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DRAKRTI

Quest for nature

Officers' Club
CASFOS Dehradun



FLORA OF THE WEEK

Cascabela thevetia (Kaner)

Cascabela thevetia is an evergreen tropical shrub or small tree that bears yellow or orange-yellow, trumpet like flowers and its fruit is deep red/black in color encasing a large seed. It contains a milky sap. Propagate by seed in spring.

Its fruit is deep red-black in color encasing a large seed that bears some resemblance to a 'Chinese lucky nut.' It can be invasive in open areas and under light shade. All parts of the plants are very poisonous, especially the sap and oily seeds. The common name bestill refers to its poisonous properties. *Cascabela thevetia* is cultivated as an ornamental plant. In frost prone areas it is container plant, in the winter season brought inside a greenhouse or as a house plant. It tolerates most soils and is drought tolerant. The plant's toxins have tested in experiments for uses in biological pest control. It's seed oil was used to make a 'paint' with antifungal, antibacterial and anti-termite properties.



Habit : A small tree with milky juice.

Leaves : Numerous, alternate, close together, linear, acute.

Inflorescence : Axillary or terminal cymes

Flowers :

Yellow, fragrant.

Calyx lobes 5, acute, imbricate.

Corolla campanulate, segments 5, twisted imbricate.

Stamens 5, in the throat of the corolla-tube, filaments hairy at base, anthers ovate.

Disk angular, annular, thick.

Carpels 2, connate, superior, style filiform, stigma big, capitate.

Fruit : A fleshy drupe, 4 angled, compressed with 2 ridges, seeds 2 to 4.

Flowering and Fruiting Time : Throughout the year.

Kingdom	Plantae
Sub-kingdom	Tracheophytes
Division	Angiosperms
Class	Eudicots
Order	Gentianiales
Family	Apocynaceae
Genus	<i>Cascabela</i>
Species	<i>thevetia</i>

Naturalised Distribution

Naturalised populations are distributed mainly in the coastal areas of eastern Australia. It is most common in coastal southern and central Queensland. Scattered populations are also present in the coastal parts of northern Queensland, the Northern Territory and northern Western Australia (e.g. at Koolan Island). Also recorded in New South Wales (particularly near Grafton) and in non-coastal parts of Queensland and Western Australia.

Medicinal uses:

A bark or leaf decoction is taken to loosen the bowels, as an emetic, and is said to be an effective cure for intermittent fevers. Local name of *Cascabela thevetia* is Peeli Kaner. Distribution of *Cascabela thevetia*. The plants have been used to treat heart failure in China and Russia for decades, but scientific evidence supporting use is limited to small, poorly designed studies.

Significance :

- Common, wild and cultivated in the gardens. The whole plant is poisonous.
- Commonly planted near the temples, the flowers being offered to God Shiva. **Seeds kept in the pocket for luck.**



Central Academy for State Forest Service
Dehradun

FAUNA OF THE WEEK

CERVUS UNICOLOUR

(SAMBHAR DEER)

Sambhar deer is one of the largest members of deer family. They are strong and tough animals with a thick hide and coarse hair of a uniform brown colour on the body. In general, in the life span of 20-26 years they attain a height of 102 to 160 cm at the shoulder and may weigh as much as 546 kg, though more typically 100 to 350 kg. Head and body length varies from 1.62 to 2.7 m, with a 22 to 35 cm tail. They are preyed by leopard, tiger and dhole, which make them an important component of the ecosystem.

Morphology

- ◇ The colour of body is dark or light brown with a yellowish or greyish tinge. The under parts are paler in colour. Old Sambhar's tend to become very dark brown, almost black.
- ◇ Males have unique stout, rugged antlers with three points, or tines.
- ◇ They have long, strong legs, the upper color being dark brown, with the inner parts of the legs a paler or dirty white. Their brownish gray ears are long.
- ◇ The tail is relatively long for deer, and is generally black above with a whitish underside.
- ◇ Females are much smaller than males and having no antlers.
- ◇ Adult males and pregnant or lactating females possess an unusual hairless, blood-red spot located about halfway down the underside of their throats

Kingdom	Animalia
Phylum	Chordata
Class	Mammalia
Order	Artiodactyla
Family	Cervidae
Genus	<i>Cervus</i>
Species	<i>C. unicolour</i>



Distribution :

Sambar Deer are water-dependent, so they are never found far from water, but also found in a broad range of forest habitats: dry deciduous forest, rainforest and mixed forests. Their range is distributed from the foothills of the Himalayan Mountains across southern Asia and reaching the islands of Taiwan, Sumatra and Borneo.

In India, they can easily be spotted at some protected areas like Kanha, Corbett, Ranthambhore, Bandhavgarh, Gir, Dudhwa, Manas, Kaziranga and Sariska. Home range sizes are probably equally variable, but have been recorded as 1500 ha for males and 300 ha for females in India.

