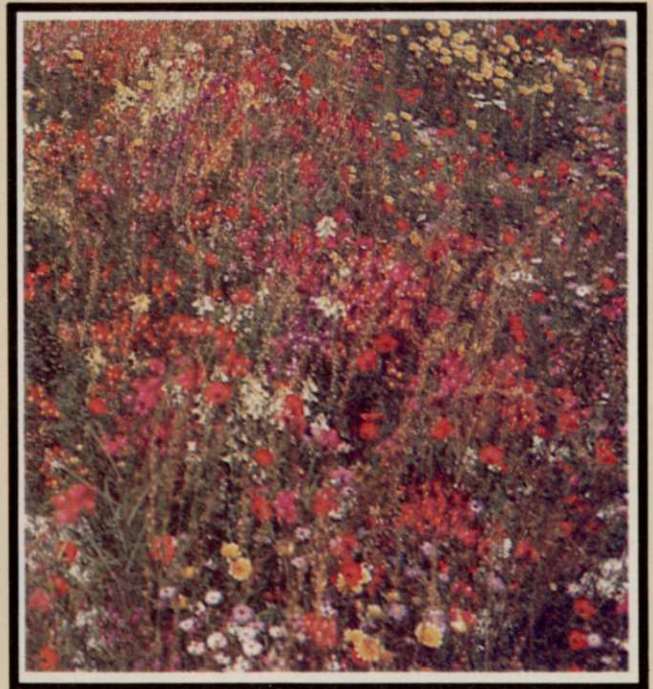


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- Northern Mix
- Southern Mix
- Either Mix

