



# RGRMNH NEWS LETTER

Vol. I Issue - I April - June, 2018

1



- In this issue:-
- About the museum
  - Flame of the forest
  - Royal Bengal Tiger
  - Exhibit of the month
  - Educational Programmes of this Qtr.
  - Educational Programmes in next Qtr.

## ABOUT THE RGRMNH :-

Rajiv Gandhi Regional Museum of Natural History (RGRMNH) is a Regional Center of National Museum of Natural History, New Delhi under the Ministry of Environment, Forest & Climate Change, Government of India. This institution is devoted to environmental education among the different masses of the community. This museum has been opened to general public from 01st March, 2014 with temporary galleries on "Biodiversity of Rajasthan", Biodiversity of Western Ghats, Flora & Fauna of Ranthambhore Tiger Reserve, corridor consisting different Flora & Fauna of India. It has a meaningful vision for developing scientific temper in the society on environment and natural heritage of the country by education, training and awareness. It has mission to collecting, conserving, documenting, researching and exhibiting objects representative of flora & fauna of its geographical region i.e. Rajasthan, Gujarat, and Daman & Diu (UT).

Existing Temporary Exhibitions:

1. Tribes of India
2. Seeds of India
3. Heritage Sites of India
4. Textiles of India
5. Adaptation in Desert Flora & Fauna

## Glimpses of educational activities at RGRMNH, SWM



## Flame of the forest (*Butea monosperma*)

*Butea monosperma* (Lam.) Taub. is a species of *Butea*, commonly known as "Flame of the Forest, Parrot Tree, Bastard Teak" belongs to the family Leguminosae. It is medium-sized, deciduous tree. Bark of this tree show a reddish exudate. Leaves 3-foliolate; leaflets 6-18 cm long, 10-16 cm broad, lathery, finely silky below when young, turning glabrous with age. Flowers orange red or scarlet in colour, in fascicles on 8-10 cm long racemes, born on leafless branches. Pods one seeded, oblong, 10-25 cm long, 4-6 cm broad, flat at base, wing-like and indehiscent, pale-green or yellowish-brown. Seeds reddish brown, obovate, glossy, 2-4 cm across, wrinkled. Flowering season of this tree is from February to April and fruits appear from month of May to July.

### Etymology:-

The generic name *Butea* is named after John Stuart, 3rd Earl of Bute (1713-1792), member of parliament, prime minister for one year, and a patron of botany. William Roxburgh erected the genus *Butea* in 1795, but it became a nomen invalidum. Carl Willdenow validated the name *Butea* in 1802.

### General information :-

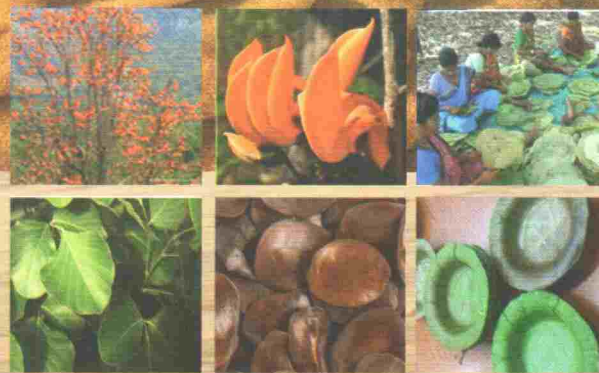
*Butea* is extensively used in Ayurveda for its various medicinal values. Flame of the forest, bastard teak, battle of plassey tree, parrot tree, Bengal kino, Dhak, Khakar and Palas tree all are common names of *Butea monosperma*. In hindi a common phrase is used "dhak ke teen paat", it comes from three leaflets of *Butea*. In India it is state flower of Jharkhand and Uttar Pradesh.

### Distribution:-

*Butea monosperma* is native to tropical and sub-tropical parts of the Indian Subcontinent and Southeast Asia, ranging across India, Bangladesh, Nepal, Sri Lanka, Myanmar, Thailand, Laos, Cambodia, Vietnam, Malaysia, and western Indonesia. It is widely distributed in throughout the India.

### Uses :-

The plant is used in Ayurvedic, Unani and Siddha medicine for various ailments. Almost all the parts of the plant namely root, leaves, fruit, stem bark, flowers, gum young branches are used as medicine, food, dye, resin, fibre and for other miscellaneous purposes such as fish poison, fodder, utensils, etc. The various uses of plant may be divided into the following groups on the basis of their uses:



2

### 1) Economic Importance

The most important use of this tree is as a good host of a Lac insect for production of Rangeeni lac. It is cultivated for this purpose in Madhya Pradesh, Bihar, and West Bengal. The species is suitable for raw material for the production of newsprint either alone or in mixture with bamboo pulp. The bark particularly of roots yields a coarse brown fibre used for rough cordage and caulking boats. Incision in the bark gives a clear red gum known as "Butea gum or Bengal Kino" and is considered valuable by druggists for its astringent qualities and by leather workers for its tannin. The wood is dirty white and soft and, being durable under water, is used for well-curbs and water scoops. The wood is also a good source of charcoal. Flowers yield a red or orange dye, which is used as a colouring agent for fabric.

