

Acacia drepanolobium Harmes ex Sjostedt Acacia nilotica (L.) Willd. ex Delile Acacia senegal (L.) Willd. Acacia seyal Delille Acacia tortilis (Forssk.) Hayne FABACEAE

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Synonyms

Acacia drepanolobium Harmes ex Sjostedt: Acacia formicarum Harms, Acacia lathouwersii Staner, Vachellia drepanolobium (Harms ex Y. Sjöstedt) P.J.H. Hurter Acacia nilotica (L.) Willd. ex Delile: Acacia adansonii Gioll. & Perr., Acacia arabica (Lam.) Willd.) Acacia nilotica subsp. adansonii (Guill. & Perr.) Brenan, Acacia scorpioides (L.) W. Wight., Acacia vera Willd., Mimosa arabica Lam., Mimosa nilotica L., Mimosa nilotica Thunb., Mimosa scorpioides L., Vachellia nilotica (L.) P.J.H. Hurter & Mabb.

Acacia senegal (L.) Willd.: Mimosa senegal L., Mimosa senegalensis Houtt., Senegalia senegal (L.) Britton

Acacia seyal Delille: *Acacia giraffa* Sieber ex Steud., *Acacia giraffae* Hochst. ex A. Rich., *Acacia stenocarpa* Hochst. ex A. Rich, *Vachellia seyal* (Delille) P.J.H. Hurter

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Acacia tortilis (Forssk.) Hayne: *Acacia perottettii* Steud., *Mimosa tortilis* Forssk., *Vachellia tortilis* (Forssk.) Galasso & Banfi

Local Names

Acacia drepanolobium: Kamba: Kiunga, Muuga, Kipsigis: Mugurit, Luo: Adugo, Gugna, Maa: Eluai, Redile: Fulai, Samburu: Luai, Rangau, Tugen: Ngowo, Turkana: Eiyellel, Kamba: Kiunga (Beentje 1994; Kokwaro 2009).

Acacia nilotica: Bajun: Ntetwe, Borana: Burguge, Digo: Chigundigundi, Duruma: Mgundi, Gabbra: Burkuke, Giriama: Munga, Kamba: Musemei, Kisemei, Kipsigis: Chepitet, Maa: Ol-Kiloriti, Ol-Erb at, Ol-Kiroriti, Marakwet: Ngobgwa, Oromo: Chalado, Pokot: Opokwo, Rendile: Gilorit, Mirgi, Samburu: Lokoloriti, Eldekeki, Somali: Tugerr, Tugen: Chebiwo, Turkana: Ekapelimen, Swahili: Mjungu, Msemehi, Mgunga, Mtetewe, Gogo: Chigundigundi, Mfuku, Shambaa: Mopira, English: Babul acacia, Scented thorn, Scented-pod acacia (Beentje 1994; Kokwaro 2009).

Acacia senegal: Bajun: Mtengewa, Borana: Dimitu, Idado, Digo: Chikwata, Gabbra: Iddaado, Kamba: Mung'ole, Musemei, Luo: Kiluor, Otiep, Maa: Olderekesi, Oromo: Bura-dima, Sebonah, Pokot: Chemagayan, Rendile: Mirgi, Samburu: Eldekeki, Lolderekesi, Somali: Adageti, Ethad-geri, Turkana: Ekunoit, Swahili: Aiti, Kikwata, Mgunga, Acholi: Achika, Teso: Epujait, Luhya: Kimunyenya, Chagga: Mwera, Nyankore: Omugando, English: Gum tree, Gum arabic tree, Three-thorned acacia (Beentje 1994; Kokwaro 2009).

Acacia seyal: Borana: Wachu-Adi, Wacho-Dima, Gabbra: Waac'c'u, Kamba: Kinyua, Kisewa, Kipsigis: Mugurt, Chepkomon, Luo: Ali, Maa: Oleregat, Ole-Rai, Ol-Munishui, Marakwet: Reno, Pokot: Rena, Rendile: Fulai, Samburu: Lerai, Somali: Fullai, Jikh, Tugen: Lelnet, Turkana: Ekoromait, Swahili: Mgunga, English: White galled acacia, Whistling thorn, Shittim wood (Beentje 1994; Kokwaro 2009).

