A self-guided walk April 2025 Adelaide Botanic Garden

Plants make an enormous range of compounds, some nutritious, some potentially medicinal, and others highly toxic. People have found elaborate ways to prepare toxic plants for the table or other uses, but often only after long and sometimes bitter experience. So, unless you are very confident of a plant's identity it is most unwise to experiment - no matter how inviting they may appear.

See over page for map *An Australian native

1 ***Carissa carandas*** Bengal currant, carandas plum India, Pakistan, Nepal, Afghanistan, Sri Lanka.
Used for many years in Ayurvedic medicine to treat a range of health conditions from infected wounds to insanity. Fever and pain are treated with leaf teas, and crushed roots are used as an insect repellent. Its elongated red berries are rich in vitamins and minerals, and unripe fruit is commonly used for pickles and chutney. The fearsome branched thorns in this tangled barrier explain its use as one of the species in the Great Hedge of India (1803-1879), a 4000 km customs barrier across India, initially made of dead material but increasingly planted by the British to prevent 'illegal traffic' of salt which was otherwise heavily taxed.

2 ***Afrocarpus falcatus*** Oteniqua, common yellowwood Malawi, Mozambique, Eswatini, South Africa
Oteniqua is a tall podocarp, with cones reduced to just one fertile scale bearing a single seed. The bark and seed are used in traditional medicine, and the timber has been used for furniture and flooring. Fallen seeds near the trunk, often with a pale-blue waxy bloom, identify this tree as a female. In southern Africa, many species eat the ripe seed for its thin, fleshy coating, but it is mainly dispersed by a fruit bat, which digests the coating (containing a germination inhibitor) and voids the seed away from the parent tree. Although it has no pollen cones at the moment, an impressive, spreading male tree can be found at **2a.**

3 ***Thevetia peruviana*** Yellow oleander, Napoleon's hat Mexico, Central and South America
On either side of the path here is a tall, graceful shrub with willow-like lanceolate leaves, apricot flowers and large green fruits. Now known as ***Cascabela thevetia,*** this attractive but dangerously poisonous plant is a relative of the familiar *Nerium oleander*. Like oleander, all parts contain glycosides which affect the heart and have the potential to cause accidental poisoning and occasional death. So, despite the use of herbal preparations of bark and leaves in the Americas to treat various skin disorders, this is a plant best left alone.

4 ***Ensete ventricosum*** Abyssinian banana, ensete Ethiopia
A large herbaceous species from the banana family, ensete has large pale-green leaves with salmon-pink midribs. It is widespread in East Africa, but is mainly cultivated in Ethiopia as a staple food for about twenty million people. The plant flowers and bears fruit once in its lifetime and then dies. Its bananas are inedible, flavourless, fibrous and very seedy. The domesticated crop is propagated by offsets and grown for the fresh corms, which are cooked like potatoes, as well as the starch in the leaf bases and roots.

5 ***Nolina stricta*** **(**now *Beaucarnea stricta*) Elephant's foot or ponytail palm Mexico
Elephant's foot is a tall, slow-growing (to 10 m) evergreen succulent with a large swollen base (caudex) found on steep hillsides in the dry, deciduous tropical forests of Oaxaca. It owes its drought tolerance to the water-rich tissues of the caudex and the rosettes of erect, stiff, thin leaves (*stricta*) at the ends of branches at the top of the plant. Overharvesting from the wild for the nursery trade has led to its listing in the Convention on International Trade in Endangered Species (CITES) which requires a permit for such traffic.

6 ***Cycas revoluta*** Japanese sago palm Southern Japan
The feathery-leaved *Cycas revoluta* is one of several species used for production of sago - pearls of starch extracted from the pith of the trunk. Like all other parts of the plant, the pith contains toxins which must be thoroughly leached to prevent the vomiting, diarrhoea and liver failure if ingested. On the path (opposite another ponytail palm) is a female *Cycas* displaying a large seed cone with leathery seed-bearing leaves rather than the often brightly-coloured woody cones of other cycad genera. The male *Cycas*, in a circular bed at (**6a**) have the usual slender, woody pollen cones. Neither of the species at sites 5 and 6 is a palm.

7** ***Stenocarpus sinuatus Firewheel tree Atherton Tableland (Qld) to northern NSW
A medium tree in the Adelaide climate, this member of the family Proteaceae grows up to 40 m in its natural habitat. The (usually) scarlet, wheel-shaped umbels of flowers, arranged like the ribs of an umbrella, appear in the "Wheel flower" series of prints by the South Australian artist Margaret Preston. The fruits are long and boat-shaped. Easily grown from fresh seed or cuttings, its timber has a beautiful red grain for woodwork.

8 ***Agave sisalana*** Sisal, sisal hemp (usually associated with rope and twine) Southern Mexico
Botanical specimens of *Agave sisalana*, thought to have originated in Mexico, were first shipped from the Spanish colonial port of Sisal in Yucatan. It is now widely cultivated elsewhere for its rosettes of sword-shaped leaves which yield a tough fibre with a long list of applications, perhaps beginning with the fabric and paper made by the Aztecs and Maya. Steroidal precursors in extracts from *Agave sisalana* are still used in the pharmaceutical industry for the manufacture of cortisone, other anti-inflammatories and contraceptives.

9 ***Capparis spinosa*** Caper bush Mediterranean basin, central and western Asia
The caper bush is a perennial, drought-tolerant shrub with an extensive root system. The showy, fragrant flowers have four white or pinkish-white petals and numerous delicate mauve stamens. Pruning stimulates production of the small, green, edible capers (unopened flower buds) which are usually salted and pickled. Capers have been used for centuries in cooking and for seasoning many dishes. Immature fruits (caper berries) are also pickled and used in regional cuisines.