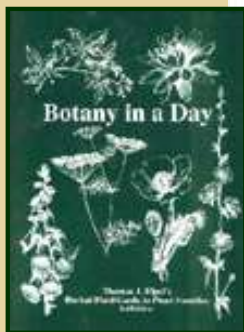
Primitive Skills & Braintanning
Michael Foltmer
1330 Brantner Road
Evans, CO 80620
970-339-5608

Connecticut

Two Coyotes Survival & Wilderness Awareness School
Scott Eldridge
PO Box 427
Kent, CT 06757
860-927-4870
scott@twocoyotes.org

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Florida

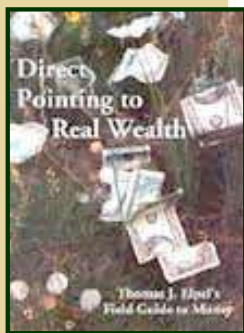


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Global Principles Survival School
653 West 23rd St. #294
Panama City, FL 32405
850-722-7870
president@globalprinciples.com

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Georgia

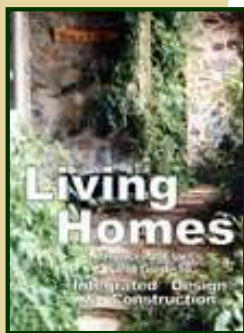


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Medicine Bow Wilderness School
Mark Warren
104 Medicine Bow
Dahlonega, GA 30533
medbow@alltel.net

Hofunee Programs
Scott Jones
2550 Elberton Rd
Carlton, GA 30627
706-743-5144
scottj@arches.uga.edu

Idaho



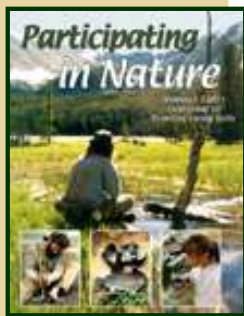
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Salmon Outdoor School
Joe & Denise Bigley
PO Box 17
Tendoy, ID 83468
208-756-8240
school@aboman.com

BACKTRACKS, LLC
Dave & Paula Wescott
PO Box 905
Rexburg, ID 83440
208-359-2400
Dwescot@aol.com

Soaring Spirits
Kathleen Hechimori & Steve Wilson
PO Box 877
Bellevue, ID 83313
208-788-6185
mail@soaringspirits.com

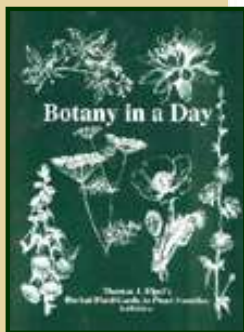


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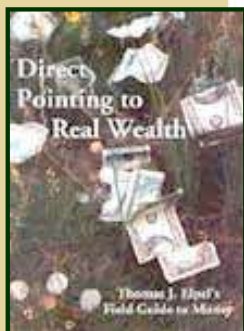
Nature Education Programs, Ltd.
Suite 215 - 3030 Warrenville Rd.
Lisle, IL 60532
630-955-9550
natedpro@aol.com

Ancient Lifeways Institute
John & Ela White
Michael Hollow Road
Michael, IL 62065
618-576-9255
AncientL@aol.com

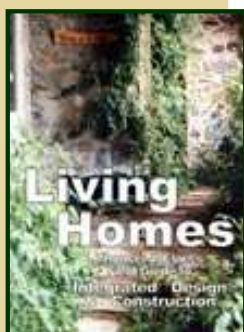
Illinois



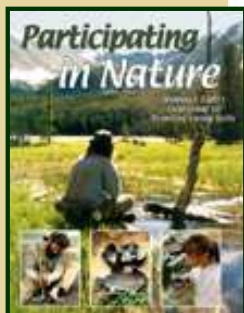
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Center for American Archeology

PO Box 366
Kampsville, IL 62053
618-653-4316
CAA@caa-archeology.org

NORTHWEST SCHOOL OF SURVIVAL

Brian Wheeler
800 W. 5th Ave., Suite 103-B
Naperville, IL 60563
603-305-9717
Info@nwsos.com

Maine

The Maine Primitive Skills School

Michael Douglas
175 Heartbreak HL
Palermo, ME 04354-7137
207-623-7298
primitiv@mint.net

EARTHWAYS

Ray & Nancy Reitze
RR2, Box 2700
Canaan, ME 04924
207-426-8138

Beartraks Schools of Wilderness Living

Dan Fisher
99 Woodside Road
Brunswick, ME 04011
207-729-8616
info@beartraks.com

Check this out!

