**The Lemon Bush**

by Phakamani Xaba, SANBI, Kirstenbosch National Botanical Garden and Rosalie McVay

This is the thirteenth in a series of articles on indigenous plants that have traditionally been used by humans in southern Africa for food, medicine, crafts, and charms. Some of these plants are now threatened while others that once formed an important part of our diet have been forgotten. It is hoped that these articles will help revive an interest in growing, using and conserving a valuable indigenous resource. Please note that cited traditional information about medicinal use of plants does not constitute a recommendation for their use for self-treatment. Improper or uninformed use of wild plants can be extremely dangerous.

Learning to grow and use these plants will help:
- Promote sustainable use of these plants.
- Provide practical growing information especially for threatened species.
- Reduce pressure of harvesting from natural populations in the wild.
- Inform the general public about indigenous useful plants.
- Preserve indigenous knowledge.

**The Lemon Bush** (*Lippia javanica*) is a strongly fragrant, medicinal plant indigenous to southern and tropical Africa. A hardy, untidy, multi-stemmed shrub of the open grassveld and bushveld, it gives off an intense lemon scent when crushed.

Traditionally the leaves have been used for their strong scent as an insect repellant and placed in linen cupboards and potpourri jars, or medicinally in an infusion for fevers, ‘flu, coughs, colds and chest complaints. The plant has also been used topically for treating skin rashes and, in strong concentrations, scabies and lice.

The Lemon Bush is easily grown from seed or cuttings. Plants tolerate a wide variety of soil types and are drought-hardy.

**Where do we find the Lemon Bush?**

The Lemon Bush is found in grasslands and woodlands, often locally abundant, throughout much of eastern and central southern Africa, from the Eastern Cape northwards through Botswana, Swaziland, Mozambique, Malawi, Tanzania, to Kenya.

**What does it look like?**

The Lemon Bush is an erect, multi-branched, woody shrub that grows 1-2 m tall. Stems are more or less square in cross-section. The 3-4 cm-long leaves are hairy on both sides and have dentate, lightly toothed, margins, and are rough to the feel with deeply sunken veins from above. Leaves are opposite, often in whorls of up to four and have a characteristic lemon scent when crushed. Small creamy-white flowers clustered together in dense, round spikes about 1 cm in diameter are produced between February and May (but can be found throughout the year). Seeds are small brown nutlets.

**Conservation status**

Despite its popularity for traditional medicine and charm use, the Lemon Bush is widespread in the wild and locally abundant in some areas. It is a hardy, drought-resistant plant that grows easily from seed in a variety of soil types.

**Pests**

It is possible that the aromatic leaves protect this plant as animals do not browse it except under extraordinary circumstances.

**Traditional and future uses**

This plant is well known medicinally to many African tribes and to many avid herbalists. The leaves (and stems) are made into a tea as a cough and cold remedy, to bring down fevers and to treat malaria. It is also excellent for treating skin problems, scabies and scalp infections. Some people inhale the smoke for asthma and chronic cough. Preparations are also used as an anti-inflammatory to soothe sore muscles.

Xhosa people have used Lemon Bush to disinfect meat that has been contaminated with anthrax. It is also used traditionally as a charm for protection against dogs, lightning and crocodiles and for ritual cleansing after contact with a corpse.

In horticulture the Lemon Bush is a prized landscape or herb garden plant. It is drought resistant and tolerates a wide variety of soil types. It grows in full sun or partial shade. The lemony fragrance of its natural oils add a wonderful dimension to a garden and it has many uses in the home, not only medicinally, but also for its insect repelling, but pleasant fragrance in linen cupboards and for potpourri jars.

**Commercial availability**

The Lemon Bush is rich in volatile oils including myrcene, caryophyllene, linalool, cymene and ipsdienone and is farmed commercially in South Africa and Kenya for essential oil production for the perfume industry. Geographical variations have been identified in the concentration and proportions of the active compounds which
have been demonstrated in the laboratory to have decongestant, antiseptic and anti-inflammatory activity.

Clinical studies using human volunteers have also shown that Lemon Bush extract is a more potent malaria vector mosquito repellent than most available commercial formulations. As a consequence the South African government’s Council for Scientific and Industrial Research (CSIR) has isolated, characterized and patented a formulation and set up a rural community partnership in Giyani, Limpopo Province, to grow Lemon Bush on a commercial scale. The cold-pressed extract is being processed for large-scale production of anti-mosquito candles and other insect repellants. Giyani’s Hi Hanyile mosquito repellent and essential oils factory has the capacity to manufacture 400 000 candles a year. Each 250 g candle can burn for up to 55 hours and retails for about R20.

Seeds are seasonally available from the Kirstenbosch Seed Room. Contact Mr Kuphuluma Zenze on tel +27 (021) 799 8624 or email seedroom@sanbi.org.za.

