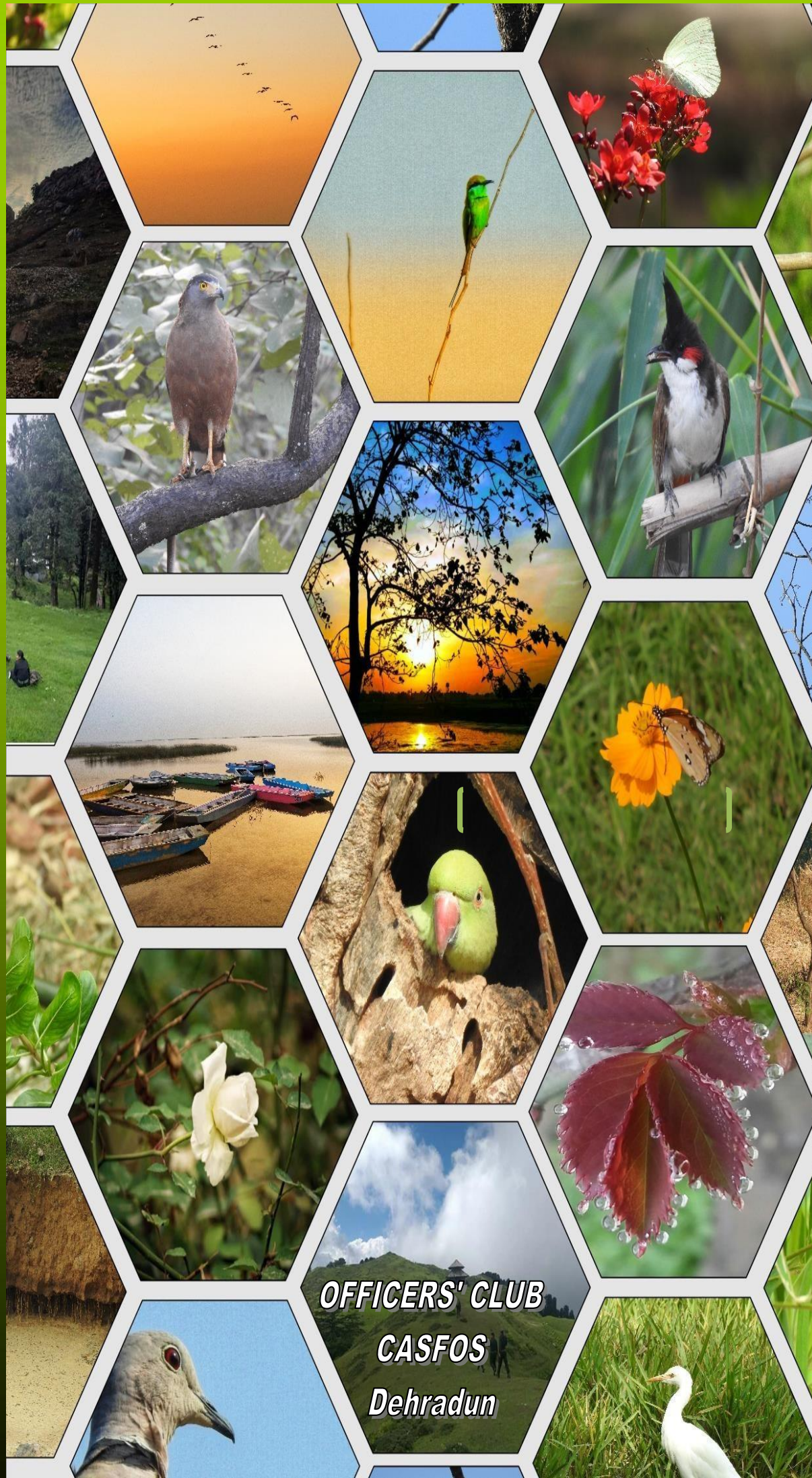




## Quest for nature







Central Academy for State Forest Service  
Dehradun

# FLORA OF THE WEEK

## *Vitex negundo* (*Nirgundi*)

**V** *itex negundo*, commonly known as the Chinese chaste tree, five leaved chaste tree or nisinda is a large aromatic shrub with quadrangular, densely whitish, tomentose branchlets. It is widely used in folk medicine.

