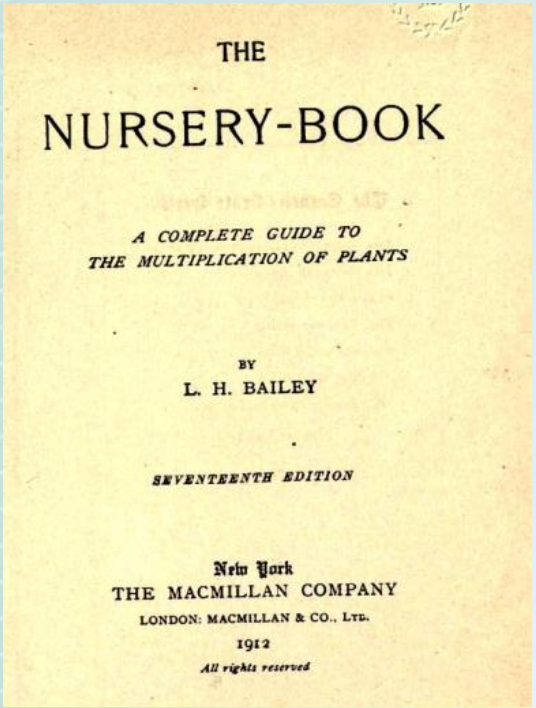
Air Layering
Tropical Ornamental Hardwoods

Joe DeFrank - UH-Manoa
Tropical Plant and Soil Science

Topics Covered

- What is air-layering
- Various types of air-layer systems
- Details of improve air-layer method

What is Air-layering



THE

NURSERY-BOOK

A COMPLETE GUIDE TO
THE MULTIPLICATION OF PLANTS

BY
L. H. BAILEY

SEVENTEENTH EDITION

New York
THE MACMILLAN COMPANY
LONDON: MACMILLAN & CO., LTD.
1912
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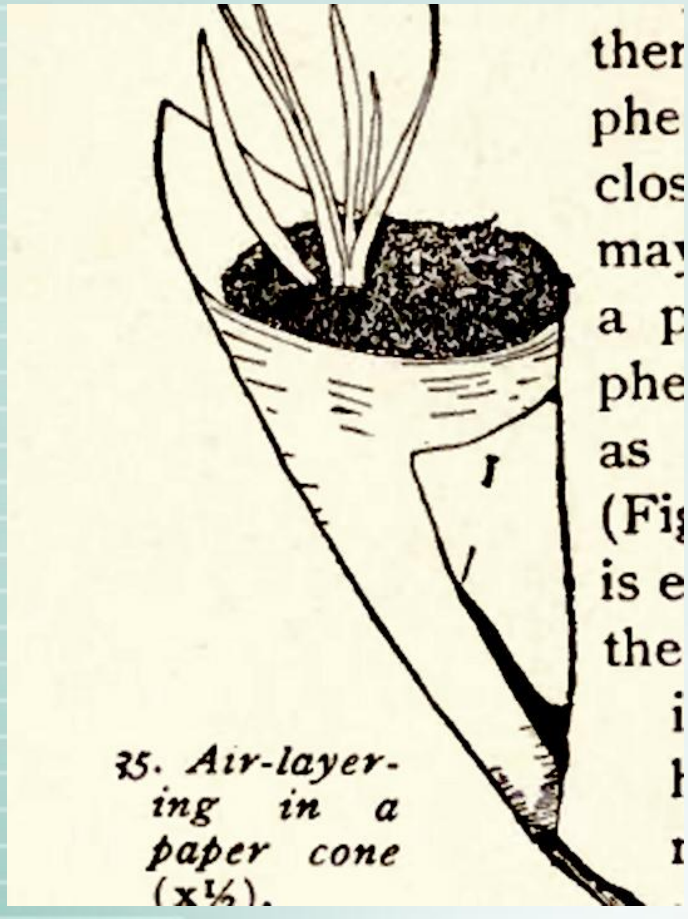
34. Pot-layerage.