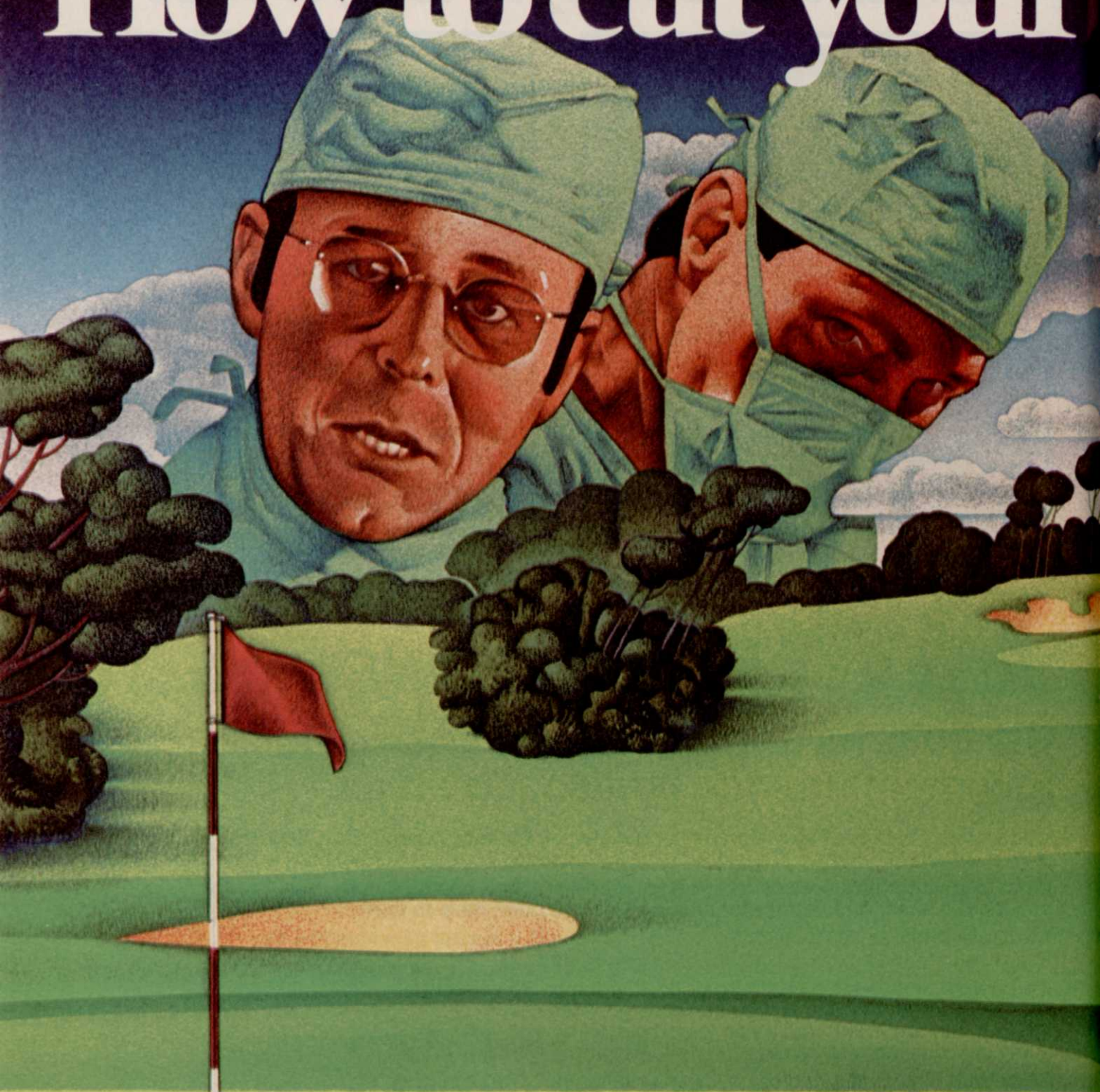


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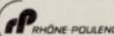


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Planking designed to steer people from one area to another is the trademark of a Ridge Nurseries deck.

DECK CONSTRUCTION LANDSCAPERS BUILD AS HOME PURCHASES



Piano-shaped deck is set on I-beams in a cement base. Doerler Landscaping used this method instead of the wooden joist arrangement due to insufficient depth.

High interest rates. Reaganomics. Tight money. While these terms often herald bad times for the new construction market, many landscape contractors have found their deck construction business on the upswing.

"About 70% of the deck jobs that we do are additions to previously built homes," said Bill Kourbage, Ridge Nurseries, Dix Hills, NY. Other contractors contacted by *Weeds Trees & Turf* agreed that the majority of their deck and wood structure work was in additions. High interest rates have dissuaded many home owners from new home purchases and steered them instead into improvement of their current home.

Landscape Architect Steve Ownby told *WTT*, "There is a lot of interest in decks. I find that people



Bracing of the bench to the deck is one of the many areas that lend itself to innovative and unique designs.

MORE DECKS TUMBLE

By THOMAS PACIELLO

are doing a much better job of developing their residential environment." As in most construction jobs, communication between the design and contracting personnel is vital and many contractors are centralizing both tasks. Bill Doerler, Doerler Landscaping, Lawrenceville, NJ, employs four landscape architects who serve as salesmen, design consultants and on-the-job supervisors. "With much of our work, we try to design, build and maintain the entire entertainment area as opposed to simply building a deck," said Doerler.

One Doerler job that WTT visited illustrated this point. A greenhouse opened out onto a piano-shaped deck. The shallowness of the area in which the deck was built posed a problem. Doerler opted to set steel I-beams in a concrete base

to support the deck structure. Off of the deck is the pool and the rest of the entertainment area. Wood structures are present in many forms in this area. Railroad ties serve as hedge borders on two sides of the pool and on a third side are used as the base of two vegetable gardens. A wooden fence conceals the pool's pump and filter and a three-cell compost heap is constructed with removable wooden slats for easy usage as its volume changes. The pool was the only segment of the area that was subcontracted.

Indeed, many landscape contractors believe that the greater their capabilities, the greater their ability to suggest work that might be overlooked. "We design everything on the outside of the house, deck, pool, tennis courts, everything,"

said Kourbage. "Some of the work is subcontracted, but the key is for you to be the one person the homeowner deals with." Kourbage explained that the homeowner is much more comfortable with having one person to explain their ideas to and one person to be responsible for the work. "Being the key person enhances your reputation which in turn helps your business," added Kourbage, who does not advertise.

The majority of landscape contractors contacted by WTT did little or no advertising to promote their deck construction capabilities. "Advertising did not pay off for me," said William Beitz, William Beitz and Associates, Stillwater, OK. "My work basically comes from word-of-mouth." Many con-

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Bill Doerler, *Doerler Landscaping, Lawrenceville, NJ, employs four landscape architects who design "total entertainment areas."*

tractors hold firm the belief that the best advertisement is an attractively-designed and well-constructed landscape. Professional contacts is one area that should not be overlooked. Professionals with different specialties are sometimes in the position to call on one another's services. Ownby (whose specialty is new construction design) has hooked up with Beitz (whose work is basically renovations) in the past when he needed remodel contracting. "Professionals need to consult each other on an ongoing basis to do the best possible job," said Beitz.