IUCN Status : **Vulnerable** / WPA,1972 : **Schedule III**

Behaviour- Sambhar deer are either crepuscular (active at dusk and dawn) or nocturnal (active during the night) animals

- ◇ They often gather near water, and they are good swimmers, being able to easily swim with their body fully submerged with only their head above water.
- ◇ They have excellent senses of hearing and smell which are used mainly for detection of predators
- ◇ Although their first instinct is to freeze when disturbed, they will confront predators with loud alarm barks, stomps and the mane will erect to make them appear more intimidating.

Mating Habits : Sambhars are polygynous, one male mating with multiple females. They form small herds of no more than six members. Generally it will be one male and several females.

- ◇ They guard their breeding territory and attract female deer by means of vocal displays and smell.
- ◇ The crest on the neck is also used as sexual ornamentation as males in breeding condition display a swollen neck, which is intensified by mud wallowing, which makes the individual appear larger and darker.
- ◇ There is no specific breeding season, though it most commonly takes place between from September and January. Usually just one fawn is born, after a gestation period of about 9 months.
- ◇ Calves at birth are very active. They begin to eat solid food from 5 to 14 days, and ruminant once they are 27 to 35 days old.



◇ **Diet-** They are herbivores, eating various grasses, foliage, fruits, leaves, water plants, herbs, buds, berries, bamboo, stems and bark, as well as a wide range of shrubs and trees.

Threats and conservation-The main threat to the species is poaching for meat and antlers. Other threats include habitat destruction due various developmental activities. The populations in India have been more stable within the network of protected areas, but have also seen a decline outside the parks and reserves.

Information source* : Wikipedia, google



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BIRD OF THE WEEK

Psittacula krameri (Rose-Ringed Parakeet)

The Rose-Ringed Parakeet, commonly known as *Tota* in the Hindi heartland of India, is a medium-sized parrot in the genus *Psittacula*, of the family *Psittaculidae*. It has disjunct native ranges in South Asia and Africa. It is now introduced into many other parts of the world. The rose-ringed parakeet is sexually dimorphic. Both sexes have a distinctive green colour in the wild and captive bred ring necks have multiple colour mutations. In the wild, this is a noisy species with an unmistakable squawking call. Captive individuals can be taught to speak. They are a herbivorous and non-migratory species.

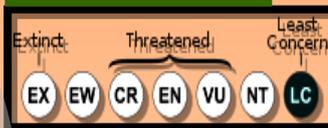


Morphology

Psittacula krameri is a medium-sized bird with a body length on average of about 38.1 cm. It has a body mass of about 137.0 g. These birds have a green body with a reddish beak. They have a rather long pointed tail that is more than half of the body's length. This tail can be up to 25 cm long. The males of this species show a dark purplish color around their necks, giving the ring-necked parakeet its name. The young birds do not show this coloring on their necks, however they only acquire it once they reach sexual maturity which is about the age of three. The female birds do not have this rose colored ring around their necks.



Conservation Status



Scientific Classification

Kingdom	Animalia
Phylum	Chordata
Class	Aves
Order	Psittaciformes
Family	Psittaculidae
Genus	<i>Psittacula</i>
Species	<i>krameri</i>

Distribution



Food Habits

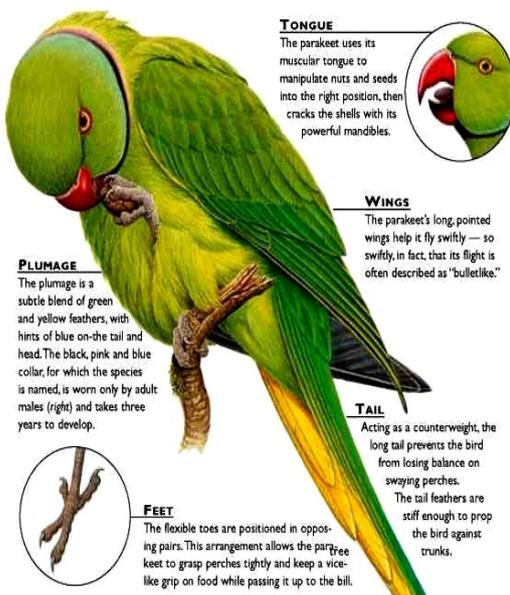
The primary diet of the ring-necked parakeet is seeds and grains, making this bird a granivore. About 80 percent of this bird's diet is seed-based. This parakeet also eats insects, fruits, and nectar.

Reproduction

The rose-ringed parakeet is a seasonal breeder and is monogamous. In this species, the female actually attracts the male and initiates the mating. Rose-ringed parakeets are oviparous & iteroparous, lays eggs in February and March. Lays on average about four eggs each clutch (range 1-7).

Ecosystem Role

They are the main seed dispersers of some plant species. Seeds dropped by parrots under the mother tree can be consumed and secondarily dispersed by a variety of other species. Also disperse seeds through stomatochory & endozoochory. Parrots can also pollinate. Through both antagonistic and mutualistic interactions with their food plants, parrots can exert cascading effects on the plants' life cycles and shape the structure and functioning of ecosystems.



Major Threat

Parakeets in captivity is one of the more visible symbols of illegal trade in India. They are taken from the wild and smuggled to various parts of the country and beyond.

Source: Animal Diversity Web, Google Images & Wikipedia.