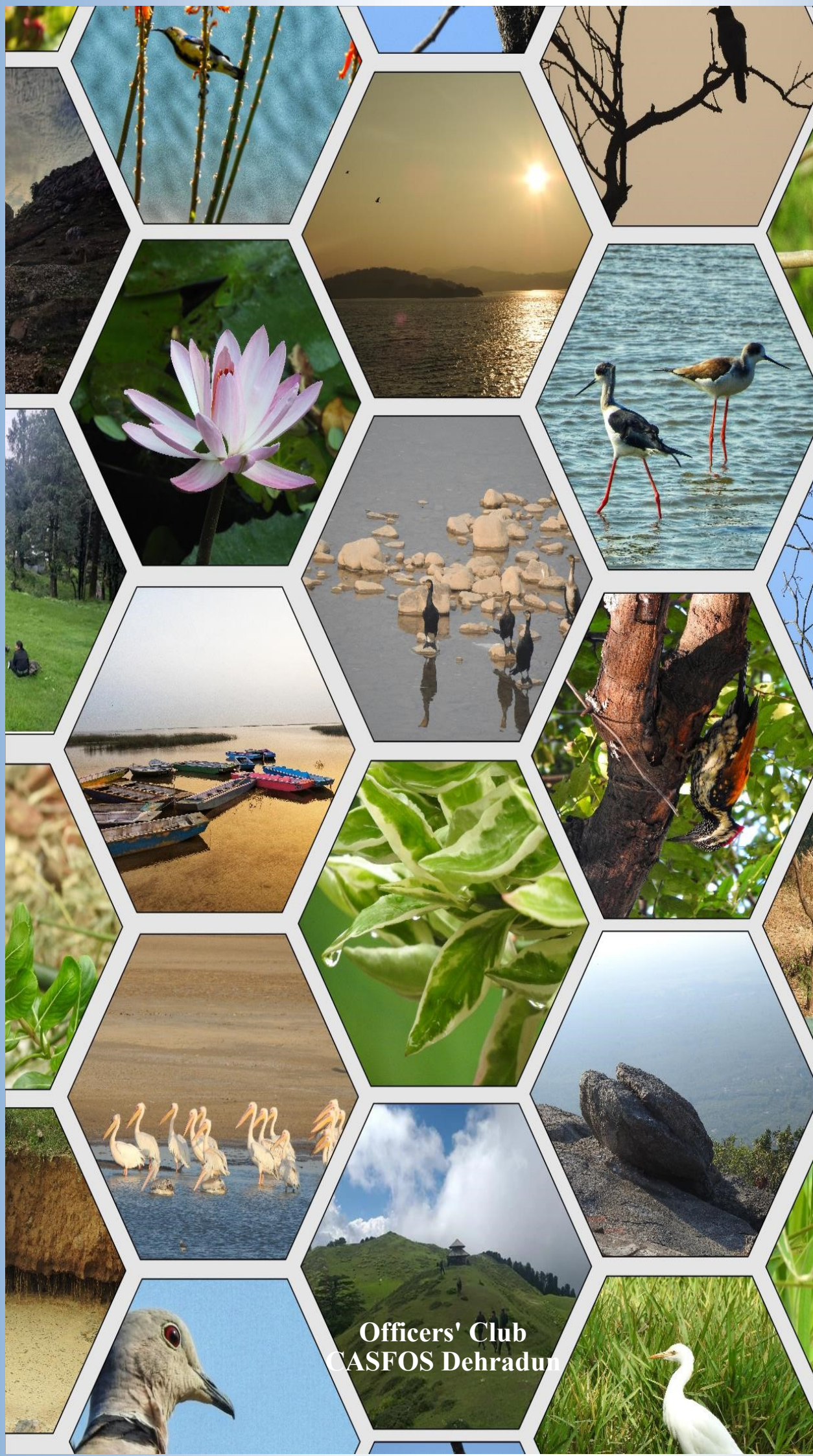




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PRAKRITI

Quest for nature



Officers' Club
CASFOS Dehradun



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FLORA OF THE WEEK

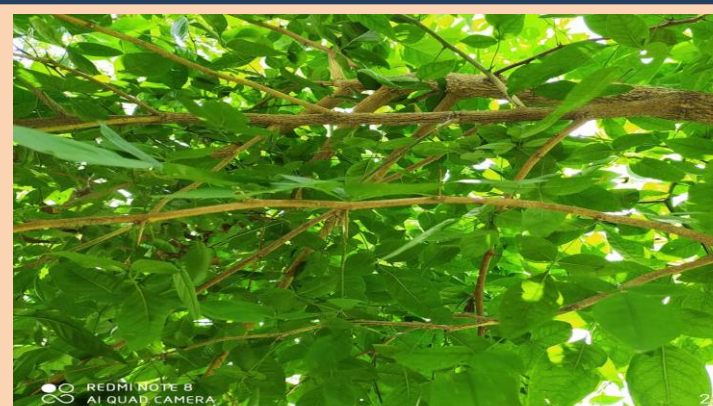
Aegle marmelos Bael

The Bael tree has its origin from Eastern Ghats and Central India. It is native to India. The tree grows wild in dry forests on hills and plains of central and southern India and Burma, Pakistan and Bangladesh, also in mixed deciduous and dry dipterocarp forests. *A. marmelos* is a subtropical species.

The Bael one of the sacred trees of the Hindus. Leaves are offered in prayers to Shiva and Parvathi since ancient times. Its leaves are trifoliate symbolizing the Thrimurthies-Brahma, Vishnu, Shiva, with spear shaped leaflets resembling Thrisoolam the weapon of Lord Shiva.

BOTANICAL DESCRIPTION:

Aegle marmelos is a slow-growing, medium sized tree, up to 12-15 m tall with short trunk, thick, soft, flaking bark, and spreading, sometimes spiny branches, the lower ones drooping. It exudes gum which is sweet at first taste and then irritating to the throat.



RELIGIOUS IMPORTANCE:

Bael is used in the ritual rites of Hindus. It is considered the residence of goddess Lakshmi. Bael trees are considered an incarnation of goddess Sati. Bael trees can be usually seen near the Hindu temples. It is believed that Hindu deity Lord Shiva is fond of bael trees and its leaves and fruits still play a main role in his worship.

