

# PYGEUM

COMMON NAME

## *Prunus africana*

SCIENTIFIC NAME

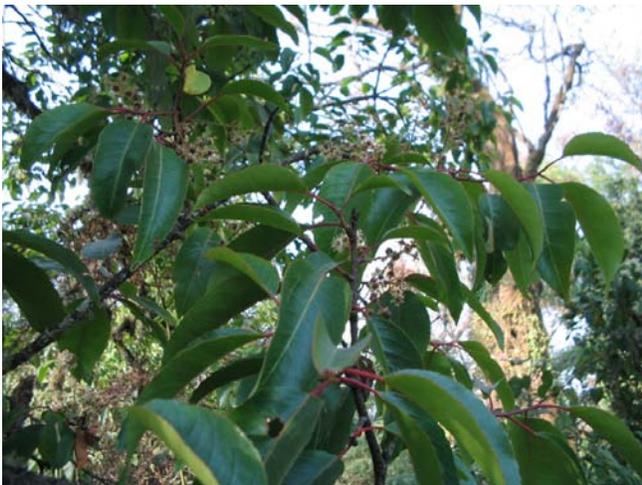
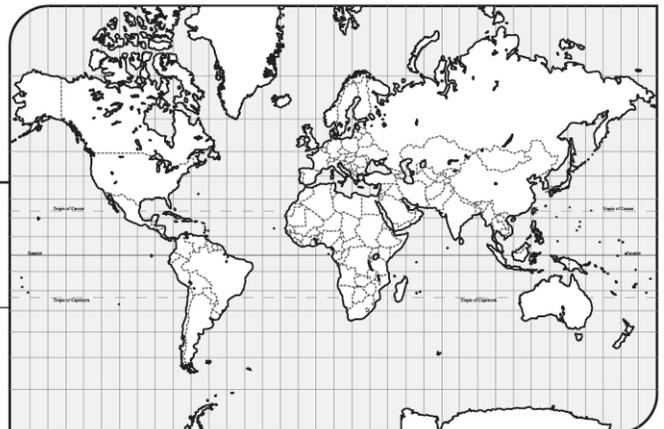


Photo Credit: Kristen Stewart

### Importance

A stately canopy tree of the high montane forests of Africa, pygeum has long been used for medicinal purposes. Leaves have been used as an inhalant for fever or are drunk as an infusion to improve appetite. Water has been added to pounded bark and the red liquid is used as a remedy for stomach-ache or as a purgative for cattle. The bark, bruised leaves, and fruits have a strong, bitter-almond smell, and have a reputation for being poisonous and being used in witchcraft (like many plants that have medicinal properties).

Today, that very medicinal property is putting this tree in danger. The liquid extracts from *Prunus africana* bark, also known as pygeum, are used in the treatment of benign prostatic hyperplasia (BPH) and prostate gland hypertrophy, (common conditions in older men which make urination painful or impossible). Because these are such common conditions, the bark is in high demand – by the year 2000, \$150 million worth of bark was being sold each year.



### Rose Family (*Rosaceae*)

FAMILY

### Vulnerable

RED LIST CATEGORY

After more than 40 years of collecting bark, the wild pygeum tree population has been seriously depleted. Particularly with an increasingly aging population, pressure on this tree is only going to be greater in the future. Currently, most pygeum bark is still collected from trees in the wild. While correctly removing the bark does not kill the tree, much of the bark removal occurring is done poorly, damaging or killing mature trees. These trees are also harvested for timber, with wood being used for agricultural tool handles, wagons, furniture, and more. The sustainability of the pygeum trade is a subject of extensive research and international discussion.

## Description

**Form:** A medium to large evergreen tree that is found growing in the canopy up to 75 to 150 feet (24 to 36 m) tall with a trunk diameter that can be over 3 feet (1 m).

**Leaf:** The heavy, shining foliage is composed of alternate, simple leaves. Leaves are oval or lance shaped, 2 to 6 inches (5 to 15 cm) long, shiny deep green on the top side and duller and lighter underneath. They have conspicuous veins and a distinct midrib prominent on the underside, sometimes widely tapering at both ends and sometimes with a long drawn-out point, or with a round tip. The margin varies from finely toothed to untoothed, and leaves are set on a pink or red petiole 0.75 inches (2 cm) long. The crushed leaves have a bitter almond smell.

**Flower:** The small, white or greenish flowers are hairy and fragrant. They are borne abundantly in bunches 2 to 3 inches (5 to 7.6 cm) long in the axils of leaves or on the side of shoots or in branched axillary sprays. The flowers are 1 to 2 inches (3 to 7 cm) long with

small calyx and petals and 10 to 20 prominent stamens. In its area of natural distribution, *P. africana* flowers between November and February, though sporadic flowering all year round can be seen in Kenya.

**Fruit:** The spherical, pinkish-brown fruit (known as a drupe) is bitter and resembles a cherry when ripe. Fruits are approximately half an inch (1.3 cm) in diameter. Seeds are broader than they are tall with a thin, dark red to reddish-brown pulp when ripe and 1 or 2 small, delicate, oval seeds inside. The seeds are believed to be recalcitrant, i.e., unable to survive drying and freezing for *ex-situ* conservation.

**Bark & Twigs:** The bark that is so highly prized for medicine is dark-brown to gray bark and rugged. The branchlets are brown, corky, and dotted with breathing spots and the twigs have a knobby appearance.

## Habitat and Ecology

Pygeum is native to the montane forests of Africa and the high altitude rainforest of Madagascar, occurring at altitudes of 5900 to 7200 feet (1800 to 2200 m). This stately tree grows in the humid and semi-humid highlands and humid midlands. The species has a high light requirement and grows best in forest gaps. Pygeum is an important part of the forest food web. Insects pollinate the tree, and fruits are highly relished and dispersed by birds and monkeys.

## Threats

The primary threat to this tree is the harvesting of bark for the European medicinal market. In places where jobs are scarce, quick profits from harvesting can be tempting, resulting in unsustainable harvesting of the

tree. On Mt Cameroon, as with some other areas within the range of this species, many trees have died as a result of girdling caused by bark removal. The bark harvest, primarily taken from the wild in Cameroon, Kenya, Tanzania, Madagascar, as well as the Democratic Republic of Congo (the former Zaire), has had a devastating effect on wild populations of the species. In addition, surrounding forests have been clear-cut for forest products and agricultural land, limiting the tree's habitat.

### Conservation Action

This overexploitation sparked conservation concerns, resulting in the species being listed in Appendix II of CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) in 1994. This convention requires exporting countries to issue export permits and countries of import have to check these permits upon entry. The Scientific Authority of an export country advises its Management Authority on the sustainability of a consignment and, ideally, the export permit would be based on sound inventory and management information. All of the countries exporting pygeum bark are signatories to CITES, meaning that the bark exported to western countries should be harvested from a sustainable source. However, the reality is somewhat different and, despite the legislation, the unsustainable exploitation of this species is well-recorded. For truly sustainable production of medicines from pygeum bark, establishment of managed forests or plantations for harvesting bark will be required.

Want to help? Only buy pygeum if the manufacturer can show it was harvested responsibly. You can also consult your health care provider for other effective medications

to treat BPH, or educate others on the ongoing discussion of sustainable pygeum harvest and production.

### References

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