Search for primitive survival and nature awareness classes with the **Hollowtop Outdoor Primitive School** [On-Line Calendar of Schools](#)

Massachusetts

Photography & Nature Programs

Paul Rezendes
Bearsden Road Star Route
South Royalston, MA 01331
978-249-8810

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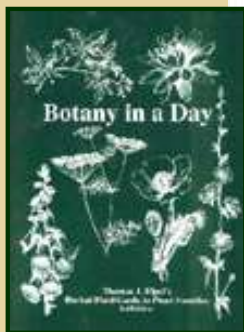
Michigan

Check this out!

Search for primitive survival and nature awareness classes with the **Hollowtop Outdoor Primitive School** [On-Line Calendar of Schools](#)

Woodland Wilderness Skills

Dan Jones
2869 114th Avenue
Allegan, MI 49010
dannwjones@allegan.net

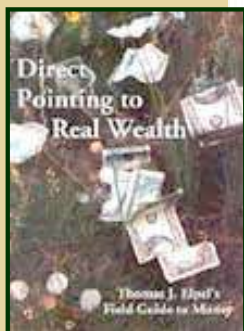


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Ancient Arts Folk School
Casey Makela
PO Box 1
Lincoln, Michigan 48742
989-736-7627
folkartschool@hotmail.com

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Search for primitive survival and nature awareness classes with the **Hollowtop Outdoor Primitive School** [On-Line Calendar of Schools](#)

Missouri

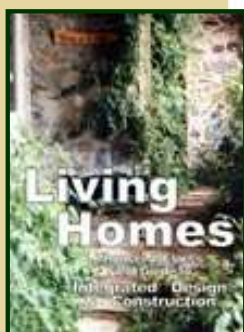


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First Earth Wilderness School, LLC
Bo Brown
3425 N. FR 209
Strafford, MO 65757
bo@firstearth.org

Montana



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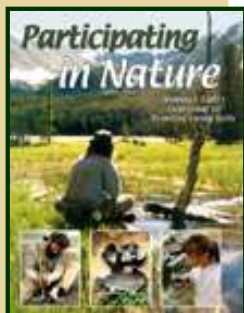
Hollowtop Outdoor Primitive School
Thomas J. Elpel
12 Quartz Street
Pony, MT 59747-0697
406-685-3222
[E-mail Contact Page](#)

A NATURALIST'S WORLD
Jim Halfpenny & Diann Thompson
PO Box 989
Gardiner, Montana 59030
406-848-9458
trackdoctor@tracknature.com

The Artisan
Melvin Beattie
PO Box 9736
Helena, MT 59604-9736
406-458-5493
msbeattie@iglide.net

The Hunter Gatherer Project
Lynx Shepherd
PO Box 550
Kila, MT 59920
406-889-5619

Nebraska

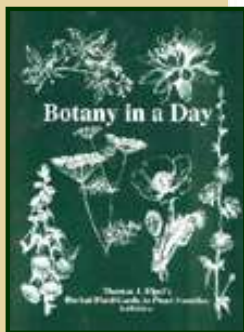


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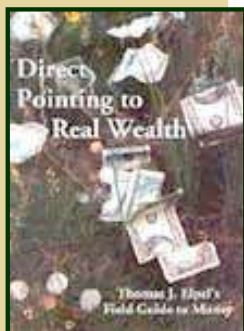
Spirit in the Wind
Rick & Doris Hamilton
87255 464th Ave.
Stuart, NE 68780
402-924-3180
hamilton@elkhorn.net

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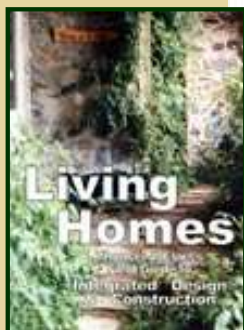
New Hampshire



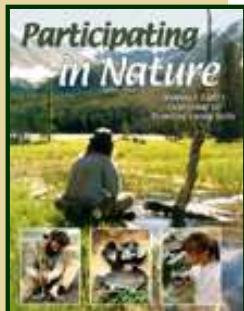
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Life Skills Training Center
George Drowne & Dan Rigger
486 Thayer Road
Dorchester, NH 03266
603-786-9338
lstcntr@worldpath.net