Design details

On the subject of design details, landscape contractors varied widely. "Anyone can build a square deck," said Kourbage. "We never do the same job twice. Some of our designs are still in style ten years after they're built." The challenge of coming up with new and unique designs was one of the common threads among landscape contractors. The Kelly residence was a job designed by Ownby and contracted by Beitz. The home was a subdivision of a golf course and part of a semi-urban environment. "The back of the home opened out into a densely-wooded area," said Ownby. "You felt like you were walking out of a treehouse. There was also a very steep grade." Ownby said that the challenge was to preserve the naturalness of the

site. He also had to solve the problem of the grade. The "ground" floor of the front of the house was actually the second floor of the rear of the house. Ownby designed two levels of decks. The upper level wooden deck leads you down to the lower deck which is comprised of a pool bordered by redwood decking on one side and stone decking on the other. A curved, stone staircase leads into the pool and stone tree basins were constructed to integrate the wooded environment with the deck. Beitz subcontracted both the pool and masonry work.

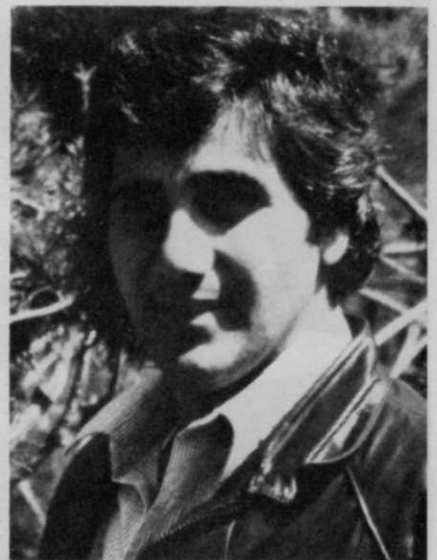
Tiering

Ridge Nurseries tries to avoid stairs whenever possible and use tiering instead. "With tiers you can get different uses out of the same structure," said Kourbage. "What serves as a bench on one level can serve as a step to another and replace the need for stairs." Another Kourbage trademark is sophisticated planking. Kourbage explained that by angling planking you can steer people into various sections of the entertainment area. This is a subtle technique that is particularly effective when tiers (instead of stairs) are employed.

The types of materials used and how they are employed varied from region to region. Landscape contractors in some areas found redwood to be prohibitively expensive. Some contractors told *WTT* that, especially for visible areas, redwood was worth the expense. "It's practically maintenance-free and stands the test of time," said one northeastern contractor. More contractors are also opting for concrete footings instead of railroad ties. "With concrete footings we feel we give the structure a sense of permanence," said Kourbage. "With railroad ties you're never sure if they'll settle or erode."

Building Codes

The majority of contractors told *WTT* that they do their work according to current building codes. "The only time we have to comply with building codes is when we're putting up an overhead structure or the work involves utility lines," said Beitz. Taking it one step further, one New York contractor said, "We do all our work according to code because oftentimes



Bill Kourbage, *Ridge Nurseries, Dix Hills, NY, (whose business is concentrated in Long Island's "Gold Coast") averages close to 15 deck jobs a year.*

homeowners will call us years after we have completed a job and say they want to sell the house and does the work that we performed meet the building permit standards."

While earth-moving equipment is occasionally used, particularly when steep grades are involved, deck construction typically requires few elaborate tools. Most contractors use standard carpentry tools, some power tools (saws, drills) and an auger. A few contractors commented on realizing how dependent they have become on power tools when they were forced to use standard tools on decks where there were no electrical hook-ups.

While the economy has hurt some construction, many landscape contractors are moving full speed ahead with their deck construction. The average contractor surveyed by *WTT* planned to build 10-15 decks per year costing \$20,000 per unit. That price tag is misleading though, taking into account \$40,000 jobs in suburban New York and \$5,000 jobs in rural Oklahoma.

"During the gasoline crisis in the early 1970's people stayed home, did less travelling and subsequently wanted a 'total environment' on their property," said Kourbage. "That is when our deck business started to pick up and I see the same thing happening again." A lot of landscape contractors who do deck construction hope he is right.

