

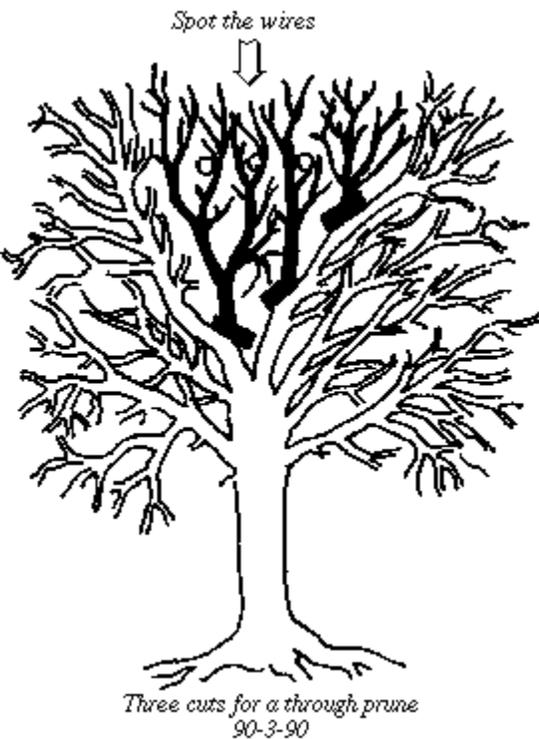


Power Lines

By Cass Turnbull

One of my personal heroes is Ben Barnes of Seattle City Light. For years he has been crusading to end the torture and mutilation of trees which is done for power lines. He initiated tree replacement programs, tightened up line clearance contracts and procedures, (boosting crew morale) and has worked with communities. His efforts produced a Right Tree Book, the Elmer and Crabby Tree kids' work book, the "right tree" refrigerator magnet. Ben has basically educated an entire city of people and officials about power line clearance.

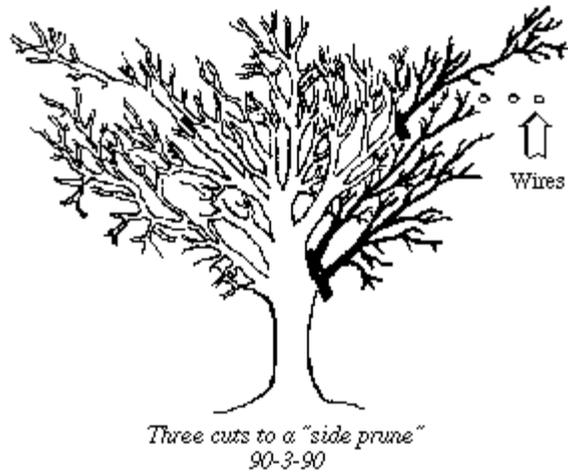
He "keeps on going", year after year, like the Energizer bunny, but not without meeting constant resistance. One reason is that Ben, as well as all the other line clearance workers I know, represent some of the most hated and distrusted monopolies in the nation. No matter how carefully he explains the situation, people often choose not to listen, or to understand. They can't believe that these people aren't just pushing the best solution for power companies, not trees. Even people who should know better — arborists, city officials, and gardeners who know how to prune — are far too quick to jump on the utility bashing band wagon.



The truth of the matter is - *there are no nice solutions to the problem of trees growing into power lines.* In that sense, it mirrors many of our current political and social problems. Power line clearance workers are caught between a rock and a hard place. Actually they're between a power line and a tree limb. They get yelled at if they let trees grow into wires, they get yelled at for topping, they get yelled at for directional pruning (after they properly through-pruned my neighbor's tree, he went out and topped it into a ball or as he put it, "made it the way it should be".) Utility workers even get yelled at for suggesting trees be removed and replaced with better sized species.

There is no reasonable way to keep a big tree small. Even with careful, annual selective heading, all you wind up with is a extraordinarily expensive twiggy ball on a stick. So why not plant a Paul's scarlet hawthorn in the first place, and save the rate payers a heap? The three things that escape most people are: 1) the wires are uninsulated and very, very dangerous; 2) the sheer magnitude of the problem—thousands of miles of wires, with homeowners planting new birches under them every day and changing addresses an average of every eleven years; and 3) there are problems with every proposed solution.

