

INTRODUCTION TO AIR LAYERING

with Kurt Kaiser

AGENDA

Introduction

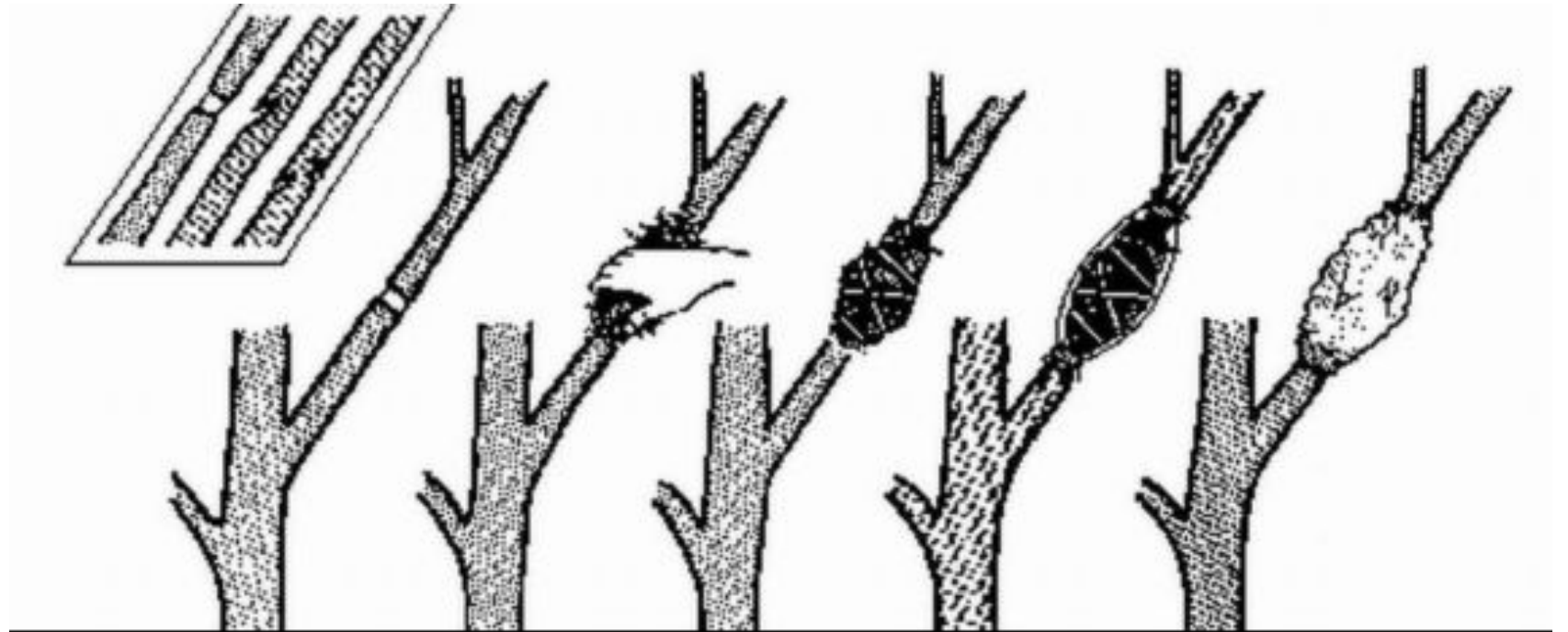
Air Layering basics

Tools

Resources

References

Questions



INTRODUCTION

- Kurt Kaiser
- Loma Rica, CA; zone 9b
- My experience with air layering



WHAT IS AIR LAYERING?

A method of propagating trees and shrubs.

It is the process of removing a branch or section of the trunk of a tree to create another tree.

WHY AIR LAYER?



Creates a perfect clone of mother plant.



It is a quicker way grow a larger plant than from seed or cuttings.



Little to no cost.



A good way to propagate a native species i.e., California sycamore.

HOW LONG DOES IT TAKE?



Approximately two (2) months to one (1) year, depending on the tree.



Some trees air layer more easily than others.

BEST TIME OF YEAR TO AIR LAYER

- Best time of year is Spring
- Wait for the mother tree to leaf out.
- Sugars and hormones are active



TOOLS

- Sharpie (permanent marker)
- Sharp knife (grafting knife)
 - ✓ **High carbon works well**
- **Rooting hormone (optional)**
 - ✓ **I use Gel rooting hormone and paint it on with a small paint brush.**

TOOLS CONT.