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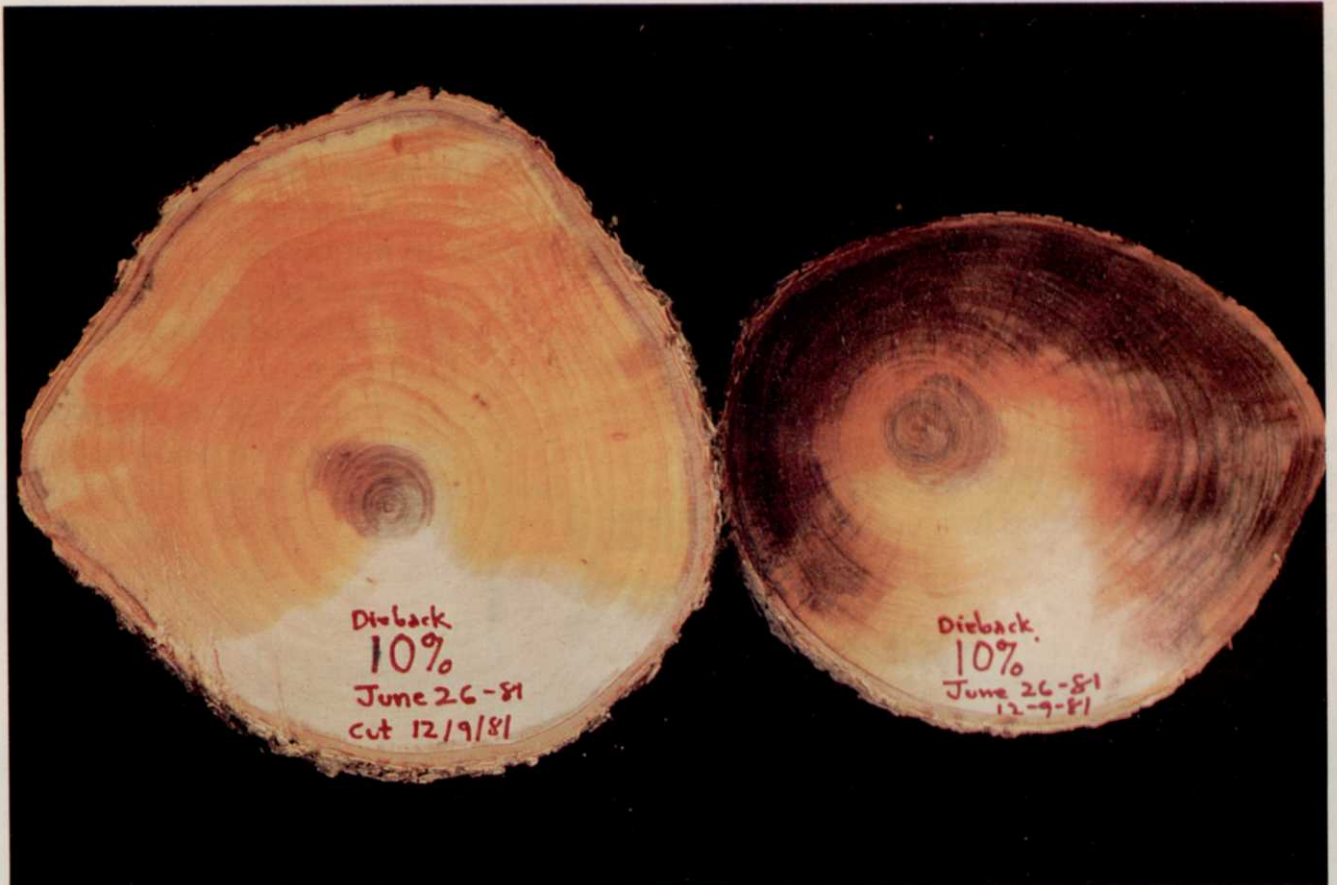
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SHIGO AND HIS SAW SHED NEW LIGHT ON TREE HEALTH

By BRUCE F. SHANK



Darkened wood tissue indicates starch reserves of sample. Slice on left shows virtually no reserves—a hopeless case. Whereas, the slice on right came from a healthy tree with good reserves.

Alex Shigo, chief scientist at the USDA Northeastern Forestry Experiment Station in New Hampshire, is well-known to the tree care community. In 1950, he began to dissect hundreds of trees with a chain saw to pin down the actual response of trees to injury and maintenance practices. He is largely responsible for finishing work begun by Hepting in the 30's on compartmentalization. Shigo developed a model called CODIT to show exactly how a tree walls off injured and diseased wood to protect the rest of the tree.