Acacia tortilis: Borana / Ilelewa: Dadacha, Gabbra: Daddacha, Ilelewa: Dadwota, Kamba: Kilaa, Maa: Ol-Gorete, Ol-tepesi, Ol-Entepesi, Oromo: Gudis, Dabaso, Dadech, Pokot: Ses, Rendile: Dahar, Samburu: Ltepes, Somali: Abak, Kura, Tugen: Sietsiet, Seseya, Turkana: Ewoi, Ettior, Teso / Turkana: Etir, Swahili: Munga, Mgunga, English: Whistling thorn (Beentje 1994, Kokwaro 2009).

Botany and Ecology

Acacia drepanolobium Harmes ex Sjostedt: Bush or small tree 1-5(-7.5) m high, with short radiating branches from main stem, sometimes spreading at top. Young branchlets shortly pubescent to puberulous, rarely glabrous, grey then going brown, no powdery inner bark on twigs. Old bark black or grey, usually rough, sometimes smooth. Stipules spinescent, mostly 1.5-4.5 (-7.5) cm long (some shorter ones often also present), straight, grey or whitish, some fused at base into round "ant-galls" 1-3.5 cm in diameter, grape-purple going blackish. Petiole 2-5 (very rarely to 10) mm long, glandular at the lowest of the 3-13 pairs of pinnae, rachis 0.8-4.5(-9) cm



Fig. 1 Acacia abyssinica (Fabaceae), Bale Mountain National Park, Demaro, Ethiopia. (Photo R.W. Bussmann)

long, glandular between the top 1–6 pairs of pinnae, leaflets 11–22 pairs, glabrous or minutely ciliolate, subacute or acute sometimes obtuse at apex, 1.5–5.5 mm long, 0.7–1.25 (–1.75) mm wide. Flowers white or sometimes cream, in heads, involucel at or rarely a short way above base of the glabrous puberulous or shortly pubescent peduncle. Calyx 0.75–1.5(–2.5) mm, long, glabrous or ciliolate. Corolla glabrous outside, sometimes puberulous on lobes, 3–4 mm long. Pods falcate or annular, thinly coriaceous, finely longitudinally venose, glabrous, or puberulous, mostly attenuate or even acuminate at ends, 4–7 cm long, 0.5–1.0 cm wide. Seeds mottled whitish-grey and dark brown, smooth, irregularly quadrate or elliptic, compressed, 10–12 mm long, 4.5–5.5 mm wide, areole 5–6 mm long, 3–3.5 mm wide. Shrub or dwarf-tree grassland, "gregarious, usually on alkaline hard-pan grey soils with *Lannea humilis* and *Commiphora schimperi*, or in fringing 'mbuga', or on dark clay cracking lime-acumulating soils" 600–2680 m (Brenan 1959) (Figs. 1, 2, 3, and 4).

Acacia nilotica (L.) Willd. ex Delile: Tree (1.2)2.5-14 m tall, bark on trunk rough, fissured, blackish or grey or brown, neither powdery nor peeling, young branchlets from almost glabrous to subtomentose, glands inconspicuous or absent, bark of twigs not flaking off, grey to brown. Stipules spinescent, up to 8(11) cm long, straight or almost so, often deflexed, "ant-galls" and other prickles absent. Leaves often with 1 (2) petiolar glands and other glands between all or only the topmost of the 2–11(17) pairs of pinnae, leaflets 7–25(30) pairs, $1.5-7 \times 0.5-1.5$ mm, glabrous to pubescent, not spinulose-mucronate at the apex, lateral nerves invisible beneath.

Fig. 2 Acacia abyssinica (Fabaceae), Bale Mountain National Park, Demaro, Ethiopia. (Photo R.W. Bussmann)



Fig. 3 Acacia drepanolobium (Fabaceae), samburu, Kenya. (Photo R.W. Bussmann)



Flowers bright yellow, in axillary pedunculate heads 6–15 mm in diam., involucel from near the base to c. half-way up the peduncle, very rarely somewhat higher up. Calyx 1–2 mm long, subglabrous to pubescent. Corolla 2.5–3.5 mm long, glabrous to pubescent outside. Pods especially variable, indehiscent, (4)8–17 (24) \times 1.3–2.2 cm, straight or curved, glabrous to grey-velvety, turgid. Seeds deep-blackish-brown, 7–9 \times 6–7 mm, smooth, subcircular, compressed, areole 6– 7 \times 4.5–5 mm *Acacia nilotica* is native to the drylands of tropical Africa and western Asia, eastwards as far as India, Myanmar, and Sri Lanka. In Africa, it occurs from Senegal to Egypt and southwards through eastern Africa to Mozambique and South Africa (Natal) and the Indian Ocean islands. It has been distributed throughout the tropics and became naturalized in many areas, including Cape Verde, Jamaica, Nepal, Indonesia, Vietnam, and Australia. It is widely cultivated in the Indian subcontinent. (Brenan 1959).