Virtual Mountain Wilderness School
Bruce Carroll
PO Box 84
Fitzwilliam, NH 03447
603-585-3094
bc@virtualmountain.org

JACK MOUNTAIN BUSHCRAFT, LLC
Tim Smith
PO Box 61
Wolfeboro Falls, NH 03896-0061
603-569-6150
timsmith@jackmountainbushcraft.com

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New Jersey

Ingwe's Wilderness Trail
182-B Broad Street
Red Bank, NJ 07701
908-741-2486

THE TRACKER, INC.
Tom Brown, Jr.
PO Box 173
Asbury, NJ 08802-0173
908-479-4681

Primitive Industries
Jack Cresson
40 E. 2nd Street
Moorestown, NJ 08057
856-234-3286
jackcresson@juno.com

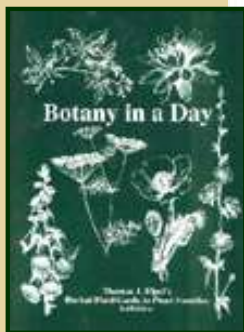
Wild Food Company
Linda Runyon
PO Box 83
Shiloh, NJ 08353
856-234-3286
lrunyon8@yahoo.com

New Mexico

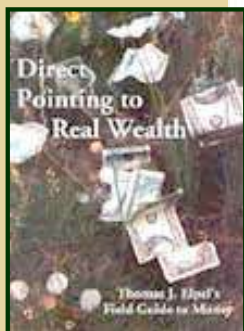
The Earthen Spirituality Project
Jesse Wolf Hardin and Loba Hardin
PO Box 516
Reserve, NM 87830
505-533-6446
earthway@concentric.net

The Tracking Project
John Stokes
PO Box 266
Corrales, NM 87048-8788
505-898-6967

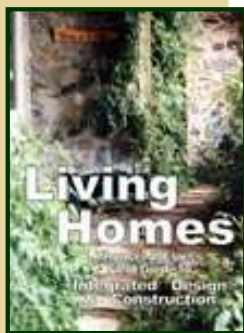
New York



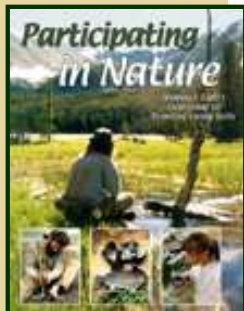
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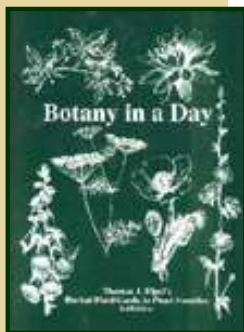


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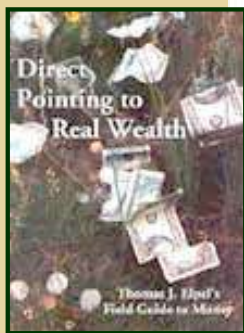
<p><u>Gibbons' Woodfolks</u> PO Box 35 Plattsburgh, NY 12901 518-578-4124 <u>Woodfolks35@Yahoo.com</u></p>	<p><u>Ndakinna Wilderness Project</u> 23 Middle Grove Road Greenfield Center, NY 12833 518-583-9980 <u>jim@ndakinna.com</u></p>
<p><u>HAWK CIRCLE</u> Ricardo Sierra PO Box 506 Cherry Valley, NY 13320 607-264-3396 <u>Ricardo@hawkcircle.com</u></p>	<p>Ancient Skills School Joe Longshore II 357 Cowan Road Canton, NY 13617 213-255-9502</p>
<p>Check this out! Search for primitive survival and nature awareness classes with the Hollowtop Outdoor Primitive School <u>On-Line Calendar of Schools</u></p>	<p><u>Wildman Steve Brill</u> 143-25 84 Dr. Apt. 6C Jamaica, NY 11435 718-291-6825 <u>wildmansteve@bigfoot.com</u></p>
<p><u>Wilderness Way School</u> Mike Head 744 Glenmary Drive Owego, NY 13827 607-687-9186</p>	<p><u>The Wilderness Center</u> Marty Simon 435 Sandy Knoll Road Chateaugay, NY 12920 518-497-3179</p>