**GET CONNECTED**
Please email Phakamani Xaba at p.xaba@sanbi.org.

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**READING**


**WHATS IN A NAME?**

**Botanical name:** *Lippia javanica* (Burm.f.) Spreng. Both the generic and specific names are very old. The generic name, *Lippia*, commemorates the Seventeenth Century French physician and natural historian Augustin Lippi (1678-1705) who was part of a delegation sent by Louis XIV to establish commercial relations with Ethiopia. The group were attacked and murdered at Sennar on the Blue Nile on 10 November 1705. The specific name, *javanica*, was given by the Dutch botanist Nicolaas Laurens Burman (1734-1793) who thought the plant came from Java (although the species is indigenous to Africa) and placed it in the genus *Verbena*. The German physician and plant systematist Curt Polycarp Joachim Sprengel (1766-1833) transferred Burman’s name to the genus *Lippia*.

**Family name:** Verbenaceae. The verbena family includes 1035 species in 36 genera of mainly tropical and sub-tropical trees, shrubs and herbs, most of which are aromatic. These include the famous Lemon Verbena (*Aloysia triphylla*) from South America. The family has eight genera and some forty species in southern Africa. There are about 200 tropical and subtropical species of *Lippia*, six of which are indigenous to South Africa.

**Common names:** Lemon Bush, Fever Tea/Tree, Wild Tea (English); Umsuzwane, Umswazi (IsiZulu); Inzinziniba, Umzinzinibe (IsiXhosa); Beukebos, Koorsbossie, Lemoenbossie, Maagbossie (Afrikaans); Umsuzwana (IsiNdebele); Musuzwane, Beukebos, Koorsbossie, Lemoenbossie, Maagbossie (Afrikaans); Umsuzwana (IsiNdebele); Musuzwane, Beukebos, Koorsbossie, Lemoenbossie, Maagbossie (Afrikaans); Umsuzwana (IsiNdebele); Musuzwane, Beukebos, Koorsbossie, Lemoenbossie, Maagbossie (Afrikaans); Umsuzwana (IsiNdebele); Musuzwane, Beukebos, Koorsbossie, Lemoenbossie, Maagbossie (Afrikaans); Umsuzwana (IsiNdebele); Musuzwane, Beukebos, Koorsbossie, Lemoenbossie, Maagbossie (Afrikaans); Umsuzwana (IsiNdebele); Musuzwane, Beukebos, Koorsbossie, Lemoenbossie, Maagbossie (Afrikaans); Umsuzwana (IsiNdebele); Musuzwane, Beukebos, Koorsbossie, Lemoenbossie, Maagbossie (Afrikaans); Umsuzwana (IsiNdebele); Musuzwane, Beukebos, Koorsbossie, Lemoenbossie, Maagbossie (Afrikaans); Umsuzwana (IsiNdebele).

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**An easy guide to growing LEMON BUSH**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Environment Required for Success</th>
<th>Treatment</th>
<th>Time</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seed harvesting and preparation</td>
<td>Seeds are small, brown, dry nutlets when ripe.</td>
<td>No treatment is necessary as seed is easily germinated and grown under most conditions.</td>
<td>Collect seed in winter and throughout spring as seed dries on plants.</td>
<td>This is one of the most rewarding of all wild herbs to grow.</td>
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<tr>
<td>Sowing</td>
<td>Sow in seed trays or any other suitable properly draining container. The seed can also be sown in prepared beds.</td>
<td>As the species is a pioneer seeds are easily germinated and grown under most conditions.</td>
<td>Early spring (August) to early summer (December).</td>
<td>Can be sown in trays (spring) or directly into beds (summer).</td>
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<tr>
<td>Vegetative cutting preparation</td>
<td>Take 5-8 cm apical shoot tip cuttings. Semi-hardwood cuttings root best.</td>
<td>A rooting hormone such as Seradex 2® helps speed up the process.</td>
<td>Cuttings taken in spring root best.</td>
<td>Rooted cuttings should be planted in a small container in a general planting mix. They can be re-potted into a larger container during the summer.</td>
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<tr>
<td>Cultivation</td>
<td>Ideally, beds should be weed-free with loose soil and light watering, but they tolerate a wide variety of soil types and are drought resistant.</td>
<td>Plants thrive in full sun but also do well in light shade.</td>
<td>Will grow to 2 m within three years under ideal conditions.</td>
<td>Tolerates heavy pruning, but for shaping, prune lightly and often. Leaves are best harvested during the summer or autumn.</td>
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**ABBREVIATIONS**

AA: African Abelmoschus moschatus; AB: Aspilia praecox; CC: Chettimondy 1705; CE: Citronella essential oil; CI: Chiasma inodorum; CI: Citronella; CR: Citronella repens; CS: Calligonum; DT: Desert Tomato; EB: Euphorbia horrida; FC: Frangula calderini; GC: Gmelina arborea; HD: Helichrysum distans; HJ: Helichrysum juminum; KH: Knockhout; LV: Lippia javanica; LP: Lippia peruviana; MS: Melaleuca species; M: Maticora species; MT: Tithonia diversifolia; N: Nerium oleander; PL: Pluchea; RM: Ruprechtia minor; SC: Scutia corymbosa; SM: Solanum macrocarpum; SP: Spermacoce species; ST: Stenosiphon species; SW: Spatholobus species; TW: Tithonia diversifolia; UB: Ugni molinae; VC: Visco caudata; W: Witheria species; YM: Yucca species.