Fig. 4 Acacia hookii (Fabaceae), Sekenani, Maasai Mara, Kenya. (Photo R.W. Bussmann)



Acacia senegal (L.) Willd.: Shrub or tree up to 13 m tall, the bark grey to brown or blackish, scaly, rough, young branchlets densely to sparsely pubescent, soon glabrescent. Stipules not spinescent. Prickles just below the nodes, either in threes, up to 7 mm long, the central one hooked downwards, the laterals curved upwards, or else solitary, the laterals being absent. Leaves: petiole glandular or not (glands 0.5– 0.75 mm in diameter), rachis pubescent, glandular between the top 1–5 pairs of pinnae, prickly or not, pinnae (2)3–6(12) pairs, 0.5–1.5(2.4, very rarely to 4 or more) cm long, leaflets 7–25 pairs, $1-4(9) \times 0.5-1.75(-3)$ mm, linear-to elliptic-oblong, ciliate on the margins only or hairy on the surface, or wholly subglabrous, lateral nerves not visible or sometimes somewhat prominent beneath, apex obtuse to subacute. Flowers white or cream, fragrant, sessile, in spikes 1.5-10 cm long on peduncles 0.7–2 cm long, normally produced with the leaves, axis pubescent to glabrous. Calyx 2-2.75(3.5) mm long, glabrous to somewhat pubescent. Corolla 2.75-4 mm long, exceeding the calyx, 5-lobed, glabrous outside. Stamen-filaments 4.5-7 mm long, free, anthers 0.2-0.25 mm, across, with a caducous gland. Ovary glabrous, very shortly stipitate. Pods usually grey-brown, sometimes pale- or darkbrown, dehiscent, $(1.8)4-19 \times (1.2)2-3.4$ cm, densely to sparsely appressedpubescent to puberulous, oblong, straight, venose, rounded to acuminate at the apex. Seeds subcircular-lenticular, 8-12 mm in diam., central areole small to medium, $2.5-6 \times 2.5-5$ mm, markedly impressed. Acacia senegal is widely distributed in the drier parts of tropical Africa, from Senegal and Mauritania in the west to Eritrea and Ethiopia in the north-east and to South Africa in the south. Of the four recognized varieties var. *senegal* is the most widespread and is found throughout the area of distribution (Brenan 1959).

The use of gum arabic (or gum acacia), which is derived from an exudate from the bark, dates from the first Egyptian Dynasty (3400 B.C.). Gum Arabic has been used for at least 4,000 years by local people for the preparation of food, in human and veterinary medicine, in crafts, and as a cosmetic. *Acacia senegal* produces the only acacia gum evaluated toxicologically as a safe food additive. Nowadays, the gum is present in a wide range of everyday products. 60–75% of the world production of gum Arabic is used in the food industry and in human and animal medicine (Brenan 1959) (Figs. 5, 6, and 7).

Acacia seyal Delille: Tree (2)3–9(12) m tall, bark on trunk powdery, white to greenish-yellow or orange-red, young branchlets with few sparse hairs to almost glabrous and with numerous reddish sessile glands (rarely, and not in our area, rather densely puberulous), epidermis of twigs becoming reddish and conspicuously flaking off to expose a greyish or reddish powdery bark. Stipules spinescent, up to 8 cm long, "ant-galls" present or not, other prickles absent. Leaves often with a rather large gland on the petiole and between the top 1–2 pairs of pinnae, pinnae (2)3–7 (8) pairs, leaflets (7)11–20 pairs, 3–8(10) × 0.75–1.5(3) mm, in our area sparingly ciliolate to glabrous, lateral nerves invisible beneath. Flowers bright yellow, in







Fig. 6 Acacia senegal (Fabaceae), Sekenani, Maasai Mara, Kenya. (Photo R.W. Bussmann)



Fig. 7 Acacia senegal (Fabaceae), Amboseli, Kenya. (Photo R.W. Bussmann)

axillary pedunculate heads 10–13 mm in diameter borne on terminal or short lateral shoots of the current season, involucel in the lower half of the peduncle, 2–4 mm long, apex of bracteoles rounded to elliptic, sometimes pointed. Calyx 2–2.5 mm