### 2) Traditional Uses

The flowers are used to prepare a traditional Holi color. The leaves were used by previous generations of people to serve food instead of plastics of today. Dried leaves are used for wrapping tobacco to make biddies and to pack parcel materials. Young shoots yield a fiber used for ropes. The young leaves are used as buffalo fodder.

### 3) Medicinal Uses

**A) Root:** The roots possess anti fertility, aphrodisiacal and analgesic properties. They are useful in night blindness, filariasis, helminthiasis, piles, ulcers and tumors. Spoonful of root powder mixed with water is drunk as an antidote for snake-bite.

**B) Bark:** The bark is anthelmintic, appetizing, laxative and aphrodisiac. It is useful in bone fractures, piles, hydrocele, liver disorders, gonorrhoea and blood purification. Bark is also used as blood purifier. Paste of bark is used externally to relieve body swelling. Bark juice is very effective in goiter. Stems bark powder is used to apply on injury caused due to axe.

**C) Leaf:** The leaves to have astringent, carminative, anthelmintic, aphrodisiacal, tonic, anti-inflammatory, antidiabetic and wound healing properties. The juice of leaves can be used as an enema. Decoction of the leaves treats leucorrhoea and diabetes. The leaves are good for eye diseases. Poultice prepared from leaves of "Palaas" relieves various skin disorders like boils, pimples, swelling and skin ulcers.

**D) Flower:** The flowers have astringent, antidiarrheal, anticancer, hepato protective, anti oxidative, expectorant, diuretic, anti-inflammatory, anti gonorrhoeal, tonic,

aphrodisiacal and emmenagogue properties. Flowers are also depurative, remove swelling and prevent pus formation in urogenital tract of males. Flowers of this tree are used in the treatment of impotency and very beneficial for irregular bleeding and severe abdominal pain during menstruation. Decoction of leaves relieve leucorrhoea. Dried flowers of this tree are soaked overnight and saffron color water obtained is used for bathing during summers to protect children against various skin allergies and skin disorders. Flowers are also used to cure diabetes, leprosy, gout, skin diseases, thirst and burning sensation.

**E) Seed:** The seeds have anthelmintic activity. The seeds treat diarrhea, when ground and mixed with lemon juice, and applied, they can relieve itching of ringworm and eczema. The crushed seeds have the potency to kill maggots in wounds and sores.

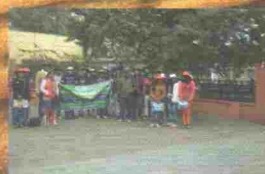
**F) Gum:** The gum is used for treating diarrhea and dysentery. Infusion of the gum is used as enema. The gum is astringent to the bowels. It relieves stomatitis, cough, excessive perspiration and corneal opacity. The gum is used for treating diarrhea and dysentery. A decoction or infusion of the gum is used as enema.

### 4) Religious ceremonies

The tree is considered sacred by both the Hindus and the Buddhists. The Hindus consider it sacred because of the tri-foliolate formation of its leaves which represents the Holy trinity with Vishnu, the Preserver in the middle, Brahma, the Creator on the left and Siva, the Destroyer on the right. The orange red flowers of the tree are offered to the gods, especially to goddess Kali. It is said that the tree is a form of Agnidev, God of Fire. In Telangana, these flowers are specially used in the worship of Lord Shiva on occasion of Shivratri and flowers are used to worship Saraswathi on Basant Panchami in Bengal. In Kerala the wood of this tree is used for fire rituals.

### 5) Folk tradition

In the state of Jharkhand Palash is associated with the folk tradition. Many folk literary expressions describe palash as the forest fire. Leaves are also used for making Ghongda to protect from rain. Flowers and young fruit are used as vegetables by tribals. Fresh twigs are tied on horns of bullocks on occasion of 'Pola' festival.





# ROYAL BENGAL TIGER (*Panthera tigris* ssp. *tigris*)

- Kingdom : Animalia
- Phylum : Chordata
- Class : Mammalia
- Order : Carnivora
- Suborder : Feliformia
- Family : Felidae
- Sub family : Pantherinae
- Genus : *Panthera*
- Species : *tigris*
- Subsp. : *tigris*



The tiger is among the most recognizable and popular of the world's charismatic mega fauna and it is the national animal of India. The species is classified in the genus *Panthera* with the lion, leopard, jaguar, and snow leopard. The tiger (*Panthera tigris*) has a muscular body with powerful forelimbs, a large head and a tail that is about half the length of its body. The tiger is the largest cat species, most recognizable for its pattern of dark vertical stripes on reddish-orange fur with a lighter underside. Its pelage is dense and heavy, and coloration varies between shades of orange and brown with white ventral areas and distinctive vertical black stripes that are unique in each individual. It is listed as Endangered on the IUCN Red List.