Pot-layering, *circumposition*, *air-layering* and *Chinese layering* are terms applied to the rooting of rigid stems by means of surrounding them, while in their natural position, with earth or moss, or similar material. The stem is wounded—commonly girdled—and a divided pot or box is placed about it and filled with earth (Fig. 34). The roots

Various types of Air-layering



35. *Air-layering in a paper cone (x½).*

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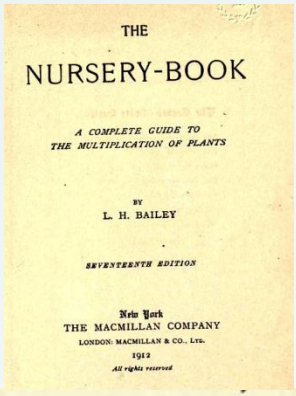
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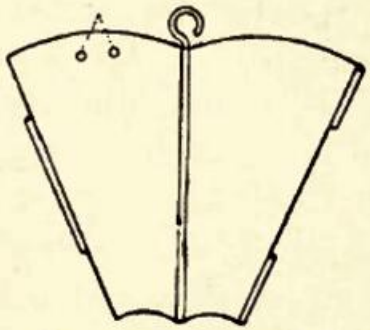
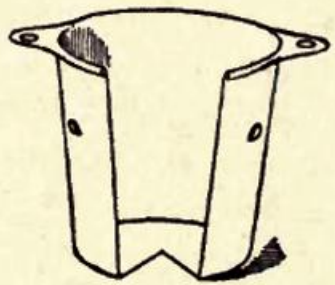
and after roots have formed abundantly the top may be cut off and potted independently, the old stump being discarded.

The French have various handy devices for facilitating pot-layering. Fig. 36 shows a layering-pot, provided with a niche in the side to receive the stem, and a flange behind for securing it to a support. The pot shown in Fig. 33 is a similar device. Fig. 37 represents a layering-cone. It is made of zinc or other metal, usually 4 or 5 inches high, and



37. *Layering-cone.*



38. *Layering-cup.*

39. *Layering-cup.*

Local air layer method with media in bags

Images courtesy Dr. Ken Leonhardt-UH TPSS

Improvement to existing air layer systems

Problems

1. **Time consuming to prepare moss on film strips**
2. **Sealing ends w/string caused failures due to constriction above root formation zone**
3. **Ants invaded moss and caused rots**
4. **Opaque film = Uncertainty of root formation**
5. **Working off the ground, hard to apply film wraps**

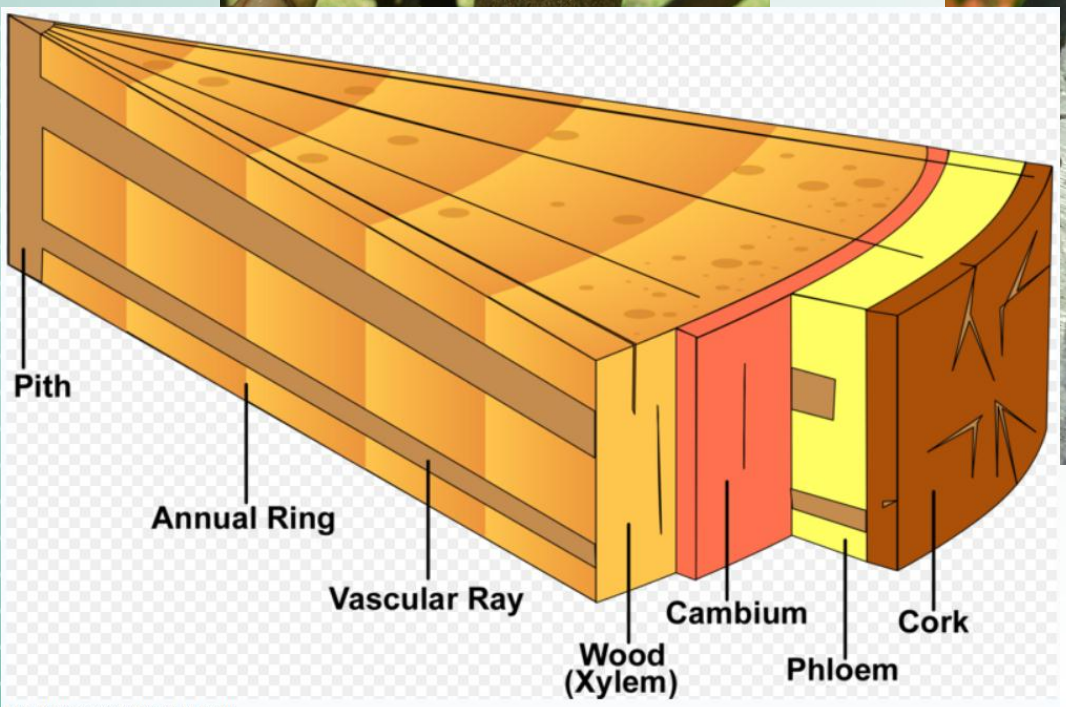
Improvement to existing air layer systems