Fig. 8 Acacia xanthophloea (Fabaceae), Nairobi National Park, Kenya. (Photo R.W. Bussmann)



long, inconspicuously puberulous in upper part. Corolla 3.5–4 mm long, glabrous outside. Pods dehiscent, $(5)7–20(22) \times 0.5–0.9$ cm, linear, falcate, constricted between the seeds, finely longitudinally veined, glabrous except for some sessile glands. Seeds olive to olive-brown, $7–9 \times 4.5–5$ mm, faintly and minutely wrinkled, elliptic, compressed, areole $5–6 \times 2.5–3.5$ mm (Brenan 1959).

Acacia tortilis (Forssk.) Hayne: Tree 4–21 m. tall, occasionally a bush 1 m. high, crown flat or spreading,10 bark grey to black, fissured, young branchlets glabrous to densely pubescent, going brown to purplish-black. Stipules spinescent, some short hooked and up to c. 5 mm long, mixed with other long straight whitish ones to c. 8 (10) cm long, "ant-galls" and other prickles absent. Leaves, rachis short, 2 cm long or less, pinnae 2–10 pairs, 2–17 mm long, leaflets 6–19 pairs per pinna, usually very small, 0.5–2.5(6) mm long, ciliate to glabrous. Flowers cream or whitish, in axillary heads 5–10 mm in diameter on peduncles 0.4–2.4 cm long, involucel in the lower half of the peduncle. Pods contorted or spirally twisted, longitudinally veined, tomentellous to glabrous. Seeds olive to red-brown, 7 × 4.5–6 mm, smooth, elliptic, compressed, areole $5–6 \times 3–4$ mm (Brenan 1959) (Figs. 8 and 9).

Acacia species are an important component of dry Afromontane forests (Bussmann 2002).

Local Medicinal Uses

Acacia drepanolobium: Bark chewed for sore throat, root decoction given to mothers after birth (Maasai), and for gastrointestinal problems (Beentje 1994; Kokwaro 2009; Muthee et al. 2011).

Acacia nilotica: The species a wealth of medicinal uses. It is used for stomach upset and pain, the bark is chewed to protect against scurvy, an infusion is taken for dysentery and diarrhea. In Nigeria, it is one of the standard drugs for treating diarrhea. It has also been used to eliminate stomach worms, as an antiseptic for

Fig. 9 Acacia xanthophloea (Fabaceae), Nairobi National Park, Kenya. (Photo R.W. Bussmann)



open wounds and as an expectorant for treating coughs. In Africa, twigs are used as a toothbrush. A decoction of the fruit is considered a febrifuge, and the seeds have antimalarial, antidiabetic, antihypertensive, and antispasmodic activities. The bark, gum, leaves, and pods are used in many traditional medicines, possessing antiinflammatory properties. The gum has been used as an emulsifying agent and emollient. It is edible and is used to relieve throat and chest complaints. Bark infusion used for digestion, the fruit juice for eye problems, as well a chest-problems (Beentje 1994). The bark is chewed for sore throat and cough. Leaves are boiled and the extract drunk as tea for chest-problems and pneumonia. Boiled bark and roots are used for indigestion and stomach trouble, and sometimes used as aphrodisiac. The bark decoction is uses for digestion and as stimulant, the root decoction for impotence (Kokwaro 2009). In Ethiopia used externally for swellings and skin problems (Wondimu et al. 2007). The Maasai use a bark decoction as stimulant (Muthee et al. 2011). Also used as digestive, to increase appetite, for chest pain, colds, backache, stomach problems, and to treat diarrhea (Nankaya et al. 2019, 2020).

Acacia senegal / Acacia seyal: Bark, leaves, and gum are used as an astringent to treat colds, ophthalmia, diarrhea, and hemorrhages. The seed contains a fat which is used in medicine. A soothing and softening agent, gum Arabic is extensively employed in folk medicines. Among many other uses, it is used internally for

coughs, diarrhea, dysentery, hemorrhages, and externally to cover inflamed areas. Bark decoction used for malaria and diarrhea, root decoction also for diarrhea (Beentje 1994). The root decoction is purgative and used for stomach-pain, and diarrhea. The juice from the seed pods is used for eyesores. The bark decoction serves for cough. Bark, gum and leaf juice are used for dysentery and stomach-ache. Bark powder is applied to wounds. Leaves are chewed for toothache. The root decoction also serves for diabetes (Kokwaro 2009). The bark is boiled for stomach problems and abortion by the Samburu (Bussmann 2006), and a decoction is applied externally for skin rashes (Njoroge et al. 2004).