- Long fiber Sphagnum moss – moistened
- ✓ Do not use manure or cheap soil as it may contain bacteria or fungus.
- **Ziploc bags**
- ✓ **Or a small, plastic pot (cut) – will need to water more often**
- ✓ Air layering pods (propagation balls) - I have not tried these

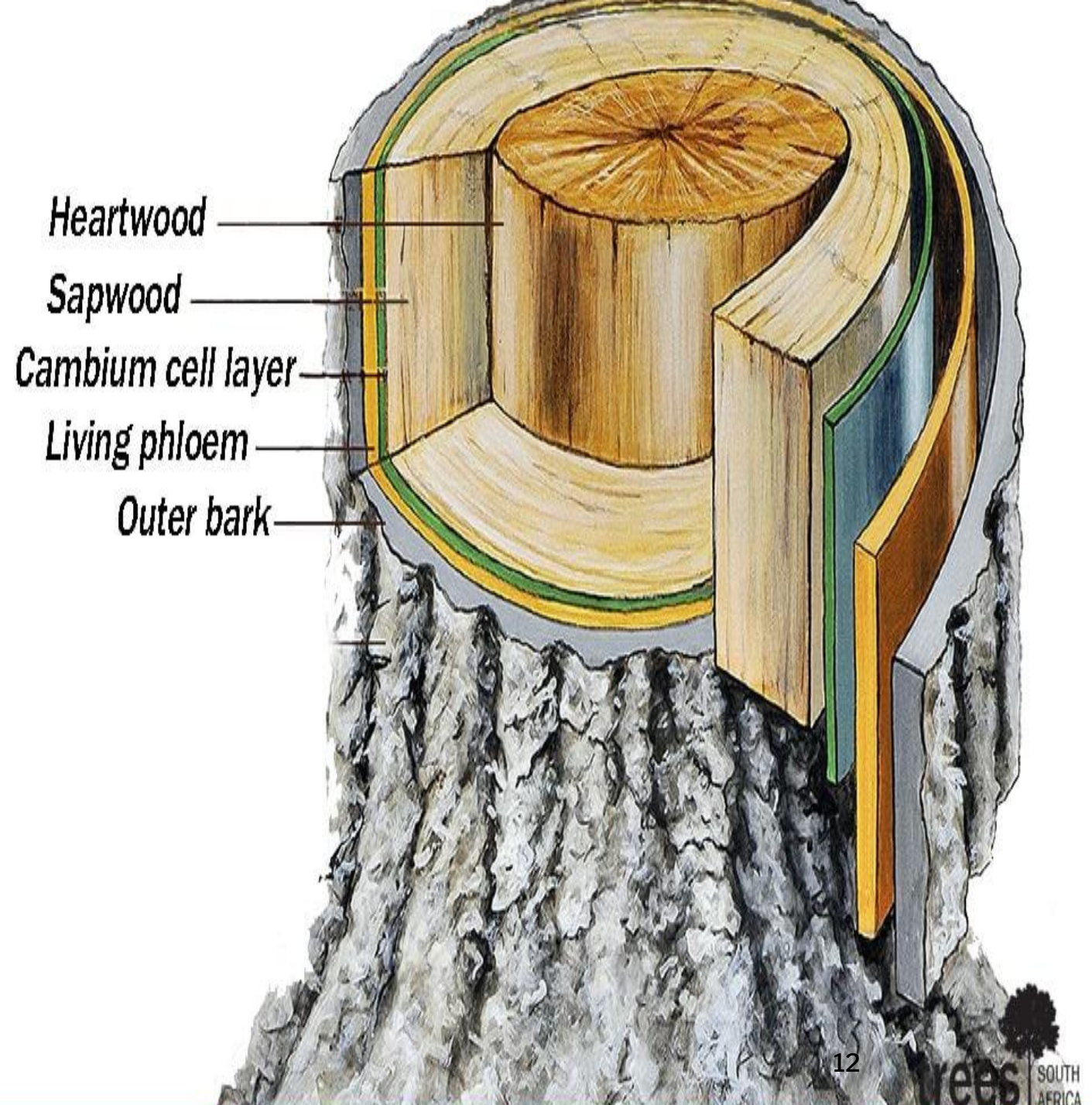
TOOLS CONT.

