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Monodora junodii | Plantz Africa

Introduction

Imagine a tree with a flower like an orchid bloom; one so unusual that next to nothing is known about how to grow it. Would this not be a major garden status symbol? Imagine no longer; but read on and meet the green-apple tree.



Description

Description

Monodora junodii is a rather shrubby small tree up to 7 m tall, with smooth grey bark.



Leaves one-at-a-time (alternate or spirally arranged), drooping, roughly oblong or widest beyond the middle, up to 200 x 75 mm, shiny emerald green, hairless, stalked; margin without teeth.



Flowers solitary (hence the name), orchid-like, green or yellow-green with liver-coloured spots, or some petals liver-coloured throughout; usually after the first good rains (September to November in Kwazulu-Natal). Fruits grey-green, lumpy-roundish, up to 55 mm in diameter, fleshy, edible but not palatable.



Conservation Status

Status

Green-apple is not listed in the Threatened Plants section of the SANBI website, and so one may assume that it is not under threat.

Distribution and habitat

Distribution description

Green-apple trees occur in sand forest and dry woodland on the eastern side of Africa from Tanzania southwards to the Maputaland region shared by Mozambique and Kwazulu-Natal. It is possible to deduce that the dry appearance of at least some of the range of this tree is due to rapid drainage rather than excessively low rainfall. In cultivation one would expect the trees to require a warm climate, moderate to high rainfall, and quite well-drained soil, with a not necessarily abundant supply of nutrients.

Derivation of name and historical aspects

History

Monodora junodii was described from two late 19th century specimens, one collected by Rev. Junod at Delagoa Bay, the other by the ubiquitous F.R.R. Schlechter at Lourenço Marques (both of these place names indicate the area surrounding Maputo, Mozambique). The genus name is derived from two Greek words, *monos* meaning one and *doron* meaning a gift; the combination refers to the solitary flowers of this tree. In the cartoon below, Ettie seems to be quite pleased with her single flower.

The specific epithet honours Rev. Henri Alexandre Junod (1863-1934), a missionary stationed for much of his career at Shiluvane in Limpopo Province . His collection of plants from there, the lowveld of

Mpumalanga and parts of Mozambique, is an important early historical record of the flora of these areas. Fifteen species of *Monodora* have been described from tropical Africa, of which only *M. junodii* extends southwards to South Africa . There are probably a few more species in the equatorial rain forests awaiting description. The pantropical family Annonaceae includes some 112 genera and over 2000 species (Mabberley 1997). Although the family itself is relatively clearly defined, relationships of genera within the family are anything but clear. However, *Monodora* and *Isolona* (also tropical African) are usually regarded as forming a group separable from the other genera, and this group has been described as the subfamily Monodoroideae.

Ecology

Ecology

Despite the fact that the green-apple is widespread and apparently not under threat of extinction, it is nowhere either common or a significant feature of the vegetation. Its ecology therefore remains completely unstudied, and residents of the warm places where it grows may find the discovery of its pollinators and dispersal agents a worthy challenge.

Uses

Use

Pooley (1993) records that branches of green-apple are used for building huts. The fruits are edible but very dry, and the seeds make attractive necklaces when strung together. Seeds of *M. myristica* (Gaertn.) Dunal (calabash nutmeg; mainly West African but extending to Angola and the Kenyan shore of Lake Victoria) are used as a nutmeg substitute and in indigenous medicine.



Growing Monodora junodii

Grow

Coates Palgrave (2002) indicates that the green-apple is difficult to establish, but I have seen a very bonny tree of this species evidently thriving in a garden in Kloof, near Durban . These trees are almost certainly frost-sensitive. Although their natural habitat is dry woodland and sand forest, the tree in Kloof is thriving in an area which receives some 1 075 mm of rain each year, and is quite often shrouded in mist.

As green-apple is a small tree, it is best suited to use as a feature tree in a small garden, or as part of a bush clump, preferably near a busy area where the orchid-like flowers can be enjoyed to best advantage.

Pooley suggests that it should be grown from seed, without giving any details. Because it is so seldom grown, virtually nothing is known about its requirements and problems. Soils in the suburbs above Kloof are derived from sandstone, and so not wonderfully retentive of moisture. In the grassland parts of the reserve, and in the surrounding suburbs, the soils are neither destitute of, nor spectacularly rich in humus. Probably the best advice that can be given to would-be growers of this tree is to read up on related trees that are grown as tropical fruit crops (sweetsop, soursop, cherimoya and other West Indian species of *Annona*), and follow recommendations for them.

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Credits

H.F. Glen

Kwazulu-Natal Herbarium

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Monodora junodii is a species of plant in the family Annonaceae. It is native to Eswatini, Kenya, Malawi, Mozambique, South Africa, Tanzania, and Zimbabwe. Heinrich Gustav Adolf Engler and Ludwig Diels, the German botanists who first formally described the species, named it after Henri-Alexandre Junod. Last updated February 11, 2020. species of plant in the family Annonaceae. A secondary and tertiary alkaloidal fraction from *Monodora junodii* was examined by the combination of preparative ion-pair HPLC and preparative TLC. A benzyloisoquinoline alkaloid, (R)-1,2,3,4-tetrahydro-8-hydroxy-7-methoxy-1-[(4-methoxyphenyl)methyl] isoquinoline named norgorchacoine (1), was isolated for the first time from a plant, together with 17 known compounds. This chapter presents an overview of the chemistry and pharmacology of the alkaloids found in species of the Annonaceae family. The occurrence of alkaloids from Annonaceae species, as well as their chemical structures and pharmacological activities are summarized in informative and easy-to-understand tables.