**EVOLUTION:** Results of genetic analysis indicate that about 2.88 million years ago, the tiger and the snow leopard diverged from the other *Panthera* species, and that both may be more closely related to each other than to the lion, leopard and jaguar.

**DISTRIBUTION:** about 20,000 years ago, the tiger was widespread from Eastern Anatolia Region and Mesopotamia, in Central Asia to eastern Siberia and South and Southeast Asia to the Indonesian islands of Java, Bali and Sumatra. Today, tigers are regionally extinct in Afghanistan, Ukraine, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Iran, Pakistan and Singapore. During the 20th century, tigers became extinct in Western and Central Asia because of habitat loss and the ongoing killing of tigers and tiger prey. At present, their significantly fragmented and depopulated range extends eastward from India to Bangladesh, Bhutan, Nepal, Myanmar, Thailand, Cambodia, Laos, Vietnam, China, Malaysia, Indonesia, North Korea and Russia. The northern limit of their range is close to the Amur River in southeastern Siberia.

**HABITAT:** Tigers occupy a variety of habitats from tropical forests, evergreen forests,

woodlands and mangrove swamps to grasslands, savannah and rocky country.

**SIZE:** There is a notable sexual dimorphism and Males vary in total length from 250 to 390 cm and weight 90 to 306. Females vary in total length from 200 to 275 cm, weigh 65 to 167 kg.

**BEHAVIOUR:** Territories of male tiger are 60 to 100 km<sup>2</sup> while tigress may have a territory of 20 km<sup>2</sup>. Tiger establish and maintain territories but have much wider home ranges within which they roam. It is strong swimmer and often bathes in ponds, lakes and rivers, thus keeping cool in the heat of the day.

Male tiger marks trees by spraying urine and anal gland secretions, as well as marking trails with scat and marking trees or the ground with their claws for identity his territory.

**VARIATIONS IN COLOUR:** As allele found only in the Bengal population produces the white tiger, a colour variant first recorded in the early 19th century and found in an estimated one in 10,000 natural births. Genetically, whiteness is recessive: a cub is white only when both parents carry the allele for whiteness.

**DIET:** Tiger is a top predator, primarily preying on ungulates and bovids. Ex. Sambar deer, chital, barasingha, wild boar, gaur, nilgai and both water buffalo and domestic buffalo etc.

**REPRODUCTION:** Gestation ranges from 93 to 112 days, with an average of 103 to 105 days. Generally litters consist of one or three cubs.

**LIFE SPAN:** Bengal Tiger can live as long as 14 to 16 years (in wild) and in captivity 18 to 20 years.

**POPULATION:** India is home to the world's largest population (70%) of wild tigers. A 2014 census estimated a population of 2,226.

**THREATS:** Major threats to the tiger include habitat destruction, habitat fragmentation and poaching for fur and body parts.

**TIGER PROJECTS:** Project Tiger is a tiger conservation programme launched in 1973 by the Government of India during Prime Minister Indira Gandhi's tenure with aiming to ensuring a viable population of Bengal tigers in their natural habitats and also to protect them from extinction. There are 50 tiger reserves in India which are governed by Project Tiger and administrated by the National Tiger Conservation Authority (NTCA).

**CULTURAL VALUE:** It featured prominently in ancient mythology and folklore, and continues to be depicted in modern films and literature, appearing on many flags etc.

## SUB-SPECIES:-



Sumatran Tiger



Amur Tiger



Indochinese Tiger



South China Tiger



Malayan Tiger



## Exhibit of the Month at RGRMNH, SWM



Living Fossil : Nautilus  
(100 Millions years old)



Fossil : Tree Trunk  
(100 Millions years old)



Spotted Deer (Chital)

### Educational Programmes of this Quarter :-

- World Heritage Day- 18/4/18
- Earth Day - 22/4/18
- Rally on End Plastic Pollution-11/5/18
- International Museum Day-18/5/18
- Summer Vacation Prg. - 18/5/18 to 27/5/18
- World Environment Day - 05/6/18
- Exhibition on "Plastic Pollution-A Threat to ecosystem"
- Poster Exhibition on "End Plastic Pollution"
- International day for Combat Desertification-17/6/18



### Educational Programmes in next Quarter :-

- Van Mahotsav - 4/7/18
- World Tiger Day - 29/7/18
- Programme for underprivileged Children-8/8/18
- Capacity building workshop for teachers-29-30/8/18
- Programme for children with special needs-12/9/18
- Inter. day for preservation of Ozone Layer-16/9/18
- World Rhino Day-22/9/18

### Facilities:

- Library
- Ecotheatre
- Auditorium
- Ramp, Wheel Chair, Blind stick
- Drinking Water
- Parking
- Lift
- Biodiversity Park
- Hostel
- Open Theatre

### -:: Contact ::-

### Rajiv Gandhi Regional Museum of Natural History

Ramsinghpura, Sawai Madhopur-322001, Tel./Fax: 07462-223010

E-mail: rgrmnhsmp@gmail.com • Timings : 10.00 AM to 6.00 PM

(Museum will be closed on Monday & National Holidays)

