Organic Connections

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The magazine of Peter Gillham's Natural Vitality

Trace Minerals
Foundation for Health

Saving the California Oaks
Dr. Lee Klinger Uses Remineralization to Restore Life to Dying Trees

The undiscovered power of minerals

The dictionary defines *mineral* as "an inorganic substance needed by the human body for good health." We take issue with this limited definition of *mineral* for three reasons. First is that one of the definitions of *organic* (*as we show at right*) is "denoting a relation between elements of something such that they fit together harmoniously as necessary parts of a whole." Minerals are clearly a necessary part of living organisms. Second is the observable decline life exhibits when deprived of minerals. Third is the dramatic improvement in health experienced when a proper balance of minerals is provided.

Minerals may not be organic in the sense of being derived from living matter but they are certainly biological by the dictionary definition of "relating to biology or living organisms."

As a society we are moving away from the synthetic and toward the natural. This is partially a result of enlightenment and partially because ignoring our "organic connections" has led to declining health statistics and environmental issues of such scale that it is frightening to all but the most reactionary.

Minerals are part of these connections. We need them in proper balance in our bodies to be healthy. We need minerals in our soil so we can obtain them from the food we eat.

In the quest for greater and greater agricultural production, industrial farming methods have depleted our soils of a great deal of their mineral content. The result is crops which are susceptible to disease and need pesticides to keep them "healthy." Pesticides, of course, create different health and environmental problems and the end result is tasteless produce that is low in nutritional value. Keep in mind that only 2.5 percent of the total U.S. food consumption is organic and more than 10 percent of that is imported.

In this issue of *Organic Connections*, we focus on minerals in a few different ways. Naturopathic doctor Robert Maki talks about his use of magnesium in relation to cardiovascular health. Our feature article covers trace minerals and how important they are to our overall well-being. And, from a different perspective, Dr. Lee Klinger tells the fascinating story of how he was able to restore life to dying California oak trees by remineralizing the soil.

We hope you will find these enjoyable and uplifting.

—Editor

In this issue

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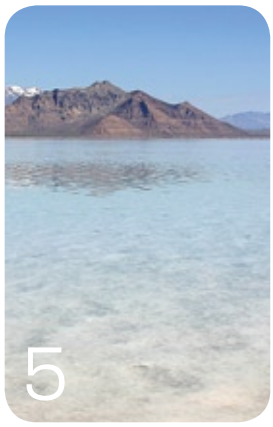
denoting a relation between elements of something such that they fit together harmoniously as necessary parts of a whole: *the organic unity of the integral work of art.* • characterized by continuous or natural development: *companies expand as much by acquisition as by organic growth.*

4 spotlight

Dr. Robert Maki is a naturopath who specializes in cardiology. He talks about the importance of magnesium to cardio health.



5 feature

How important are trace minerals? Get the whole story and what makes ConcenTrace® a superior brand of trace minerals.

6 environment

The amazing story of how Dr. Lee Klinger succeeded in saving 5,000 majestic California oak trees from death by using remineralization.

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A portion of the profits from the sale of *Natural Calm*® and *Organic Life Vitamins*™ goes to our Natural Revitalization environmental action initiative addressing global warming, which helps fund **Conservation International** (www.conservation.org) and **Remineralize the Earth** (www.remineralize.org).

Saving the California Oaks

Dr. Lee Klinger uses remineralization to restore life to dying trees

In northern California, home to some of the most spectacular scenery on the planet, a disease is running rampant that is affecting an enormous number of oak trees. Called "sudden oak death" it is a disease for which no real cause has previously been found. If caught in time, there is some possibility that a tree can be saved. But if it progresses into the stage where the tree is diseased or insect ridden, authorities dictate that the tree must be removed. And if untreated, the tree will most certainly die.

Imbalanced and depleted soil

Enter a most unusual man: Dr. Lee Klinger. An ecologist by trade, he has been specializing in the problem known as "forest decline" for over 20 years. It began when young Lee Klinger, then earning money for college, was working as a logger in southern Alaska. There he observed his first forest in decline—one of the worst in the United States. After careful observation and research, he concluded that the trees were dying from an imbalance of acid in the soil and in the trees, combined with a depletion of nutrients in the soil. He ended up writing his college dissertation on the subject—and then traveling the world applying what he had learned in Alaska everywhere he went. His theories held sound: time and time again, he saw that indeed the problem could almost invariably be linked to acidification and nutrient depletion in the soil.