After the headlining wild fire that threatened to engulf Spokane a few summers ago, eight power companies were sued for letting their power lines sag into the foliage. Ben once told me that, in one month, they took down thirty-four tree houses from within reaching distance of the wires. He showed me the local newspaper clipping about the parents who found their missing boy electrocuted in his tree house. He told me of his visit to a fellow living at home on a life support system. The man, he said, was worried. He lay on his back day after day and watched the limbs brush against the wires in the wind. Simply coming too close to a line could cause electricity to arc, and short out his life.



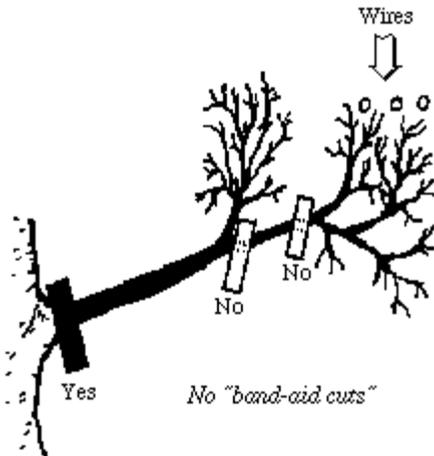
Until Ben told me these and other stories, all I thought about power outages was that they were annoying. Knowing what I know now, I realize that if the trees weren't dealt with routinely, en masse, the lights and the heat, (far more critical to others than myself), would be going out every other day, disrupting service to thousands of people.

And, Ben said, the sad thing was that most people just don't give a damn about their trees. Tree lovers often exclaim, "Why don't they just underground the wires?" But nobody tells us who "they" are. Undergrounding as a retrofit for existing communities is horrendously expensive, and most of the big old trees would have to be cut down and replanted anyway. The power companies would pass the cost on to the ratepayers. "They" isn't anybody other than "we". And as a group, "we" fight rate hikes tooth and nail. As a group "we" demand uninterrupted power.

Seattle once passed a levy to underground the City's wires (back in the good old days when money was plentiful and we had a war in Southeast Asia). Residents of each neighborhood were required to pay half the expense, with the City matching the other half. But only the wealthier neighborhoods could afford it. In effect, the tax dollars of the poor subsidized the rich to underground their wires. The program was stopped, and rightly so.

Who knows, maybe a citizen's initiative is worth a try. We could tax ourselves to underground a few major arterials in each neighborhood. (Exactly what we need - more traffic delays and construction!) But it's the larger streets that call out for truly big trees and it would keep Seattle's streets from looking like one endless Aurora Avenue. Rainier Avenue in particular may become one of the most beautiful streets in the world with two rows of majestic trees leading, on a clear day, to that most magnificent of mountains.

On the other hand, the city's residential streets usually have two sides, one for small trees and wires, the other for tall trees and no wires. Here again, it was Ben who said to me, "How come all you guys hate little trees, what's wrong with little trees?" I realized then that I was a tree snob. Originally, I suppose I was stuck on the notion of uniform rows of one species, and one size tree along the streets. But I've looked down some old City streets that have a mixture of tall and understory trees, and the effect is really quite pleasing, like a woods. For big tree lovers who have power lines and small parking strips, we suggest planting the tree back in the yard and letting it crown out ABOVE the wires. But even if you show people a full sized tree, they mentally refuse to believe that it will get that big in their yards.



There are many new gadgets and gizmos coming along in the utility industry — super strong “tree cable”, wire clustering devices and other things to help people keep their trees intact. But none of them are the final solution. Until we find a way to beam power into homes (which can't come too soon, as there is nothing quite so ugly as a city strung with wires), such remedies (including pruning) can only be considered as heroic measures to save special trees already in existence. The main focus should still be “the right tree”. That means phasing out large trees under wires, and plugging the empty spots with small trees. It takes a certain kind of clear thinking and courage to recognize what needs to be done, and to do it, even when it hurts. It's the difference between being an adult and a child.



