# REVERSE TAPER IN BONSAI: IS IT REALLY SO BAD?




In the Victorian era, corsets squeezed women into severe hourglass shapes that could almost serve as diagrams of reverse taper. By the 1950s, the same exaggerated silhouette had become curvaceous. Jessica Rabbit eventually took the concept to its cartoon extreme. Somewhere along the way, however, reverse taper acquired a less flattering association. With fast food, sugary diets, expanding waistlines, dad bods, and warnings about heart disease, a bulge in the middle no longer seemed quite so glamorous.

Bonsai has been even less forgiving.

Ask almost any experienced bonsai artist about reverse taper and you will probably hear the same rule:

***Reverse taper is bad.***

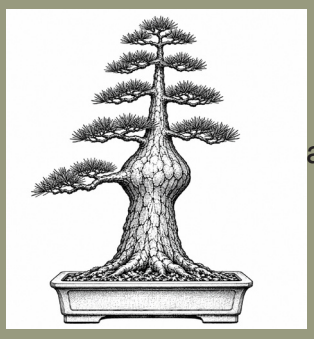
Students learn that a bonsai trunk should emerge strongly from the soil and progressively diminish in diameter as it rises. The eye follows that narrowing trunk upward, interpreting it as height, age, strength, and distance. Reverse taper interrupts that progression. A section suddenly becomes wider than the trunk below it, and supposedly the illusion collapses.

But does it?

Perhaps reverse taper deserves more consideration before we condemn every tree that displays it.

## What Is Reverse Taper?

Reverse taper occurs when part of a trunk becomes thicker than the section immediately below it. Instead of steadily decreasing from roots to apex, the trunk narrows and then expands.



A classic example occurs at a branch whorl, particularly in pines as seen in the  figure.. Several branches emerging from one point contribute vascular growth that can eventually produce a noticeable bulge. The same thing occurs in deciduous trees, which explains the familiar advice against allowing too many branches to develop from one location.

Grafting provides another common cause. A vigorous scion may thicken faster than its rootstock—or the reverse—making the union increasingly obvious with age.

Damage can also create swelling. Lightning, animals, broken limbs, insects, disease, or human activity may injure a trunk. As the tree produces callus to close the wound, the resulting growth can enlarge that section. So reverse taper isn't necessarily unnatural.

## Trees in Nature Have Reverse Taper.

Old trees contain scars, cavities, burls, swollen branch unions, deadwood, and healed wounds. Nature rarely produces the perfectly tapered trunk illustrated in a bonsai textbook.



Which raises a question:

If bonsai suggests trees in nature, why must every bonsai trunk possess perfect taper?

## The Ideal Tree That Doesn't Exist

The traditional argument has merit. Taper creates perspective. A trunk that begins broad and progressively narrows appears taller and more massive. Strong taper can make a 20-inch bonsai suggest a much larger tree.

But useful design principles sometimes become commandments.

Good taper becomes the trunk must always taper. Guidelines become rules and eventually judging criteria. That can encourage artists to create bonsai that satisfy rules rather than trees that tell convincing stories.

Perfect taper can make a beautiful bonsai. But imperfection can make a believable one. An ancient tree battered by storms should not necessarily resemble a mathematically calculated cone. Sometimes the irregularities we remove could have given the tree its character.

## When Reverse Taper Really Is Bad

None of this means every swollen trunk deserves celebration. The important distinction involves whether the swelling looks accidental or inevitable. Consider an elegant pine that gradually narrows before reaching a round swelling caused by an old branch whorl. Above it, the trunk suddenly becomes thin again. The eye stops. Instead of seeing an old pine, we see a horticultural mistake.

An obvious graft union can create the same problem. Rather than suggesting age or adversity, it advertises how the tree was propagated.

Reverse taper becomes undesirable when we notice the defect before we notice the tree.

Now consider an ancient-looking trunk with a hollow where a major branch once tore away. Callus has rolled around the wound, creating a swollen, irregular section. Technically, it may have severe reverse taper. Yet visually it makes sense. We understand what might have happened. The swelling becomes evidence of survival. That distinction matters.

## What to Do When You Encounter Reverse Taper?

1. Do Nothing—Make It a Feature

The simplest solution may sometimes be to do absolutely nothing. Better yet, emphasize it. If a swelling resembles an old injury, develop that story. A small hollow can become a larger hole.. A smooth bulge can acquire texture through carving. A cavity can extend through the swollen section and transform an obvious flaw into one of the tree's most memorable features.



The objective isn't necessarily to disguise the reverse taper. It is to give the viewer a convincing explanation for it. A defect without explanation looks like a mistake. A defect with a story becomes character.

2. Change the Front

Bonsai exists in three dimensions, but we normally present it from a preferred viewing direction. That gives the artist considerable freedom. A swelling that looks severe from one angle may nearly disappear when the tree rotates 15 or 20 degrees. A branch, hollow, strip of dead ark or wood , or change in trunk movement may visually interrupt the offending area. Changing the front can therefore provide one of the easiest solutions.

Of course, every choice carries consequences. A new front changes the apparent trunk movement, surface roots, branch positions, apex, negative spaces, and relationship between tree and container. Don't solve a minor reverse-taper problem by creating five larger design problems. Instead, rotate the tree slowly and photograph several possibilities. Surprisingly small changes can radically alter the apparent thickness of a trunk.

3. Remove It Completely

For younger deciduous trees and species that air-layer reliably, severe reverse taper may provide an opportunity rather than a disaster. Air-layer immediately above the offending section. Once roots develop, remove the original lower trunk. The defect disappears, and the former upper section becomes a new tree with a new surface roots. In some cases, this produces a better bonsai because the artist can establish roots exactly where the

trunk possesses its most attractive proportions. The price, of course, is height.

Removing the lower trunk changes the entire design. But with undeveloped material, sacrificing height may prove preferable to spending decades trying to conceal an unattractive swelling.



4. Carve It Away

The most aggressive solution involves physically reducing the swollen area.

This requires judgment. Simply grinding a bulge until the trunk becomes cylindrical often produces an artificial-looking scar. A better approach incorporates the reduction into believable deadwood. Carve a hollow. Create a scar. Extend an existing scar. Suggest a broken branch or an old injury.

Instead of asking, How can I grind away this reverse taper? ask:

What could have happened to this tree that would explain why this section looks this way?

That question changes carving from cosmetic surgery into storytelling.

Work gradually. Removing too much living tissue can damage or kill portions of the tree. The species, vascular structure, and ability to heal should determine how aggressively one works.



## Reconsider Reverse Taper

Taper remains one of our most powerful tools for creating the illusion of a large tree in miniature. Severe, unexplained reverse taper can absolutely destroy that illusion. But reverse taper itself isn't automatically a defect.

The better question is: Does it help or hurt the story of the tree?

And remember sometimes a scar, hollow, swelling, or other imperfection makes a far more interesting tree. After all, the goal isn't to create the world's most perfectly tapered trunk. The goal is to make the viewer believe the tree has lived to tell its story.