His string of discoveries has not stopped. In fact, he is very close to a

major discovery within the next two years. If he is correct, a number of standard maintenance practices could be reevaluated or replaced with more effective methods.

I visited Dr. Shigo and his team of scientists in New Hampshire in March to see first hand how he works and what is on his mind for the coming years. Take my word, his lab is a busy one with thousands of wood samples stacked for testing and his staff going in and out for more.

The following article is based on 12 hours of interviewing. Hopefully it describes the unique train of thought of this leading tree re-

searcher. Consider these statements by Shigo, "We should be more concerned with selecting and planting decay-resistant trees than with trying to treat trees like humans. We must have strongly compartmentalizing trees in the city. A tree can survive after many severe wounds as long as it has the energy and time to wall off the injured and infected tissues. Trees may contain a large amount of decayed wood without having obvious external indicators. Tree care practices are based upon a concept of tree decay developed more than a century ago."

Continues on page 30



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JUNE 1982/WEEDS TREES & TURF 29

Once an idea is firmly established, it takes years of hard work and education to amend it. Shigo has spent more than 30 years reevaluating old notions about three disease and care.

There are many people causing unnecessary damage to trees during pruning by cutting into the collar of the branch. Many still use tree wound paint even though it serves no purpose to the tree. During cavity repair, excessive cleaning may reinjure the tree rather than help it. Injecting materials into the tree may do more harm than good, especially if holes are drilled along the same line year after year. These are just a few of the conclusions made by Shigo while working for the Forest Service.

The biggest breakthrough, however, may be just around the corner. Shigo is focusing on the energy needed for a tree to protect itself and the level of stored energy in healthy versus unhealthy trees. If the energy problem can be solved, then perhaps the tree will depend more on itself for maintenance.

"It really was the chain saw that made it possible to find out so much about trees so rapidly," Shigo says. He estimates he has sliced and cored more than 15,000 trees in his research. It is the chain saw that makes Shigo different from his fellow researchers. He takes the lab work of others and goes to his lab, the forest, for application. "A scientist doesn't create totally new ideas," says Shigo, "He adapts the ideas of previous scientists to a new perspective."

Most of Shigo's concepts are recent. Even though his work extends to the late 40's, his CODIT system, pruning recommendations, and wound dressing findings were published only in the last five years. For science, that is very recent and those who apply his work today are current.

His work on energy reserves in trees really developed out of Dutch Elm Disease research he is doing. When potassium iodide was applied to cores or slices of various trees, healthy trees showed good starch reserves while dying trees showed little if any reserves. The thought follows if starch reserves can be restored, the tree's defen-

sive reactions will improve and it will survive. Shigo is also working on Chestnut blight.

One of his first successes was the detection of weak utility poles by an electrical probe, now known as the Shigometer. The electrical resistance of the pole to a pulsed current can show whether a pole is sound or not. The same technique can be used for trees to detect interior decay. The device was actually constructed for New England Bell and is now produced by an electronics firm. Shigo did not name the device nor does he receive any money from its sale.

Compartmentalization in Trees

The original concept of tree decay was wounds expose heartwood and decay organisms attack the "dead" heartwood. Arborists saw many trees with decayed interiors and this concept made sense. In the 1930's, G.H. Hepting of Mississippi studied tree decay following forest fires. He noticed that decay in trees tended to be localized.

Shigo knew of Hepting's work and used a one-man chain saw, first developed in the late 40's, to dissect trees across and up and down. From his findings, and those of his colleagues, Shigo hypothesized that the tree responded to in-

Myths About Trees

1. Trees heal wounds.
2. All wood cells are dead, unresponsive.
3. Decay develops unrestricted through heartwood.
4. Decay starts when wounds expose heartwood.
5. Trees get their food from the soil.
6. When pruning, cut flush with the stem.
7. Frost initiates frost cracks.
8. Callus forms on from the sides of the wound.
9. Point ends when tracing wounds, use pointed or diamond-shaped washers.
10. Core holes to drain water from cavities.
11. Cavities should be cleaned to sound wood.
12. Wound dressings stop decay.
13. Water causes rot.
14. Decay is a problem of old trees only.

jury by creating vertical and horizontal barriers to contain the spread of decay. He developed an explanation involving four walls, three stopping inward or vertical spread and a fourth separating the wound from new growth. If you look at a slice of an older tree, you

Continues on page 34



Shigo's laboratory is the forest where he makes unusual cuts with his chain saw to expose new facts on tree response to injury and decay.