Taxonomic classification

Class	Dicotyledonae
Order	Sapindales
Family	Rutaceae
Genus	<i>Aegle</i>
Species	<i>marmelos</i>

Aegle marmelos commonly known as Bengal quince, golden apple, Japanese bitter orange, stone apple or wood apple.



PLANT MORPHOLOGY:

Bael is only member of the monotypic genus *Aegle*. It is a deciduous shrub or small sized tree, up to 13 m tall.

LEAF: Trifoliate, alternate, ovate with pointed tip.

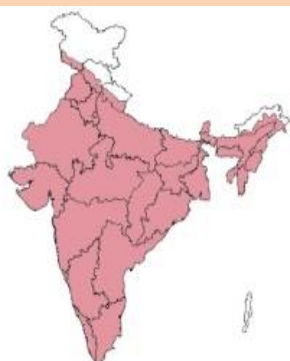
FLOWER: Pale green or yellowish colour, bisexual, calyx with five teeth. Four or five petals.

FRUIT: Diameter between 5 and 12 cm. Pear-shaped with a thick and hard rind.

MEDICINAL USES:

- Dries fruit pulp uses for preparing summer drinks, which helps overcome sunstrokes.
- It can be used to treat tuberculosis.
- Bael fruit used in the treatment of chronic diarrhea, dysentery and peptic ulcer.
- Bael fruits are of dietary use and the fruit pulp is used to prepare delicacies like murabba, puddings and juice.
- Bael leaf juice with honey can prove useful for treating fever.
- *Aegle marmelos* is rich in anti-oxidant which helps in insulin secretion which leads to low blood sugar levels.
- Bark has been reported to have beneficial effects in diabetes.

Distribution Map



Aegle marmelos is native across the Indian subcontinent and Southeast Asia, and is cultivated throughout Sri Lanka, Tamilnadu, Thailand, and Malaysia. It occurs in dry, open forests on hills and plains at altitudes from 0–1,200 m (0–3,937 ft) with mean annual rainfall of 570–2,000 mm (22–79 in).