- **Wire, zip ties or twist ties**
- **Foil for sun protection**
- **Syringe for watering**
- **Loppers / pruning tool**



PARTS OF TREE BARK

- OUTER BARK
- PHLOEM (INNER BARK)
- CAMBIUM (GREEN)
- SAPWOOD



AIR LAYERI NG PROCES S

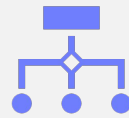


Select plant/tree and the branch.

The branch should be approximately $\frac{1}{2}$ " in diameter.



Cut away any branches in your way.



Remove other branches/leaves 2"-3" on selected branch



Mark branch with two (2) rings with pen.

AIR LAYERING PROCESS

CONT

- **Within the two rings, cut into bark down to the cambium.**
 - **This is the green under bark. It carries sugars (auxins) from leaves to the roots.**
- **Remove all bark, phloem and cambium down to the Xylem (sapwood).**
 - **Xylem carries water and minerals to leaves.**



AIR LAYERING PROCESS CONT.

- Coat with rooting hormone.
- Wrap wet sphagnum moss around the cut.
- Wrap plastic around the cut and moss.
- Tie off with wire or zip ties/twist ties.

AIR LAYERING PROCESS CONT.

- Cover with foil. I prefer foil because it allows easy access for checking the roots and works well for protecting from the sun.
- Water with syringe as needed.



AIR LAYERING PROCESS CONT.

If
successful (about
2 months), cut
off rooted branch
and plant.



POINTS TO REMEMBER

- Clean tools with alcohol.
- Make a clean cut at the top ring. This is where the roots will emerge.
- Moist but not soggy sphagnum moss.

POINTS TO REMEMBER CONT.

- Be sure to remove all phloem / cambium as it may grow back together.
- Do not let it dry out. The easiest way to water is by syringe.
- Rooting hormone comes in different strengths.
 - Some trees will require rooting hormone, but some people choose not to use it.

MY PROJECTS

- Chinese Elm – Drake
- Gardinia
- California Sycamore
- Japanese Maples – only one has been successful. This may have been due to the size of the branch
- Trident Maple
- Harry Lauder's Walking Stick
- v I plan on trying Conifer: I hear they are difficult and may take up to a year.



CALIFORNIA SYCAMORE, PLANTED AND BEGINNING TO LEAF OUT

CHINESE EVERGREEN ELM



Shaping the branch while still attached to the mother tree.

CHINESE EVERGREEN ELM



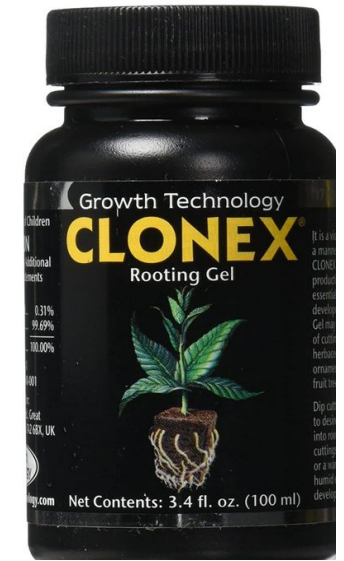
HARRY LAUDER'S WALKING STICK

Air layering with plastic pot
instead of foil.



RESOURCES & LINKS

- Google
- YouTube
- Many videos – some were useful, some not.
- Grafting knife: <https://a.co/d/aiQeIBl>
- Rooting hormone: <https://a.co/d/gQEdCoK>
Or <https://a.co/d/8AvcWwH>
- Air layering pods: <https://a.co/d/gTWCZDs>



REFERENCES

- [HTTPS://OREGONFORESTS.ORG/TREE-BIOLOGY](https://oregonforests.org/tree-biology)
- [HTTPS://WWW.EXPRESSIONSOFGRACEBONSAI.CO.UK/AIR-LAYERING-MY-JAPANESE-MAPLE/](https://www.expressionsofgracebonsai.co.uk/air-layering-my-japanese-maple/)

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QUESTIONS?





THANK YOU