It is an erect shrub or small tree growing from 2 to 8 m in height. The bark is reddish brown. Its leaves are digitate, with five lanceolate leaflets; each leaflet is around 4 to 10 cm in length, with the central leaflet being the largest and possessing a stalk. The fruit is a succulent drupe, 4 mm in diameter, rounded to egg-shaped. It is black or purple when ripe.



Kingdom	Plantae
Sub-kingdom	Tracheophytes
Division	Magnoliophyta
Class	Magnoliopsida
Order	Lamiales
Family	Lamiaceae
Genus	<i>Vitex</i>
Species	<i>negundo</i>

### Medicinal qualities

Anti-inflammatory, expectorant, tranquilizer, antispasmodic, anti convalescent, rejuvenative, anti-arthritic, anthelmintic, anti-fungal and antipyretic.

### Traditional Remedies

- ❖ Leaves are boiled in mustard oil. Oil is then filtered and used as an ear drop to get relief in ear pain.
- ❖ A spoonful of the juice extracted from the leaves is taken orally everyday is useful to reduce obesity.
- ❖ Tablets made from its leaf powder are very effective against diabetes.
- ❖ Lukewarm leaves are used to get relief from Rheumatism.
- ❖ Leaves are smeared with mustard oil are useful in Muscular pain.
- ❖ Leaf smoke is inhaled to get rid of cough.

### Phytochemical constituents

Volatile oil, triterpenes, diterpenes, sesquiterpenes, lignan, flavonoids, flavones, glycosides, iridoid glycosides and stilbene.



### Nirgundi oil

**Facts about Nirgundi:** It is excellent soil binder, traditionally used as storage insecticide, live fence; stems are used for making the base of wooden baskets. Floral nectar is the primary source of carbohydrates for many species of insects.

Guided by:  
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\*Information source: Internet

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# BIRD OF THE WEEK

## *Tragopan melanocephalus* (Western tragopan)

One of the most colorful bird in the world, endemic of NW Himalaya. The species inhabits the high-altitude temperate forests at elevations between 2400-3200m. The habitat used by the species during spring and summers majorly have Spruce (*Picea smithiana*), Fir (*Abies pindrow*), Yew (*Taxus wallichiana*) and Oak (*Qercus semicarpifolia*). Dense under-cover is a characteristics of both summer and winter habitat. Vegetative matter probably forms a principal component of their diet. Given the topographically complex nature of forests inhabited by the Western Tragopan, coupled with their elusive behavior, thorough knowledge about the species biology is lacking. Variation in undercover structure is critical in determining its distribution.

### Morphology

1. Shows Sexual dimorphism. Size of adult male is between 65 to 73 cm, and the size of female is between 55 to 65 cm. Male is bright dark, grey and black in color, with numerous spots. Females have pale brownish grey upper parts.
2. The bill is short, strong and stout.
3. Head is black, with red cheeks patches.
4. Sexual maturity is between 1.5 to 2 years.
5. Nesting and breeding season is between April to may.

Kingdom	Animalia
Phylum	Chordata
Class	Aves
Order	Galliformes
Family	Phasianidae
Genus	<i>Tragopan</i>
Species	<i>melanocephalus</i>

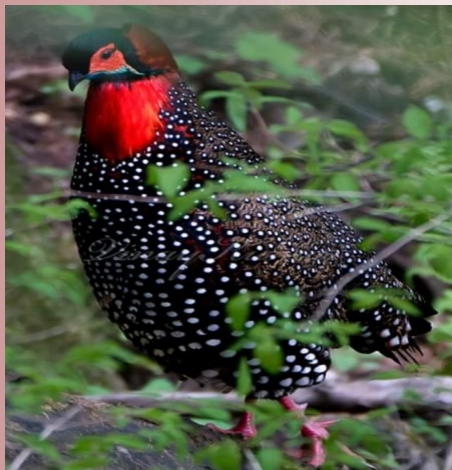


**Distribution :** The species has a patched distribution in the NW Himalayas from N Pakistan to NW India including Kashmir and Himachal Pradesh & possibly the