North Carolina

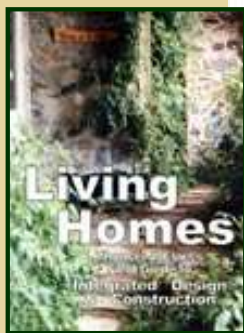
<p><u>Skills Alive</u> Mac Maness 103 Briarpatch Lane Boone, NC 28607 828-262-9629 <u>mac@abotech.com</u></p>	<p>Yonah Earthskills Programs Steven "Snowbear" & Mary Taylor 901 S. Carter Cove Road Hayesville, NC 28904 828-389-9336 <u>yonah@grove.net</u></p>
<p>Check this out! Search for primitive survival and nature awareness classes with the Hollowtop Outdoor Primitive School <u>On-Line Calendar of Schools</u></p>	<p><u>Windsong Primitives</u> Benjamin Pressley 1403 Killian Road Stanley, NC 28164 <u>benjamin@perigee.net</u></p>
<p><u>Turtle Island Preserve</u> Eustace Conway 1443 Lonnie Carlton Road Triplett, NC 28618 828-265-2267 <u>mail@turtleislandpreserve.com</u></p>	<p><u>Earth School</u> Richard Cleveland PO Box 337 Tuckasegee, NC 28783 828-293-5569 <u>richard@lovetheearth.com</u></p>



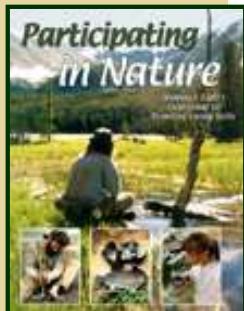
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Ohio

Goosefoot Acres Center for Resourceful Living
Peter Gail, Ph.D
PO Box 18016
Cleveland, OH 44118
216-932-2145
PETERGAIL@aol.com

Midwest Native Skills Institute
Tom Laskowski
PO Box 31764
Cleveland, OH 44131
440-526-3675
tom@survivalschool.com

Wilderness Survival Training Center
Bob Newcomer
PO Box 283
Old Washington, OH 43768
740-432-9018
bob.newcomer@starband.net

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Oregon

WILD FOOD ADVENTURES
John Kallas, Ph.D
4125 N. Colonial Ave.
Portland, OR 97217-3338
503-775-3828
mail@wildfoodadventures.com

NORTHWEST SCHOOL OF SURVIVAL
Brian Wheeler
2870 NE Hogan Rd, Suite E, #461
Gresham OR 97030
503-668-8264
Info@nwsos.com

Pennsylvania

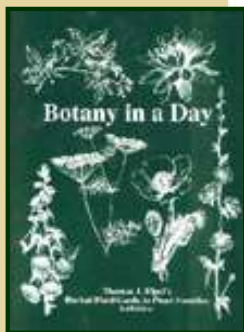
Earth Star Survival
Bob Collins
224 Trinity Ave.
Ambler, PA 19002
215-654-9164
bobcollins@earthstarsurvival.com

Native Survivalist Nature & Wilderness School
Pat Papoutsis
209 Shakespeare Drive
Sinking Spring, PA 19608-1723
pxp177@telocity.com

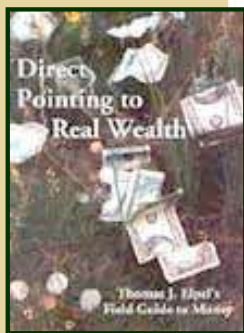
Tennessee

Spirit Bow Wilderness School
Doug Jones
2024 Blue Ribbon Downs
Lebanon, TN 37087
doug_jones@spiritbow.com

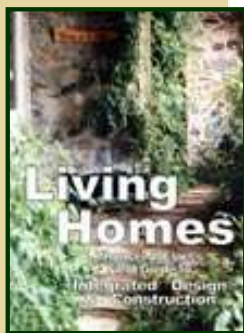
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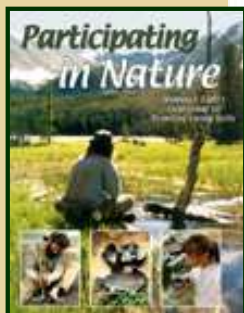
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Texas

Skills of Survival
David Alloway
May 24, 1957 - Mar 11, 2003

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Utah

Lifeways Earth Living School
Holly Stokes
PO Box 70
Spring City, UT 84662
435-787-3732
lifewaysschool@hotmail.com

Boulder Outdoor Survival School
offers many classes in Utah. See [Colorado](#) for contact information.