As for line clearance pruning and the people who may be reading this across the country, there are a couple of “correct” line clearance pruning systems. Wholesale tree topping is no longer acceptable. If your local company still does it, have us send them some brochures. (Send us a name and address, please). But, even the best companies will top certain trees in certain situations. They have to. Legally, they must keep trees specified distances from energized wires (clearance varies from three to sixteen feet according to voltage and local regulations). If the tree in question is single leadered, like a birch or fir tree, and if the homeowner refuses to let it be cut down, it will be topped. There is no third alternative, and caring and wishing can't make it so. For those people who own a row of large trees directly under the wires, it pays to think ahead. Plant the new trees in the right places now, plan on removing the “wrong” ones later.

Correct line clearance pruning can look quite severe, more severe, in fact, than the “round-over” pruning (topping a tree into a round ball) that was done in the past. It is, however, better for the health of the tree, causing less rot, and stimulating less water sprout regrowth. And it costs rate payers less in the long run. Even so, directional pruning (as it is called) is still being fought by the old guard in the utility companies, by the management who should know better, and by consumers who don't like how it looks.

Rather than making many smaller cuts close to the wires it is often preferable to make fewer, larger cuts, removing interfering branches where they meet the larger parent stem, or, alternately, back to good sized side branches. Some exceptions, I suppose, include conifers which are off-set to the

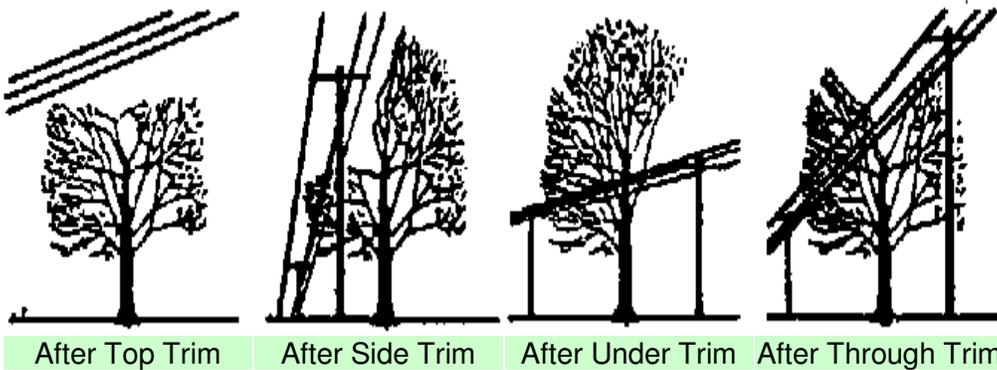
wires. Then the careful utility worker might partially “eclipse” an area near the wires. There is a certain amount of judgement involved, and the experienced utility arborist weighs factors of public safety, tree health and aesthetics when choosing where to cut.

Dr. Alex Shigo, who publishes a great little booklet for line clearance workers, has what he calls a 90-3-90 rule. It says “ninety percent of the time, three cuts will get you ninety percent of your clearance”. Unfortunately some new workers often read that as 100-3-100.

The illustrations in this article show correct line clearance pruning. Remember it's not a nice thing to do to trees, but it's the least damaging way to do a necessary thing to trees. While in

Vancouver, Canada, I had the shocking experience of seeing a tree service engaged in massive "line-clearance" pruning of a row of large trees, except that there were no lines. Monkey see, monkey do, and another argument for removal and replacement.

Correct line clearance work might mean taking off the whole side of some people's trees, if the alternative of removal is denied. Correct training can mean "topping" rows of young trees. It's best in most cases to start training trees early and low, thus giving limbs time and room to grow away from wires. Such trees are "topped" (I prefer to call cuts under two inches, "headed") a foot or more below the neutral (usually the middle wire, going up the pole). When the "topping" cuts that have to be made, get too big then it's better just to remove the tree and start over. "How big is too big?", I asked a utility arborist who was discussing topping cedars under wires. "A three inch diameter is about the biggest we like to see", he replied.



Where I live, the homeowners must give permission for a tree to be removed. In other parts of the country, arborists are only allowed to do the minimal amount to get the trees out of the wires. No removals. (How much sense does that make?) Such companies must prefer putting out fires to planning ahead, even though it clearly costs more in the long run. There it is again! Short term versus long term gain.

Now that you know what good utility line pruning looks like, you can better judge for yourself how they're doing. Personally, I have a deep appreciation for those utility arborists who are trying to do the right thing. Each and every day they have to make the best of a bad situation. I doubt that anyone ever says thank you. Thanks Ben.