**IUCN Status :** Vulnerable / **WPA, 1972 :** Schedule I / **CITES :** Appendix I

### Characteristic Features

- Western Tragopan, rarest among pheasants, popularly known as **JUJURANA** means King of birds Also serves 'flagship' value on account of socio-cultural linkages with the traditional people in Himachal Pradesh (State Bird )
- Territorial bird & killed for feathers specially for ornaments (**Kalgi**) on Caps and also a game bird. Fewer than 3000 individuals remain in wild
- Bird is extremely shy & remains concealed in undergrowth & dense foliage for predator avoidance
- Clutch size-3-6 eggs ,Incubation time ~28 days and chicks stays with mother throughout the winters .Observe Monogamous mating system.
- Tragopan perform ritualized, complex courtship displays during their breeding period for mating.
- Male birds produce distinctive advertisement calls (waa way) to attract females & defend territory
- Only Pheasant exhibits elevated nest behaviour which is one of the reason of extinction as undercover is changing rapidly due to anthropogenic disturbances.
- Conservation breeding is going on, in Sarhan Peasantry Bushahr Shimla H.P. (only place in world)



### Ecological Role

- Seed dispersers
- Insectivores
- Prey
- Habitat specialist

### Major Threats

Threatened by habitat disturbances (livestock grazing, minor forest produce collection) and fragmentation (Change in land use practices ,Poaching and Hybridization).

\* Information source: Annual I plan Sa haran peasan try (H.P.) & National Stu dbook (WI )





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# FAUNA OF THE WEEK

## *Boselaphus tragocamelus* (Blue bull)

Nilgai or blue bull (*Boselaphus tragocamelus*) is the largest Asian antelope and is ubiquitous across the northern Indian subcontinent. The sole member of the genus *Boselaphus*, the species was described and given its binomial name by German zoologist Peter Simon Pallas in 1766.

### Ecology and Behavior

Nilgai is diurnal (active mainly during the day). A 1991 study investigated the daily routine of the antelope and found feeding peaks at dawn, in the morning, in the afternoon and during the evening. Females and juveniles do not interact appreciably with males, except during the mating season. Groups are generally small, with ten or fewer individuals, though groups of 20 to 70 individuals can occur at times. In a 1980 study in the Bardiya National Park (Nepal), the average herd size was of three individuals. In a 1995 study in the Gir National Park (Gujarat, India), herd membership varied with season. However, three distinct groupings are formed: one or two females with young calves, three to six adult and yearling females with calves, and male groups with two to 18 members.



### Distribution

Nilgai prefer areas with short bushes and scattered trees in scrub forests and grassy plains. They are common in agricultural lands, but hardly occur in dense forest. Major populations occur in the Terai lowlands in the foothills of the Himalayas (Northern India), but the antelope is sparsely found in Nepal and Pakistan.



Male



Female

Kingdom:	Animalia
Phylum:	Chordata
Class:	Mammalia
Order:	Artiodactyla
Family:	Bovidae
Subfamily:	Bovinae
Genus:	<i>Boselaphus</i>
Species:	<i>tragocamelus</i>

**Body characters:** The nilgai stands 1–1.5 metres (3.3–4.9 ft) at the shoulder, males weigh 109–288 kilograms (240–635 lb), and the lighter females 100–213 kilograms (220–470 lb). A sturdy thin-legged antelope, the nilgai is characterised by a sloping back, a deep neck with a white patch on the throat, a short crest of hair along the neck terminating in a tuft, and white facial spots. A column of pendant coarse hair hangs from the dewlap ridge below the white patch. Sexual dimorphism is prominent – while females and juveniles are orange to tawny. Adult males have a bluish-grey coat. Only males possess horns, 15–24 centimetres (5.9–9.4 in) long.

### Diet

Herbivores, the nilgai prefer grasses and herbs; woody plants are commonly eaten in the dry tropical forests of India. Studies suggest they may be browsers or mixed feeders in India. The nilgai can survive for long periods without water and do not drink regularly even in summer. Flowers (*Butea monosperma*), foliage (*Anogeissus pendula*, *Capparis sepiaria*, *Grewia flavescens* and *Zizyphus mauritiana*), pods (*Acacia nilotica*, *A. catechu* and *A. leucophloea*) and fruits (*Zizyphus mauritiana*). Preferred grass species include *Cenchrus species*, *Cynodon dactylon*, *Desmostachya bipinnata*, *Scirpus tuberosus* and *Vetiveria zizanoides*.

### Culling and Conservation

The populations of nilgai in India are so large that farmers in the states Bihar, Chhattisgarh, Haryana, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh have pleaded to the government to cull them. Farmers in Neemuch (Madhya Pradesh) went on a hunger strike in 2015 demanding compensation for the damage.

For centuries Indian villagers have associated the nilgai with the cow, a sacred animal revered by Hindus and Bishnois.