



Tree Specialists, Inc.

Conservation | Preservation | Restoration



The Air-Spade and Air Knife

These specialized tools use highly compressed air to excavate soil and mulch material away from tree trunks and root systems. Unlike mechanical excavation with machinery or hand tools, the air spade causes very little physical injury to the tree itself. For the arborist, the air spade is an invaluable tool with a number of practical uses.

The Air Spade allows the arborist to examine and treat structural problems with the tree's trunk flare and root collar. This region is critical for the long term health and stability of the tree structure — think of it as the foundation upon which the entire tree rests.

For younger trees that were grown and harvested from a nursery, proper trunk flare development is often impeded by the growth of adventitious secondary roots. If left untreated, these roots will eventually encircle the stem, constricting the flow of water and nutrients. The air spade uncovers the roots, allowing the arborist to prune them out and restore the tree to optimal health.

The arborist can also rehabilitate poor quality soils and sites that have been damaged by construction equipment and activity. The air spade efficiently breaks up compacted soils and incorporates compost, dramatically improving the soil structure and rejuvenating root growth.

It can also be used to excavate trenches in and around tree roots without having to sever the roots themselves. This allows for the placement of sub-surface utilities such as irrigation lines, electrical conduit, electric dog fences, etc. without damaging the roots of established trees.

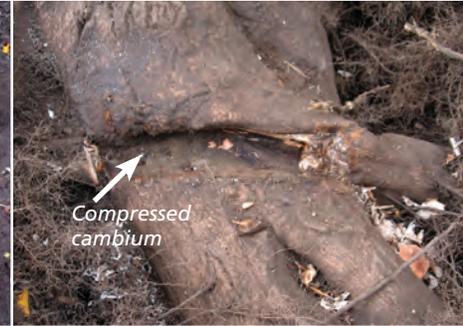
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Girdling root

Airspade removes turf/soil from trunk flare



Compressed cambium

Girdling root is pruned out



Excessive mulch at base encourages encircling roots, resulting in early fall coloration and decline in upper canopy



Air spade reveals serious root deformity



Breaking up compacted turf/soil



Integrating compost to rejuvenate root zone



Accredited by the
Tree Care Industry Association