

# Juniperus procera

## Cupressaceae

### Indigenous

**COMMON NAMES:** **Boran:** Aru; **English:** East African cedar, Pencil cedar; **Kamba:** Mukuu; **Kikuyu:** Mutarakwa; **Luhya (Bukusu):** Kumutarakwa; **Maasai:** Oltarakwai, Entarakwai; **Marakwet:** Tarakwet, Tarokwa; **Meru:** Muraana, Mutarakwa; **Nandi:** Tarakwet, Turkwet; **Ogiek:** Teet; **Pokot:** Tarokwa; **Sabaot:** Torokio; **Tugen:** Tarokwa; **Turkana:** Eminet, Ethaiyeit.

**DESCRIPTION:** An evergreen tree to about 40 m with a straight trunk; pyramidal shape when young. The foliage is finer and more open than cypress. **BARK:** Thin grey-brown, fissured, peeling with age. **LEAVES:** Small, sharply pointed, young leaves to 1 cm, soon replaced by tiny scale-like mature leaves, blue-green, triangular and closely overlapping on the branchlets. **CONES:** Male cones small, elongate to 3 mm long, yellow with pollen when mature; female cones brown, roundish. Ripe fruit purple-blue fleshy round 'berries' about 8 mm, the pulp containing 1-4 hard seeds.

**ECOLOGY:** A large, valuable timber tree found in the highland forests of eastern Africa, from Eritrea to Tanzania, 1,050-3,000 m, but mainly above 1,800 m where it forms associations with *Podocarpus* and *Olea*. In Kenya, occurring, e.g. on the lower slopes of Mt Kenya, the Aberdares, Tugen Hills, Mt Elgon and in Loita Forest. It does best in moderate-rainfall areas but can survive quite dry conditions once established. Agroclimatic Zones III.

**USES:** Firewood, charcoal (poor quality), timber (joinery, pencils, construction), poles, posts (long-lasting in the ground), beehives, shingles, flooring, medicine (bark, leaves, twigs and buds), shade, ornamental, windbreak, veterinary medicine, ceremonial.

**PROPAGATION:** Seedlings, wildings. Mature brown to purplish black fruits are collected from the crown. Spread fruit in a thin layer on a floor for drying, then crush the fruit with a mortar and pestle. Sieve and winnow to separate seeds from the rest of the cones.

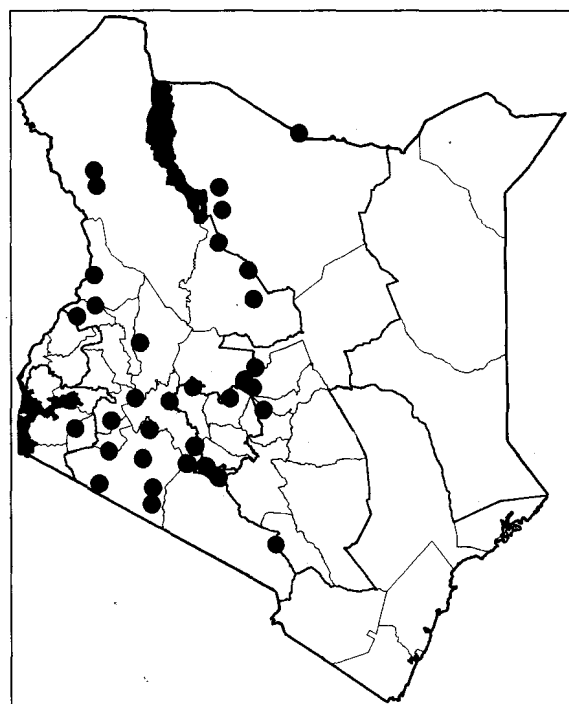
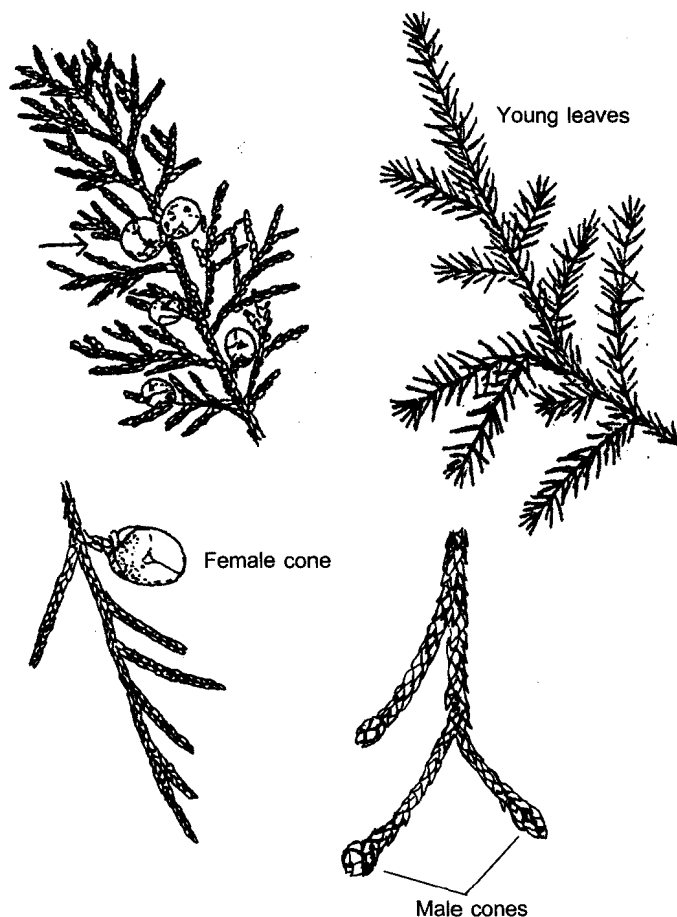
**SEED:** About 41,000 seeds per kg; germination rate 30-70% within 25-80 days.

**treatment:** Not necessary.

**storage:** Seed can be stored in airtight containers for some time if dried properly.

**MANAGEMENT:** Fairly fast growing in its natural environment, slow growing when planted elsewhere. Prune and thin trees for timber and poles. The tree takes at least 30 years to grow to maturity.

**REMARKS:** This is one of the most useful timber trees in Kenya, but also one of the most threatened by over-



## *Juniperus procera* (cont)

exploitation. The wood is termite resistant and can last for up to 100 years in the ground, therefore some of the main uses are as a source of posts and door frames. Used for making fire sticks by the Maasai (*entoole*), as a source of firewood (burns fast but charcoal is not long lasting), and making long-lasting beehives and salt troughs for livestock (**Maasai: *embeut***). Large trees are often inhabited by bees. Does not grow well with crops. This tree is now rare due to exploitation without replanting. It regenerates well and deserves high priority in reforestation programmes. Also affected by the cypress aphid. Most of the 50 or so members of the genus *Juniperus* are found in the northern hemisphere and are a source of timber, while others are ornamentals.

**FURTHER READING:** <http://www.worldagroforestrycentre.org/Sites/TreeDBS/AFT/AFT.htm>; Albrecht, 1993; Backes and Ahenda, 1998; Beentje, 1994; Bein et al., 1996; Bekele-Tesemma et al., 1993; Dharani, 2002; ITDG and IIRR, 1996; Katende et al., 1995; Kokwaro, 1993; Mbuya et al., 1994; Noad and Birnie, 1989; Palgrave and Palgrave, 2002; Sommerlatte and Sommerlatte, 1990.