

How to Properly Plant a Tree – Part 1

Find the Root Flare



Image 1. A container tree with the graft point circled. This is not the root flare.

Container trees typically have too much soil over their root system. This is due to the 'potting-up' process done by nurseries as the seedling grows larger and is potted into larger containers.

It is important to find the tree's root flare before digging the hole and planting the tree. The tree in Image 1 is currently planted too deep in the container. The bulge in the trunk at soil line is the grafting point. This is where the root stock was grafted to the desired tree species when the plant was very young. The root flare is not visible.



Image 2. The visible roots are growing from adventitious buds on the trunk. This is not the tree's root flare

After digging in the soil you will likely find roots growing from the trunk that are not part of the tree's root flare.

In Image 2, the roots growing from the trunk are from adventitious buds that are normally dormant. These adventitious roots are growing due to soil and moisture being present against the trunk. They can be left exposed and they will dry out and die or they can be removed with a sharp pruning tool.

Keep digging to find the true root flare.



Image 3. The root growing across the trunk is considered a girdling root. It needs to be removed to allow proper future trunk growth.

It is critical to remove any roots that cross or circle the trunk.

As the tree trunk and the root grow larger in size, the root can start to grow into the trunk causing damage to the tree's vascular system which moves food and water up and down the tree.

These roots are also called girdling roots because they can girdle the tree, which means the root can encircle or confine the trunk cause significant crown die-back or tree death.

In Image 3, a root is shown growing adjacent to the trunk. If this root is left in place, as it develops and grows larger, it will grow into the trunk causing damage to the trunk tissue. Simply cut the root, with a sharp pruning tool, at its point of origin on the trunk to remove the issue.

Some roots may be very thin in this area of the root ball but all roots growing around or across the trunk need to be removed to prevent future issues.



Image 4. The root growing off the trunk is part of the tree's root flare. It is important that these roots are located prior to planting.

Image 4 shows the root flare from the tree trunk. This is part of the tree's original root system and is not an adventitious root.

Imagine a child's drawing of a tree. The tree flares out at ground level, it does not grow straight into the ground like a telephone pole. This flare is what must be located prior to hole digging and tree planting. The flare is planted at or slightly above ground level.

Tree roots need oxygen to grow. By placing the root flare at or slightly above ground level when planting the tree, you are giving the tree the best situation to grow and thrive in.



Image 5. Approximately three inches of soil and roots were removed to locate the tree's original root flare.

The tree's original root flare can be many inches deep in the root ball.

By removing the soil above the root flare, it can shorten/shrink the overall size of the root ball. In most cases, it is more important to locate the root flare than to worry about the size of the root ball. If the root ball becomes too small, you may consider returning the tree to where you purchased it and selecting a new tree.

In Image 5, the root flare was located approximately 3 inches below soil level. There were many adventitious roots and girdling roots growing above this point that were removed.

Now that the root flare has been identified, the depth of the planting hole can be determined. This should be measured from the bottom of the root ball to the root flare. The root flare should sit slightly above soil grade, this is done to prevent the flare from moving below soil grade as the soil settles after planting.

To learn the next step in tree planting, view [How to Properly Plant a Tree – Part 2, root ball shaving to remove girdling roots.](#)