PORTRAIT OF A MEDICINAL TREE

Has the publicity of being one of the Trees of the Year for 1996 helped conserve the pepper bark tree?

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'This bark is powerful muti, the first one which is stronger.' I was at Johannesburg's Mai Mai market speaking to a herbalist. He confirmed what I already knew from the literature: that the bark of Warburgia salutaris, or isibhaha, as it is known by most consumers, has extraordinary healing powers. Believed by some to have magical and aphrodisiac properties, the bark is also used to cure an astonishing variety of illnesses, including stomach ulcers, sore throats, coughs, colds, chest complaints, blood disorders, skin sores, toothaches, backaches, headaches, venereal diseases, rheumatism, nightmares and malaria.

The power of the pepper bark tree comes at least in part from antifeedant compounds which repel insects and destroy bacteria. Researchers are paying particular attention to two compounds, warburganal and muzigadal, which have proved effective under laboratory conditions against snails that host the bilharzia-causing blood flukes (Schistosoma spp.) and the African army worm (Spodoptera exempta) a major crop pest. A pharmaceutical company is also investigating the antibiotic properties of these compounds.

Most traditional remedies use the red inner bark of the tree, which smells of cinnamon and tastes bumpy when chewed (hence the English name). The bark is ground and mixed with water or milk. It can also be taken as a snuff or applied externally as a paste. At the Mai Mai market I was also told that the powdered bark was packed into little capsules.

The demand for the bark is enormous, outstripping the supply. A survey carried out by Cunningham in the late 1980s of 54 herb traders in KwaZulu-Natal estimated that 315 large mielie bags of W. salutaris bark are consumed yearly! In Johannesburg I was told that the wholesale price of a large sack is around R80. The bark is re-sold to consumers for R2.50 to R5 a piece.

As a result of this thriving and profitable trade, trees in KwaZulu/Natal have been cut down and the herbalists that I spoke to said that their supplies now came from Swaziland and Mpumalanga. Agriculture, commercial forestry, and urban and industrial development have also played their part in destroying the habitats where the pepper bark tree grows. It is very likely that within the next 10-15 years all natural stands of pepper bark trees will become extinct.

Clearly, protective legislation and defensive measures, such as painting the trunks of trees with brown PVA paint, destroying their symbolic and commercial value, can only delay the disappearance of pepper bark trees from the wild.

What action is being taken to conserve them?

As early as 1946, recommendations that the state should begin propagating endangered medicinal plant species were made. At the time however, nothing was done about this, beyond the enactment of legislation and its sporadic and ineffectual enforcement.
Some forty years later, workers at Durban Municipality’s Silverglen Nursery took the initiative and began to propagate endangered medicinal plants. The pepper bark tree was high on their list of priorities (see Veld & Flora 81(1), p.16). An educational programme was initiated with the support of herbalists. The programme, which has proved to be very successful, has trained 500 traditional healers to date and provided them with plant material which can be cultivated and harvested for use as medicine.

On its own, however, small scale cultivation will not meet the enormous demand for bark in the urban areas. Additional problems are that bark can only be harvested from trees that are at least 10 years old and that seed from wild populations is invariably parasitized. The declaration of the pepper bark tree as Tree of the Year by the Department of Water Affairs and Forestry was therefore a significant step forward. Commercial growers have been spurred into producing hundreds of thousands of plants from cuttings to supply the market and by now, the interested gardening public will be well aware of the pepper bark tree’s plight.

The Department has also committed itself to establishing pepper bark tree plantations on its own land in suitable areas and intends actively seeking the involvement of neighbouring communities. It is hoped that this strategy will provide a source of material for the continued propagation of pepper bark trees while providing rural communities with an additional source of income generated from selling the bark.

The good news for gardeners is that the pepper bark tree is also a handsome specimen plant. It thrives in a sunny, protected position in well-drained soil which is rich in organic matter. Under these conditions, growth of 50-75 cm a year can be expected. The pepper bark tree tolerates cold, but not frost. Highveld gardeners will have to find a frost-free niche if they hope one day to harvest bark from their plants!

THE PEPPER BARK TREE

Warburgia salutaris belongs in the Camelliaaceae, a small family of 5 genera, all of which are trees producing aromatic oils. The genus Warburgia, which is named after the German botanist Dr Otto Warburg (1859 - 1938), is exclusively African. There are 4 species of Warburgia, with W. salutaris occurring in southern Africa as a rare component of coastal and submontane forest in Zimbabwe, Mozambique, Swaziland and South Africa, where it is found in KwaZulu/Natal,Mpumalanga and the Northern Province. The specific epithet ‘salutaris’ is derived from Latin and means ‘healthy’.

The pepper bark tree has had two previous botanical names. The first specimen to come under the scrutiny of botanical researchers was collected in Mozambique in the first half of the 19th century and named Chibaca salutaris by the botanist Bertoloni. In 1917, material from trees growing on the western slopes of the Drakensberg range was described by Pott as Warburgia breyeri. Later on it was decided that those 2 species were in fact the same and the pepper bark tree’s botanic name became W. salutaris.

Later workers have debated whether or not W. salutaris is the same as W. ugandensis subsp. ugandensis, which occurs naturally in eastern and central Africa, but the two have been kept separate on the basis of differences in numbers of ovules, placenta and differences in fruit sizes.

The local name ‘iShibaha’ and Bertoloni’s genus name Chibaco (which he derived from the local name for the tree) are both possibly linked to the name ‘karambaki’, which is believed to be Arabic in origin. Karambaki is the name of a Warburgia species found in east Africa which has been an item of trade for many centuries.

Further reading