Acacia tortilis: Bark decoction is used for diarrhea and stomach-ache (Beentje 1994; Kokwaro 2009). Roots are used to treat skin diseases (Kokwaro 2009).

The bark of *Acacia hookii* is eaten by the Maasai for stomachache (Bussmann et al. 2006), and similar uses are reported by the Samburu, who also use *Acacia etbaica* for the same purpose. This species is also used to ease childbirth (Bussmann 2006). In Ethiopia the species serves for tonsilitis and gonorrhoea (Wondimu et al. 2007).

The bark decoction of *Acacia concinna* is used for toothache and body pain in India, the fruit is used for diabetes (Debbarma et al. 2017). A bark paste of *Acacia leucophloea* is applied to wounds (Muthu et al. 2006). *Acacia polyacantha* leaves are boiled for abortion, while the bark of *Acacia mearnsii* is used for general weakness (Njoroge and Bussmann 2006a). The bark of *Acacia mellifera* is chewed to treat whooping cough (Njoroge and Bussmann 2006b), and for spleen pain (Teklehaymanot et al. 2010). *Acacia albida* bark is used for diarrhea (Wondimu et al. 2007). *Acacia xanthophloea* serves for skin problems and as stimulant among the Maasai (Muthee et al. 2011).

Local Food Uses

Acacia drepanolobium: Young fruits and galls edible (Beentje 1994).

Acacia nilotica: The Hausa use roasted seeds as a food flavoring. In Tanzania, the inner bark and the thick fruit pulp are boiled in water and drunk as a tea. The tannins contribute to its many medicinal uses, the plant acting as a powerful astringent.

Acacia senegal / Acacia seyal: Seed may be dried and conserved for human consumption mainly as an emergency food. In the food industry, gum Arabic is used as a flavor fixative and emulsifier, to prevent crystallization of sugar in confectionery, as a stabilizer in frozen dairy products, for its viscosity and adhesive properties in bakery products, and as a foam stabilizer and clouding agent in beer. The dried and preserved seeds of *Acacia senegal* are used as vegetables. The seeds are sometimes eaten as a vegetable. In pharmaceuticals, it is used as a stabilizer for emulsions, a binder and coating for tablets, and as an ingredient in cough drops and syrups. The gum is edible (Beentje 1994).

Acacia tortilis: The gum is edible (Beentje 1994).

The fruit of Acacia concinna is eaten in India (Debbarma et al. 2017).

Local Handicraft and Other Uses

Acacia drepanolobium: Stems and branches used for fencing (Beentje 1994).