Vermont

Camp Wihakomwi
Bull Run Rd
Northfield, VT 05663
802-485-4321

Vermont Wilderness School
Steve Young and Mark Morey
67 Main Street, Suite 13
Brattleboro, VT 05301
802-257-8570
steve@VermontWildernessSchool.com

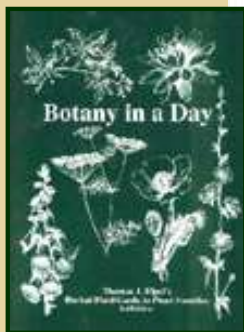
Virginia

Nature & Vision
Charles Worsham
RFD 4, Box 446 Thomas Road
Madison Heights, VA 24572
804-846-1987

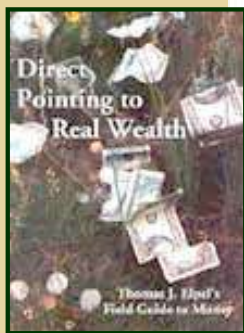
Cliffside Workshops
Errett Callahan
2 Fredonia Avenue
Lynchburg, VA 24503
434-528-3444

Earth Connection
Tim MacWelch
PO Box 961
Marshall VA 20116
540-270-2531
econnect@earth-connection.com

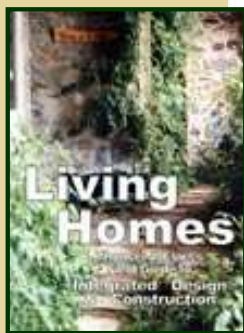
NATURE AWARENESS SCHOOL
Del & Lynne Hall
PO Box 219
Lyndhurst, VA 22952
540-377-6068



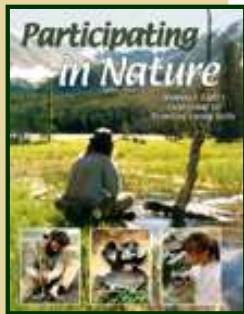
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Earth Quest
David Dabbs & Steve Sims
506 Wilson Lane
Stuart, Virginia 24171
540-930-3340

Two Suns Earth School
Route 1, Box 318
Fulks Run, Virginia 22830

Washington

EARTHWALK NORTHWEST, INC.
Frank & Karen Sherwood
PO Box 461
Issaquah, WA 98027
425-746-7267

Simply Survival
Greg & Kim Davenport
PO Box 449
Stevenson, WA 98648
509-427-4022
info@simply-survival.com

WILDERNESS AWARENESS SCHOOL
Jon Young
26331 NE Valley St. PMB-137
Duvall, WA 98019
425-788-6155

WOLF School of Natural Science
Chris Chisholm & Melva van Schyndel
PO Box 123
Lummi Island, WA 98262
360-319-6892
info@wolfjourney.com

Wisconsin

Medicine Hawk Wilderness Skills, Inc.
PO Box 07482
Milwaukee, WI 53207
630-955-9550
natedpro@aol.com

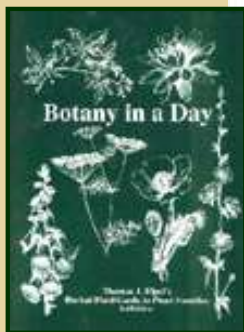
TEACHING DRUM OUTDOOR SCHOOL
Tamarack Song
7124 Military Rd.
Three Lakes, WI 54562
715-546-2944
tdrums2@newnorth.net

Wisconsin Outdoor Survival School
Tom Cartwright
S 88 W 25810 Edgewood Ave.
Mukwonago, WI 53149
262-662-5003
cartwright@execpc.com

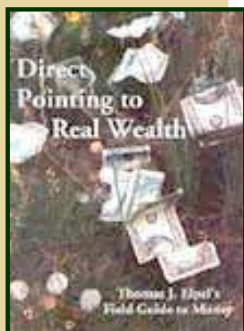
Tracks & Trees Learning Center, LLC
Doug Gaulke
N7597 County Hwy Y
Watertown, WI 53094
920-699-3217
dugtracs@execpc.com

Native Ways School
Gregg Weiss
PO Box 133
Cornucopia, Wisconsin 54827
360-708-1598
nativeways@hotmail.com

