Ocotea bullata — the stinkwood tree
The feasibility of producing stinkwood trees from cuttings

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Ocotea bullata is an evergreen tree up to 30 m tall occurring in most of the high rainfall forests of South Africa, reaching its maximum development in the forests of the Knysna region. The dark glossy-green leaves have “blisters” or “bubbles” on the upper surface, known as bullae, hence the specific name bullata.

The tree yields a beautiful timber much prized by cabinet makers since the earliest days of settlement in South Africa. By 1812 the Knysna forest had been seriously depleted of accessible specimens. Today controlled culling is practised, with replanting from self-sown seeds and cultivated seedlings found in the forest.

The small bisexual or unisexual flowers are followed by fruits in cups rather like those of the acorn. Unfortunately the flowers are prone to a fungal growth while the fruits are parasitized by insects. The only viable seeds are those dropped by birds with the resulting seedlings being used for replanting.

The potential use of the stinkwood as a specimen or ornamental tree in wind and frost free areas is hampered by the lack of available viable seed. This has also prevented the supply of trees for the use of bark in herbal medicine. It has been suggested that bark from felled trees be made available to the herbal trade. However, this has been found to be unacceptable as it is generally believed that for the bark to be efficacious it must come from living trees.

As tissue culture of this tree was not proving successful the propagation unit at Kirstenbosch undertook rooting trials to establish the feasibility of producing stinkwood trees from cuttings.

The first of several trials was undertaken in May 1984 with five cuttings from a juvenile tree growing in a local garden. The cuttings were made from semi-ripe hardwood to soft tips and, although soft tips seemed to be the obvious choice, semi-ripe hardwood proved to be more successful. A rooting medium of decomposed bark and polystyrene in proportions of 5:1 was used in a misting unit with bottom heat of approximately 25 °C and IBA 4000 ppm or Seradix 3 root-promoting hormone was applied. After three months two of the cuttings rooted and these healthy well-formed trees, approximately 5 m tall, are being grown as display plants in the Nursery at Kirstenbosch.

Further trials were carried out with variable results. Despite the lack of systematic controlled trials because of scarcity of material, certain conclusions can be drawn. Ocotea bullata can be grown from cuttings and the month of May appears to be the optimum time for taking these cuttings. While either IBA at 4000 ppm or Seradix 3 may be used as the rooting hormone, the latter is more generally available. Rooting time is about 3-4 months. Preparation techniques vary and improve as the propagator gets the “feel” for the plant under consideration, so that it is possible that further trials might produce better results.

Further reading

The dark glossy-green leaves have “blisters” or “bubbles” on the upper surface known as bullae, hence the specific name bullata. Left: cutting. Top right: under surface. Below right: upper surface.

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