As part of his research, Dr. Klinger learned how Native Americans had managed the land and the trees long before the arrival of the white man. One of the prime elements used was something that modern civilization has fought vigorously—fire. "The primary way nature keeps the acid-alkaline balance in the soils is, typically, through fire," Dr. Klinger says. "The ash from the fires neutralizes acids that tend to build up in the soils, and also puts back into the soils minerals that may have been depleted.

"Native Americans who lived here actually used fire as a very important management tool and burned around the trees very regularly," Dr. Klinger continues. "They were able essentially to grow trees—oak trees, for instance—to sizes and ages that are much bigger and older than what you would typically find in a wild setting."

Because fire has been so heartily prevented in modern times, there is acidification in the surface soils along with depletion of minerals associated with acidification. The trees then don't have the ability to fight off diseases and insects like they used to.

Sudden oak death

Five years ago, Dr. Klinger decided to utilize all he had learned, turning his attention closer to his Big Sur, California, home, where countless oak trees were dying of sudden oak death. In that he couldn't set fires willy-nilly around the many structures that stood near the oaks he was trying to save (including the famous Hearst Castle), he began "mimicking" the ash that would normally result from a fire by spreading a volcanic ash mineral compound called Azomite. "We're having very good success using these minerals to revitalize the soils and buffer the acids that have built up," Dr. Klinger says.

"We're actually seeing the tree health improve in a matter of a year or less in many cases."

For trees that are not yet progressed to the diseased state, Dr. Klinger spreads Azomite on the surface soil around the tree. The minerals are then pushed into the ground through watering or rainfall. For trees that are diseased or insect ridden, he also applies a poultice made from Azomite to the entire lower part of the trunk. He administers the poultice as well to any open sores on any trees he's treating, diseased or not.

Instead of a standard scientific laboratory approach of trying various minerals or elements and seeing what worked, Dr. Klinger

But what is truly astounding is the 80% success rate he is having with trees that are diseased or insect ridden—trees which anyone else would completely write off and have removed.

has tried and succeeded with what originally occurred in nature. Azomite contains over 70 minerals and trace minerals that have turned out to be vital to tree health.

