

## *Casuarina equisetifolia*

## Casuarinaceae

### South East Asia, north and north-east Australia

**COMMON NAMES:** **English:** Whistling pine, Beach she-oak, Horsetail tree; **Swahili:** Mvinje.

**DESCRIPTION:** A tree to 20 m with a relatively short trunk and long weeping, silvery branchlets. **BARK:** Grey-black, cracked with age, peeling off in strips. **LEAVES:** Minute scales just visible on the green branchlets; **branchlets to 30 cm hang down in crowded tufts.** **FLOWERS:** Pollen-bearing tips on some branchlets, female flowers in tiny heads with red stigmas. **FRUIT:** Woody and prickly, brown, like 'cones', in clusters, to **2.5 cm long**, releasing hundreds of tiny winged seeds.

**ECOLOGY:** Occurs naturally on tropical seashores around most coastal areas of the Pacific and Indian Oceans, making it the *Casuarina* with the widest natural distribution. In Kenya, it is the most conspicuous tree along sandy and coral beaches and nearby hinterland, 0–1,400 m. It is sometimes seen stunted by wind. The extensive root system enables the trees to grow in poor soils. It tolerates salty winds and poor, salty and sandy soils of the beaches. Agroclimatic Zones I–IV, but limited to the coast. Seeds at the coast mainly in July–August and February–March.

**USES:** Firewood (burns very well), charcoal, furniture, poles (for house construction), posts, boat building (dhow masts), tool handles, fodder, shade, ornamental, mulch, nitrogen-fixing, soil conservation, reclamation of degraded areas, sand-dune stabilization, windbreak, tannin, dye.

**PROPAGATION:** Seedlings, wildings. Produces root suckers if roots are exposed. Nursery soil where *Casuarina* are to be raised may need inoculation by addition of soil from beneath mature trees.

**SEED:** Collect cones at maturity, just before they open to release seed. Then dry cones on a cement floor or plastic sheet so seeds are released. Move around for cones to release seed, then remove cones and collect seed. The species seeds prolifically; 600,000–900,000 seeds per kg. Fair germination rate, 50–70%. Sow in seedbed and prick out soon after germination.

**treatment:** Not necessary.

**storage:** Seed can be stored for at least a year.

**MANAGEMENT:** Fast growing. Prune to get a clear bole. Coppices when young, but less vigorously than *C. cunninghamiana*.

**REMARKS:** The species has been

established on the East African coast for a long time. It is normally a pioneer tree at the seashore. Sometimes also grown as a hedge, but not very effective as a live fence. It is reputed to be one of the best fuelwood species in the world. Until recently it was used a great deal for construction in the hotel industry until the more durable mangrove trees became more popular. The species is said to exhaust soil moisture and lower the water table, and is tolerant of salt water. The tree suppresses undergrowth. Dry needles on the ground may become a fire hazard. Termites may damage seedlings as well as young trees. The species is invasive in parts of the tropics (Réunion, South Africa, Bahamas, Hawaii and Florida).

**FURTHER READING:** <http://www.worldagroforestrycentre.org/Sites/TreeDBS/AFT/AFT.htm>; Albrecht, 1993; Beentje, 1994; Bekele-Tesemma et al., 1993; Dharani, 2002; Jensen, 1999; Katende et al., 1995; Lötschert and Beese, 1983; Mbuya et al., 1994; National Academy of Sciences, 1980; Noad and Birnie, 1989; Palgrave and Palgrave, 2002; Pinyopusarek and House, 1993; von Maydell, 1990.

