

# An umbrella for all seasons

The Biblical Ark of the Tabernacle is believed to have been made out of *Acacia tortilis*, a multi-purpose tree for drylands



An *Acacia tortilis* forest in Isiolo. Note the contrast between the green canopy and the barren ground surface. (Photo: KEFRI)

By FRANCIS GACHATHI

In Exodus 25, God ordered Moses to instruct the Israelites to build an ark (verse 10) and a table (verse 23) out of acacia wood, or the shittim, according to some Bible translations. *Acacia tortilis* is presumed to be the acacia wood in question. The tree grows in the Sinai Desert and also around the Dead Sea. It is believed to be the tree from which the Biblical Ark of the Tabernacle was made.

*A. tortilis*, the umbrella thorn acacia, grows to about 5 - 8m high but can attain 20m in riverine conditions and in areas of high water table. It has a flat, spreading or umbrella-shaped crown at maturity. The spines come in pairs, some short and curved up to 5mm long, mixed with long, straight, whitish ones that grow up to 8cm in length - sometimes one long and one short white spine in the same pair. The flowers are creamy-white and fragrant, in small round heads. The tree's specific epithet "tortilis", is derived from its very distinctive spirally twisted and contorted pods, which are greenish yellow to yellow-brown.

*A. tortilis* is common in most drylands of Africa, from South Africa northwards to Algeria and Egypt, extending into Israel and southern Arabia. In Kenya, it is widely distributed in arid and semi-arid areas, particularly in the northern and eastern parts. It is drought resistant, can withstand high temperatures, salinity, sandy and stony soils, seasonal water-logging, heavy grazing and generally forms open dry forests of almost pure stands.

It will grow from sea level to 1,650m, in areas with mean annual rainfall of between 150 and



*Acacia tortilis* pods. This is where this acacia got its name. "Tortilis" means twisted. (Photo: KEFRI)

900mm. The long taproot and numerous lateral roots enable it to utilise the limited soil moisture available in the semi-desert, while stabilising the sand. Local names associated with *A. tortilis* include dadach (Boran); muua (Kamba); chebitet (Kipsigis); otiep (Luo); oltepesi (Maasai); ses (Marakwet, Pokot); mugaa (Mbeere, Tharaka); dedach (Orma); dahar (Rendille); itepes (Samburu); ewoi (Turkana) and abaq (Somali).

*A. tortilis* is perhaps the most important and widely utilised acacia tree in the drylands, highly valued by all pastoralist communities. Its leaves and flowers are readily eaten by livestock and game but the main value of the tree is in its pods, which can be numerous.

When the pods mature, usually around January-February, they are often the main source of food for cattle, sheep and goats. The pods

are collected and packed in large sacks for dry season fodder reserve and even for sale.

During famine, after removing the seeds from the pods, people pound the pods into flour, mix it with milk or blood and eat it. The gum is also edible.

The tree's heavy reddish-orange coloured wood makes excellent charcoal and firewood. It is also used for making handles for tools as well as for building. The flexible roots are used to make frames for temporary shelters. The bark is a good source of tannin. The thorny branches are suitable for erecting barriers and making temporary cages and pens. The stem and root bark produces good fibre for ropes, basketry and for making milk containers.

In addition, *A. tortilis*'s bark, roots and leaves are used for treating various ailments and conditions related to traditional beliefs. The fragrant flowers are excellent bee forage and thorns are used as needles.

Remaining green throughout the year, *A. tortilis* provides the much needed shade and shelter in the drylands, a convenient spot for resting and meetings. Many birds build nests in its branches. Its occurrence may indicate underground water sources, such as drainage lines or shallow depression.

Two subspecies occur in Kenya: subsp. *spirocarpa* which is most common and subsp. *raddiana*, confined to the islands of Faza and Manda.

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