Acacia nilotica: Use for poles (Beentje 1994). The species is used in veterinary medicine, for example, as a molluscicide to reduce liver-flukes in cattle. The pods are desirable as fodder for cattle, and the leaves, young shoots, and young pods are thought to aid milk production. Acacia nilotica wood burns without too much smoke and provides good charcoal. The flowers provide pollen and nectar for bees. This species is suitable for live fencing, mine timber, railway sleepers, boat building, wheels, and water wells as its wood is durable and resistant to borers and termites. The pods of Acacia nilotica are used traditionally in Nigeria and other sub-Saharan countries for tanning leather and as a source of khaki-to-brown dyes if used without mordant, or grey and black dyes for cotton combined with a mordant of iron-rich mud. The latter process gives the typical dark grev stripes in the "hile," "sampak," and "siole" traditional cotton textiles of Cameroon and in the "langtang" traditional cotton weaving of the Mumuye of eastern Nigeria. These textiles were locally and regionally used as currency well into the twentieth century and still have a great cultural importance. Now they are mostly used as presents from a man to his future wife and in major religious festivals, clan gatherings, and funerals. Black dyes combining tannins most probably obtained from "sant" (acacia pods) with iron mordants have been identified in ancient Egyptian textiles dating from the 18th Dynasty (1542–1305 BC) onwards. The dried mature pods used in local tanneries in Sudan produce a pinkish white leather of good quality. The tan stuff extracted from the pods is internationally called by its Hausa name: "bagaruwa"" In contrast in India and Pakistan, it is the bark, a by-product from timber plantations, that is used for tanning and dyeing leather. The tannin produces a heavy leather which is firm, durable, and hard, but combined with myrobalans (from Terminalia species) it produces excellent leather. Acacia nilotica is widely used as a timber, source of fodder, tannin and gum, and as a fence, shade, and fuel tree. The dark brown heartwood is nearly twice as hard as teak and very shock resistant, and is used widely in constructions, for railway sleepers, mine props, tool handles, and carts. The trees make effective live fencing, are a good host for the semiparasitic sandalwood (Santalum album L.) and are important trees for lac insects (shellac) in the Indian subcontinent. Gum collected from the trunk and branches was formerly used in paints and medicines. It has properties similar to true gum arabic from Acacia senegal and is frequently used in calico printing and dyeing as a thickening agent. It is also used as sizing material for silk and cotton, and in paper manufacture in India. The leaves and pods are an excellent fodder, rich in protein. The flowers yield a honey of good quality. The bark of slender branches yields a fiber which is used for the manufacture of paper or is made into coarse ropes in India. Acacia nilotica is also a popular ornamental avenue tree. The pods have molluscicidal and algicidal properties and are added to ponds in Sudan to kill snail species that carry schistosomiasis without affecting the fish. Bark decoction as panacea for livestock (Kokwaro 2009). Acacia senegal / Acacia seyal: The foliage and pods are an important fodder source for camels and goats. The wood is used for small-scale construction purposes and agricultural implements, it yields a fuelwood of good quality that can be made into good charcoal. The thorny branches are often used to make "dead fences" to enclose livestock or protect agricultural fields. Being a very drought-resistant tree, it is planted for sand dune fixation, windbreaks, and shelter belts in arid regions. The flowers are a source of honey. Cordage is made from the roots, either directly or after beating to extract the fibers, its strength makes it suitable for well ropes and fishing nets. The seed contains a fat which is used for soap making. The leaves and pods are browsed by sheep, goats, camels, impala, and giraffe. Gum Arabic is used in cosmetics as an adhesive for face masks and powders, and to give a smooth feel to lotions. Acacia senegal wood is locally valued for fuel wood and charcoal. Industrially, gum Arabic is applied as an adhesive, as a protective colloid and safeguarding agent for inks, sensitizer for lithographic plates, coating for special papers, sizing agent for cloth to give body to certain fabrics, and coating to prevent metal corrosion. Gum Arabic is also used in the manufacture of matches and ceramic pottery. In construction, the wood is used locally for poles and fenceposts, the light-colored wood for tool handles and dark heartwood for weaver's shuttles. Strong ropes are made from the bark fibers of the long surface roots. Where the trees are large (for example near the River Niger) they are cut into planks at least 12 cm thick for making canoes for hunting hippopotamuses. The wood is hard and heavy and takes a beautiful polish, with the sapwood being yellowish white and the heartwood nearly black and irregular. The wood is made into throwing-sticks which, in contrast to the Australian boomerang, can be made to fly straight and used for hunting and pageantry. The flowers are a good source of honey, an important source of nutrition and income generation to support rural livelihoods in marginal lands. The bark yields a red dye (Beentje 1994). The leaves are eaten by livestock, and the species serves for construction and fencing (Bussmann 2006). Used to treat livestock (Lulekal et al. 2008). Acacia tortilis: Bark used for fibers and roots used for basketry. Fruits eaten by livestock (Beentje 1994). The thorns are used for witchcraft (Kokwaro 2009). Often used as firewood and for fencing (Lulekal et al. 2008).

All species are used for fencing and firewood (Kiefer and Bussmann 2008; Bussmann et al. 2018). The Maasai use *Acacia hookii* and *Acacia polyacantha* for fencing because they have long thoms. The same holds true for *Acacia etbaica*. Both are browsed by elephants and goats and give good honey (Bussmann et al. 2006; Bussmann 2006). *Acacia abyssinica* serves for charcoal, firewood, and is eaten by cattle and camels (Bussmann et al. 2011), and together with *Acacia albida*, *Acacia mearnsii*, and *Acacia saligna* as shade plant, and for making tools (Mekonen et al. 2015). *Acacia pennata* leaves are used as fish poison (Neuwinger 2004). *Acacia brevispica* is used to remove nasal bots, and other parasites in cattle (Njoroge et al. 2006; Wanzala 2017).

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