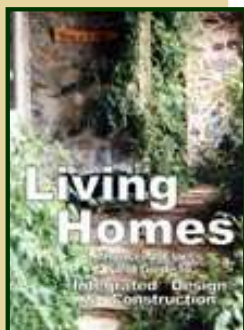
Forager's Harvest
Sam Thayer
PO Box 129
Bruce, WI 54819
715-868-3643



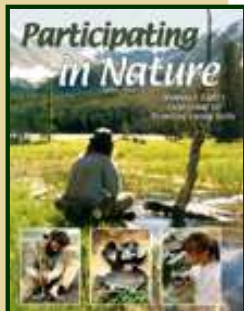
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CANADA

Alberta

KARAMAT WILDERNESS WAYS

Randy & Lori Breeuwsmas
Box 483
Wildwood, AB TOE 2M0
780-325-2345
randy@karamat.com

The Trapper
Ross Hinter
PO Box 246
Tomahawk, AB TOE 2H0
780-797-3808

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Boulder Outdoor Survival School offers classes in Alberta. See [Colorado](#) for contact information.

British Columbia

Windwalker

Wes Gietz
2205 Walnut Ave
Comox, BC V9M 1N6
250-339-3197
wgietz@windwalker.ca

Survivors Edge

Jackson Wagner
3127 Robinson Road
Sooke, BC VOS 1N0
250-642-0628
survivorsedge@hotmail.com

Okanagan Outdoor Skills and Wilderness Survival

Michelle Dallyn
3861 15th Ave
Vernon, BC V1T 8H5
250-833-4507
250-503-7056
ronandmichelle@telus.net

WOLF School of Natural Science

Chris Chisholm & Melva van Schyndel
Box 434, 1641 Lonsdale Ave
North Vancouver, B.C., V7M 2J5
604-418-8900
info@wolfjourney.com

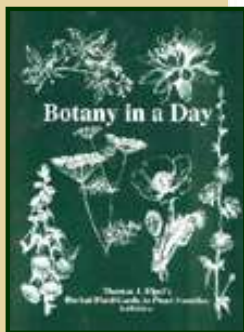
Ontario

Alba Wilderness School

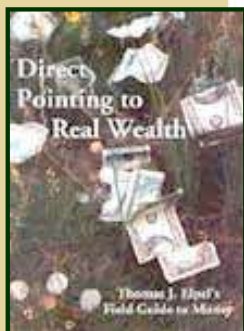
Chad & Barry Clifford & Tania Marsh
R.R.#4
Lanark, ON, KOG-1K0
613-259 3236
alba@magma.ca

Check this out!

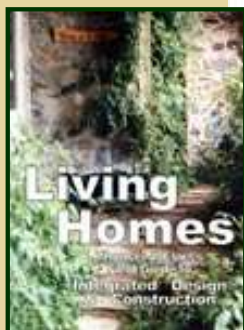
Search for primitive survival and nature awareness classes with the **Hollowtop Outdoor Primitive School** [On-Line Calendar of Schools](#)



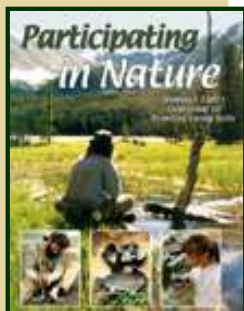
[Botany in a Day](#)



[Direct Pointing to Real Wealth](#)



[Living Homes](#)



[Participating in Nature](#)

MEXICO

[The Desert People--Tribal Village](#)
(Baja California, Mexico)
Danny August
dezertwalker@netscape.net

Boulder Outdoor Survival School
offers classes in Mexico. See
[Colorado](#) for contact information.

Other [Primitive Living Skills Links](#)

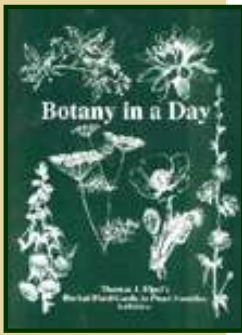
Hello!

Just wanted to say how much I really enjoyed your two video's ([3 Days at the River, Mountain Meadows](#)). They are exactly what I have been looking for in a video. I'm already looking forward to the next one. Thanks!