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FAUNA OF THE WEEK

Panthera tigris

TIGER

The graceful built of a tiger is well known. The reddish yellow to orange coat marked with black stripes and black ringed tail are characteristic of this animal. No two individuals exhibit the same stripe pattern.

The ears are black on the outer side, with a prominent white spot. Young ones are more brightly coloured than old.

Today, there are five subspecies of tiger. These subspecies are the Bengal tiger, South China tiger, Indochinese tiger, Sumatran tiger and Siberian tiger. Sadly, three subspecies of tiger have become extinct – the Caspian, Bali and Javan.

Reproduction and Development

Gestation period- 4 months

Litter size- 2-3 cubs

Weaning – 5-6 months

Sexual maturity- Females at 3-4 years and males at 4-5 years

Lifespan- 10-15 years in the wild.



National Animal of India

Kingdom	Animalia
Phylum	Chordata
Class	Mammalia
Order	Carnivora
Family	Felidae
Sub family	Pantherinae
Genus	<i>Panthera</i>



- The stripes that a tiger has are as unique as human fingerprints.
- Tigers are generally solitary creatures, but are seen as highly social able.
- Interestingly, a tiger can go two weeks without feeding.
- A tiger's roar can be heard as far as three kilometres away.
- At full speed, tigers can reach up to 65km/h.

WPA, 1972: Schedule I, Part 1, Entry No. 39

IUCN Status: Endangered

BEHAVIOUR

Tigers are usually solitary and territorial in nature.

Their social system is connected through visual signs, scent marks and vocalizations

Mainly active at night

Groom themselves using their tongue to remove dirt from their fur

Good swimmers.

HABITAT AND DISTRIBUTION:

Tiger lives in varied habitats like dry open forests, humid evergreen forest and mangrove swamps.

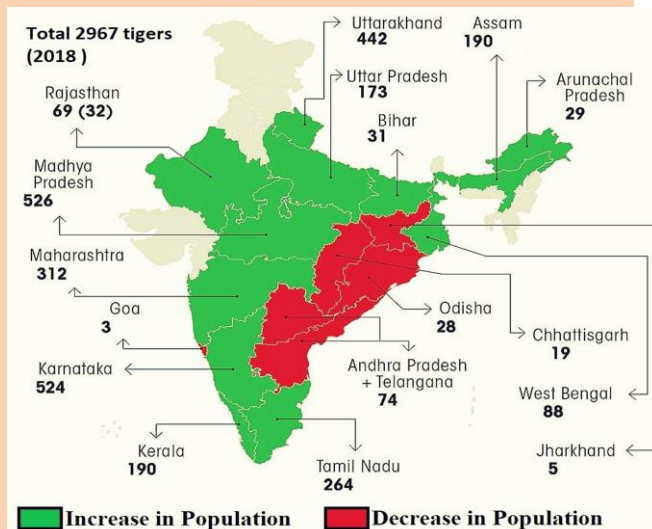
All kinds of animals fall its prey with deers & antelopes being its favorite food.

ECOLOGY

Apex predator & keystone species in their ecosystem.

Maintain balance between prey herbivore population and vegetation.

Protecting tigers translates into protecting forests which provide



BIRD OF THE WEEK

Dinopium benghalense

Black rumped woodpecker



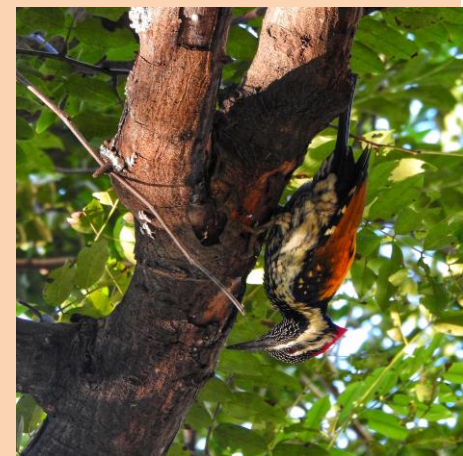
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Whenever we see drilled holes in tree stumps, immediately it strikes the thought that there would be Woodpecker bird nearby; they actually chip out wood and create holes in search of food - forage for insect prey on the trunks and branches or to create cavities for nesting and roosting.