Improvements to reduce time and improve % rooting

1. **Best time of year in HI: Sept to Nov. flowers all gone.**
2. **Insure active growth and barks slips off easily**
3. **Latex paint with insecticide for ants**
4. **Attach net sack with sphagnum moss**
5. **Apply shrink wrap to seal layer, clear plastic to viewing root formation**
6. **Wrapping procedure to prevent constriction above root zone**
7. **Incorporate drainage for work in higher rainfall areas**

Insure active growth and barks slips easily

Remove cambium layer to prevent regrowth of top and bottom part of layer, results in loss of girdling effect, you need to expose woody stem



Size of this preview: 800 × 523 pixels

- **Cut through bark and cambium layers at a angle with serrated knife**
- **Insures exposure of proper stem layer for hormone induction of root growth and maximum hormone surface area with groves from knife**

Apply rooting hormone to grooves produced with serrated knife.

0.8% Indol -3- butyric acid (Hormodin 3)

Latex paint with insecticide for ants

Permethrin SFR Termiticide/Insecticide

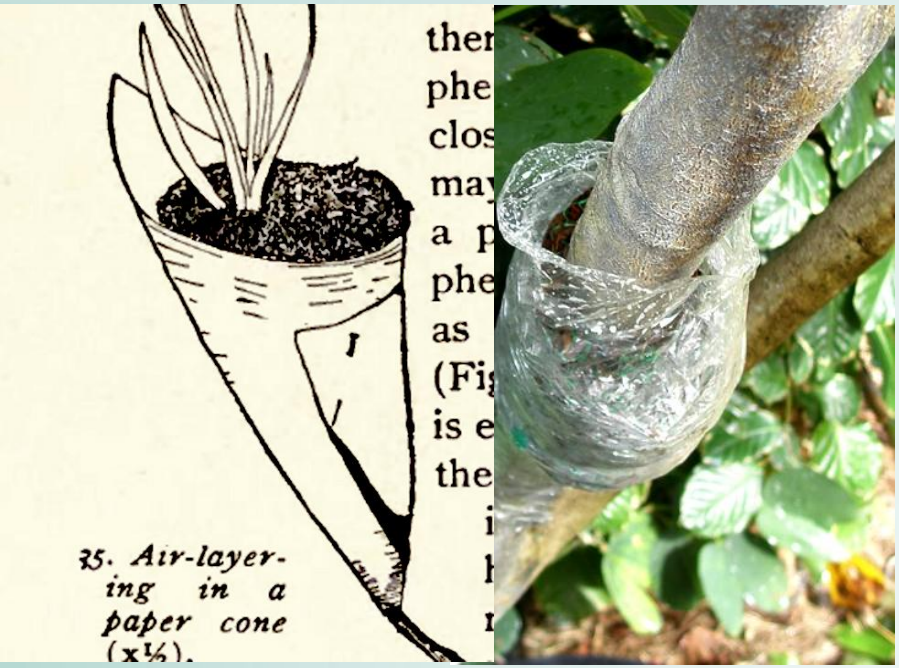
Ornamental Plants, foliage and flowering plants, evergreens, woody and herbaceous non-edible ornamentals and non-bearing plants of fruiting species in landscaped	
Ants Aphids Bagworm Beet Armyworm Birch Leafminer	4 to 8 Fluid Ounces Per 100 gallons -- or –

Application: Apply as a pinstream, as a fine/coarse, low pressure spray (20 psi or less), as a spot treatment or with a paintbrush. Treat where

Fill net sack with sphagnum moss, for hands free film application

Long media sack for branches of various sizes

Shrink wrap secures media for strong root growth



Opening at top side requires ant control and drainage

Prolific root growth allows for direct field plantings

Layers planted 02/25/07

Photo on 08/13/11 = 4.5 yrs.

For more information on topics covered

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