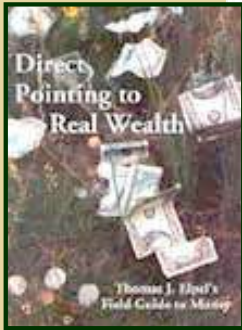
*-- Tim Dowling
(used with permission)*

[Main Menu](#)

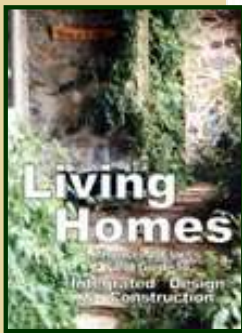
[Primitive Living Skills Page](#) | [Primitive Living Store](#)
[Society of Primitive Technology](#) | [Food Insects Newsletter](#)
[Sustainable Living Page](#) | [Home Builder's Store](#)
[Wildflowers & Weeds Page](#) | [Wildflowers Store](#)
[3Rivers Park](#) | [What's New?](#) | [Search This Site!](#)



[Botany in a Day](#)



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[Living Homes](#)



Hollowtop Outdoor
Primitive School, LLC

Main Menu

Primitive Living Skills

Tom's Journals & Articles
Tom's Class Schedule
Schools of North America
Calendar of Schools



Primitive Living Store

Stone Age Skills
Nature Awareness
Books, Videos,
Tools & Supplies

**Society of
Primitive Technology**

Bulletin of Primitive
Technology
On-line Articles
Subscription Information

Food Insects Newsletter

On-line Articles
Subscription Information

Sustainable Living

Alternative Construction
House-Building Classes
Articles & Resources
Ecological Economics



Home-Builder's Store

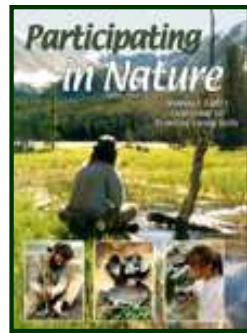
Stone, Log & Strawbale
And Many More Creative
House-Building Books,
Videos & Resources

Wildflowers & Weeds

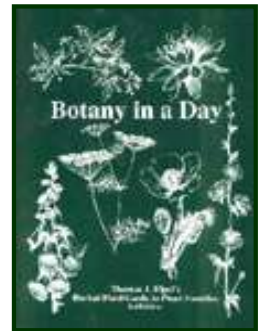
Plant Identification
& Edible Plants
Rangeland Ecology
Weed Control Alternatives



Thomas J. Elpel's
Hollowtop Outdoor Primitive School, LLC
www.hollowtop.com
www.primitive.org
www.3riverspark.org
www.wildflowers-and-weeds.com
Search Our Websites!



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A Few Other Search Engines

- [Top 100 Sites Network](#)
- [Web Crawler](#)
- [WhatUSeek](#)
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- [LinkMonster](#)
- [WhoWhere?](#)
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Wildflowers Store

Plant & Mushroom Guides
Holistic Management
Grazing Resources
Books & Videos

3Rivers Park

A Place for People
Help us Secure the Rivers!

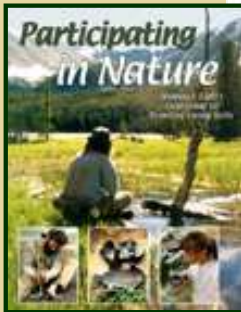
What's New?

See what's new
on all our websites!

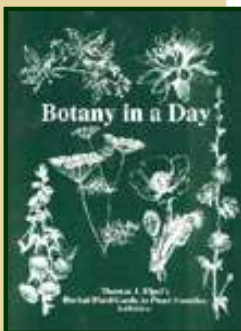
**Thomas J. Elpel's
Hollowtop Outdoor
Primitive School, LLC
PO Box 697
Pony, MT 59747-0697
406-685-3222
E-mail Contact Page**



This Website Created on a lovable
Macintosh computer!



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Galaxy

Infoseek

Access Business OnLine Official Classified Marketplace

JumpCity

BizCardz Business Directory

InfoSpace

JumpLink

Net-Announce

Northern Light

TurnPike

Unlock:The Information Exchange

Search

All In One Internet Search Site

ALIWEB

PeekABoo

Scrub The Web

WebScout

YeeHaa!

Super Snooper

Open Text

Yahoo

A N A N Z I

Argus/Univ. of Michigan ClearingHouse

Asia Trade

ATEL's "What's Hot on the Web"

BigBook Yellow Pages

Starting Point

Magellan

i-Explorer

What's New Too

Apollo

Self-Help

Four 11 Corp.