These interesting and colourful birds are members of the birds' family *Picidae* that also includes piculets, sapsuckers birds etc.

#Indian species: 12 different species of woodpeckers are found in India namely Black-rumped flameback, Greater flameback, Rufous woodpecker, Common flameback, White-billed woodpecker, Yellow-crowned woodpecker, Brown-capped pigmy woodpecker, White-naped woodpecker, Heart-spotted woodpecker, Streak-throated woodpecker, Lesser yellownape, Speckled piculet.

(#courtesy:<http://www.walkthroughindia.com/birds/12-different-species-of-woodpecker-found-in-india/>)



Morphology

- Size ranges from tiny piculets 7 cms in length to large sized birds about 50 cms.
- Weighing around 7-10 gms to 360-563 gms for larger ones.
- Plumage colorful for camouflage boldly patterned in black, white, red, and many have a crest or tufted feathers on the crown. Zygodactyl feet, strong claws, short and strong legs, stiffened tails.
- Woodpeckers have strong beaks for drilling, drumming & hammering on trees and long sticky tongues for extracting out foods (insects – adults or larvae) from drilled holes; interestingly to avoid brain damage due to drilling etc. activities, have relatively small and smooth brain, narrow subdural space, skull consisting strong & compressible sponge-like bone concentrated in the forehead and back of skull, and hyoid bone is enormously elongated.

Kingdom: Animalia

Phylum: Chordata

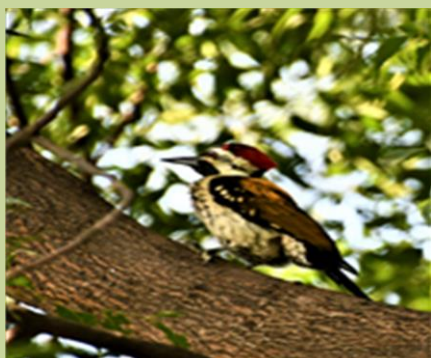
Class: Aves

Order: Piciformes

Family: Picidae

Genus: *Dinopium*

Species: *benahalense*



Characteristic features, behaviours:

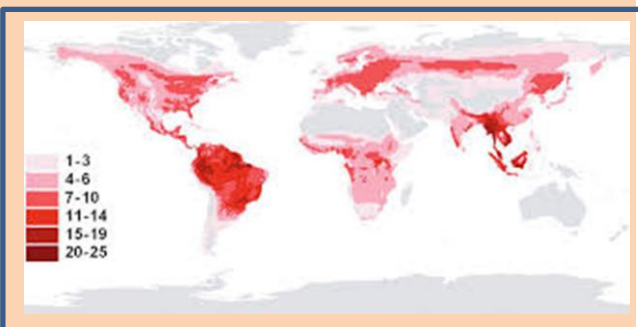
Majority of woodpeckers are solitary in nature, some of them are communal group breeders as well.

Majority of woodpecker species feed on insects and other invertebrates living under bark and in wood, having omnivorous feeding habit.

Drilling and drumming- In drilling activity they chip out wood and create holes while in drumming, which mostly occurs in spring season, a woodpecker tries to attract a mate or mark its' territory by alerting other birds or competitors.

DISTRIBUTION:

These are cosmopolitan and distributed across the world except for extreme polar regions, Australia, NewZeland, New Guinea, Madagascar.



Ecological roles:

Insectivorous, Omnivorous –
controlling forest insect pests

Habitat specialist

Indicator species

Drilled holes / cavities used by other bird species for brooding and nesting thus important part of ecosystem.

Interesting facts:

They have super long tongues:: Woodpeckers' tongues are usually about twice the length of their bill so that they can reach for insects inside the holes they peck out. When not in use, the long tongue curls around the back of the head between the skull and the skin.

They like to make music & don't get headaches.