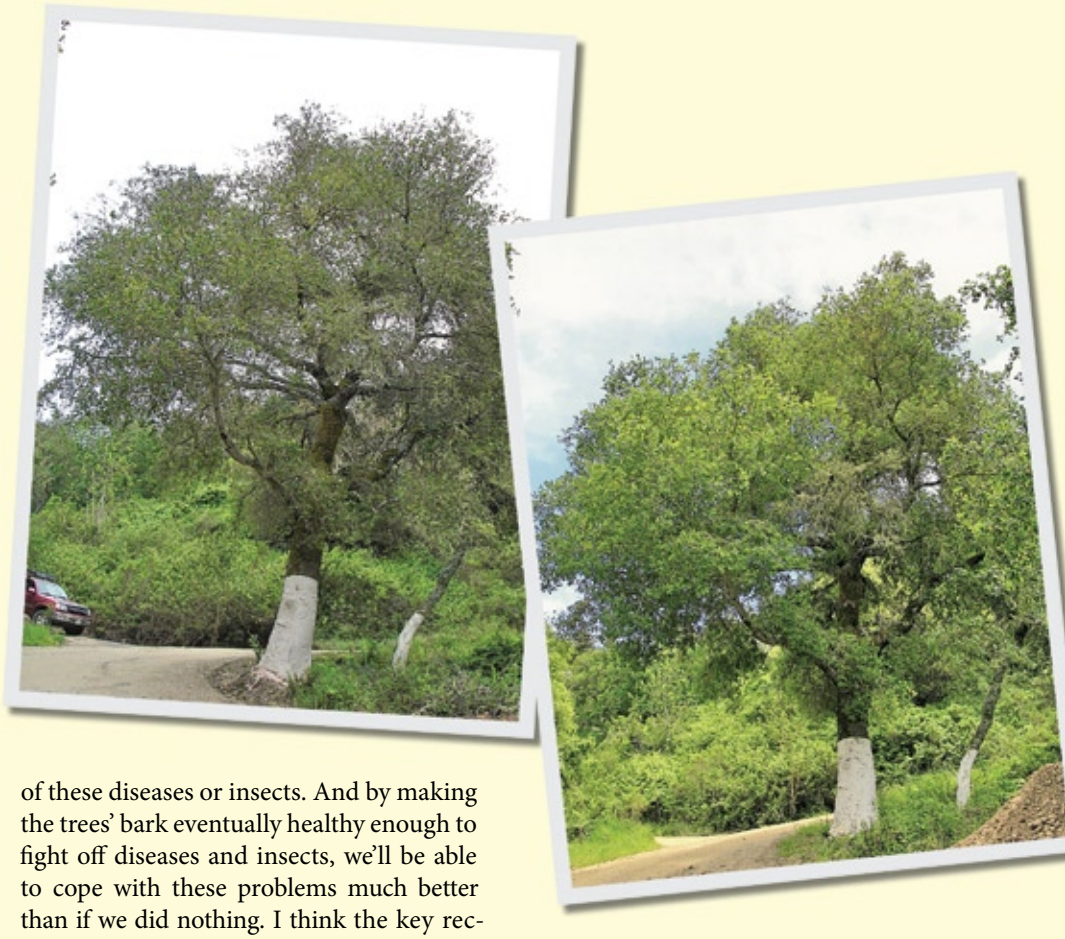
Sudden oak life

His success rate would make any scientist proud. For trees that have not yet fallen victim to disease and insects, his savior rate is 95% or better. But what is truly astounding is the 80% success rate he is having with trees that are diseased or insect ridden—trees which anyone else would completely write off and have removed. You can view some of Dr. Klinger's amazing results on his website at www.suddenoaklife.com.

As Dr. Klinger works, his research continues, and one exciting piece of information that has recently come to light is the role of bark on a tree. "One of the things I'm finding is that the bark of the tree is the tree's first line of defense against insects and disease," he says. "It's exactly like our skin. Our skin is the first line of defense against diseases getting in our bodies. As soon as you have an open wound, you risk the chance of getting a disease. The same is true for a tree. And what we're finding is, just like our skin has a high mineral requirement, so does the bark of the tree. In fact, the bark of the tree has the highest mineral requirement of any tissue in the tree. When minerals become depleted in the soil, you start having bark problems, and the bark starts to split or is not as healthy and can't fight off insects boring through the bark. Conversely, a healthy bark will be able to deter insects and disease infections, in most cases."

What does the future hold? Dr. Klinger says, "There is lots of information needed to treat trees properly, and I've tried to make a lot of that information available on my website. There's also information available on Azomite.com website.

"With the right methods used with the right frequency, we can probably get these problems under control," Dr. Klinger concludes. "We're not going to eliminate any of these diseases or insects. And by making the trees' bark eventually healthy enough to fight off diseases and insects, we'll be able to cope with these problems much better than if we did nothing. I think the key recognition here is that a lot of people aren't really given many options of what to do other than to spray toxic chemicals to try to fight the disease or insects. But again, if you get one disease or insect under control, and you haven't solved the problem of the tree's defensive system being weakened, then you're just biding time until the next set of insects or diseases moves through. So it's key to really focus on the fundamental problem, which is mineral-deficient soils, and get those soils healthy. It does take many years to get a tree healthy again, and even though we're seeing quick response in 1 or 2 years, the problems won't be solved, in many cases, for maybe 5 or 10 years, until the tree can put on new bark that's healthy enough to fight off the diseases and insects. It's going to take a concerted effort on everyone's part."



Benefits of remineralization

"When forests are unhealthy and dying off they release carbon into the atmosphere," says Joanna Campe, president of the nonprofit organization Remineralize the Earth. "When they're healthy, they store carbon. Dr. Klinger's methods have been successfully used on more than 5,000 trees afflicted with malnutrition and other disease conditions, with all but a handful responding with a flush of healthy canopy growth. His vital work is showing the substantial benefits that remineralization can bring to forests."

For more information on remineralization, visit www.remineralize.org.