LinkMaster

Infohiway

Brian's Revised Internet Yellow Pages

CANLink Directories

City.Net (virtual tourist II)

Cool Site of the Day

Commercial Advertising and Marketing Server

Computer and Communications Pages - Company Listings (e-mail submissions to jed@webstart.com)

Scot Finnie)

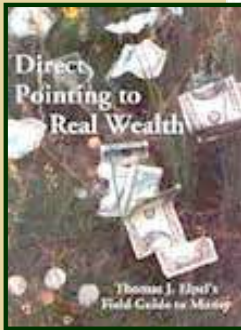
The Crest Internet Index

Darren's Free For All Page

> EINet Galaxy

Entrepreneurs on The Web

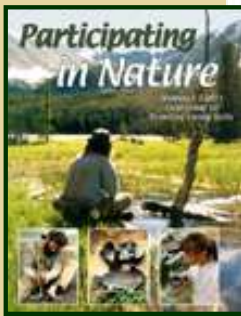
The European Directory



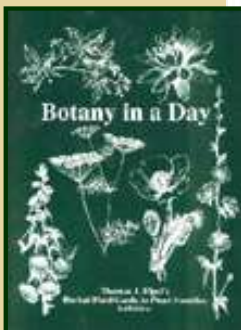
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[excite!](#)

[Four11 White Page Directory](#)

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wic@gnn.com)

[GTE SuperPages](#)

[Global On-Line Directory](#) (GoldSite Europe)

[Ground Zero](#)

[Groupweb Business Directory - InfoResearch](#)

[Hay's Ways](#)

kennw@msn.com)

[The Huge List](#)

[InfoResearch - Groupweb Business Directory](#)

[Infoseek](#) (e-mail submission to www-request@infoseek.com)

[Inktomi](#)

[Innovator's Network Yellow Pages](#)

[inSites](#) at iGuide

[Internet Consultants Directory](#)

[Internet Mall](#)

[The Internet Public Library](#) (e-mail resource information to ipl@umich.edu)

[Internet Resources Database - Classified Link](#)

[IntIndex](#) (e-mail submission to gerryh@silverplatter.com)

[iWORLD WebPointer](#) (e-mail submission to webpoint@www.iworld.com)

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[JumpCity](#)

[Lightning Web](#)

[LexiConn](#)

april@olywa.net)

[LinkMaster](#)

[LinkStar](#)

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[Manufacturers Information Net](#)

[Marshall's Hotlinks](#)

[The Meeting Place](#)

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[Microsoft Library](#) (e-mail submission to mslib@microsoft.com)

[Mother of All Link Page](#)

[Myanmar Free For All Link Page](#)

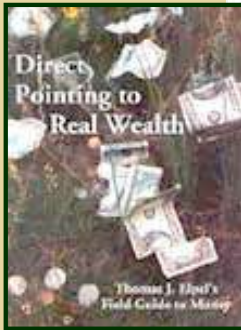
[Nerd World Media](#)

csteele@interlog.com)

[Net-Happenings](#)

[NetMall](#)

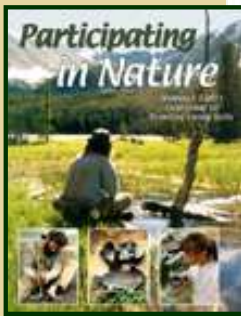
[Netscape's Escapes](#) (Suggest a Site to be reviewed on the



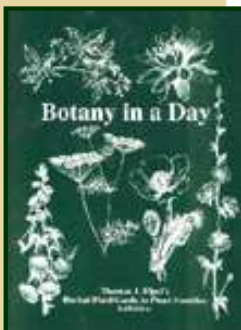
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[Recyclinx](#)

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[A Thousand Points of Sites](#)

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[Tribal Voice Additions](#)

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centrifg@keytech.com)

[Vancouver On The Net](#)

[Virtual Yellow Pages](#)

[Virtual Tourist](#) (server annnc.)

[W3 Virtual Library x Subj.](#)

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[WinMag Netguide](#)

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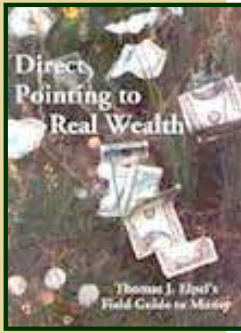
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