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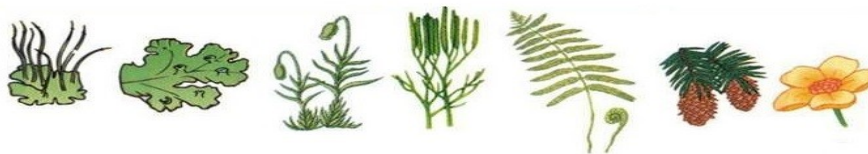
Department of Botany Newsletter



Antheia

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Plants: The Alchemists of Nature

Plants are gems of nature expert at transforming water, soil, and sunlight into an array of precious substances, many of them beyond the ability of human beings. While Humans are nailing down consciousness and learning to walk on two feet, plants on the other hand by the same process of natural selection, inventing photosynthesis (the astonishing trick of converting sunlight into food) and perfecting organic chemistry. From plants come chemical compounds that nourish, heal and poison and delight the senses, others that rouse and put to sleep and intoxicate, and a few with the astounding power to alter consciousness—even to plant dreams in the brains of awake humans.



Michael Pollan -Acclaimed author
and journalist

A new species of Sun Rose



Botanists have discovered a new species of wild Sun Rose from Eastern Ghats in India. The species, named **Portulaca laljii**, discovered from Prakasam district of Andhra Pradesh has unique features such as a tuberous root, no hair in its leaf axils, a reddish pink flower, prolate-shaped fruits, and copper brown seeds without lustre. The species has been named to honour the contribution of **Lal Ji Singh**, an eminent botanist.

Jahnobi Khodal
B.Sc 1st semester

Paleobotany-study of Fossil plants and plant Evolution

Paleobotany, is the branch of botany dealing with the recovery and identification of plant remains from geological contexts, and their use for the biological reconstruction of past environments and the evolutionary history of plants, with a bearing upon the evolution of life in general. A synonym is pelecophytology. It is a component of paleontology and paleobiology. The prefix palaco- means "ancient, old", and is derived from the Greek adjective palaios. Paleobotany is important in the reconstruction of ancient ecological systems and climate, known as paleoecology and



paleoclimatology respectively; and is fundamental to the study of green plant development and evolution. Paleobotany has also become important to the field of archaeology, primarily for the use of phytoliths in relative dating and in paleoethnobotany. The emergence of paleobotany as a scientific discipline can be

seen in the early 19th century, especially in the works of the German palaeontologist Ernst Friedrich Von Schlotheim, the Czech nobleman and scholar Kaspar Maria Von Sternberg, and the French botanist Adolphe Theodore Brongniart.

Dikhyita Sarmah
B.Sc 1st semester

Tulsi: “The Queen of Herbs”



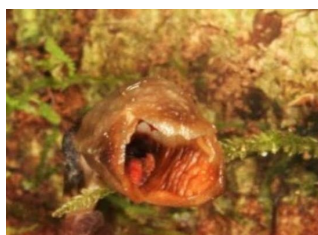
Tulsi (*Ocimum sanctum* Linn)

Cactus *Opuntia cacti*

The name cactus comes from a Greek word *Kaktos*, which means “Prickly plant”.

Opuntia cacti are known as “prickly pears” because they bear red and green fruit. *Cacti* are flowering plants shaped like barrels, pillars, cushions, or candelabra. *Cacti* belong to a group of water-storing plants known as succulents. It grows slowly, but they can live for more than 200 years. Most *cacti* are small but some can grow to 3m (9.8ft) or more. The different type of cactus is fishhook cactus, Hedgehog cactus, melon cactus, old man cactus and bishop’s cap cactus.

Hridoy Jyoti Nag
B.Sc 5th semester



Gastrodia agnicellus:
The World’s ugliest orchid

Tulsi (*Ocimum sanctum* Linn) belongs to the family Lamiaceae of flowering plant is commonly known as Holy Basil for its restorative and spiritual properties that is infused with healing power. It is considered as the holiest plants in India and is used in Ayurvedic medicine for treating various ailments. Tulsi is especially effective in supporting the heart, blood vessels, liver and lungs and also regulates blood pressure and blood sugar, relieve stress and

protect the immune system. In Ayurveda there are four types of tulsi plants (Krishna Tulsi, Rama Tulsi, Vana Tulsi and Kapoor tulsi).

Krishna Tulsi : It is used to treat throat infections, respiratory system, nasal lesions, earache and skin diseases.

Rama Tulsi : It is widely famous for its cooling taste.

Vana Tulsi : Its strong antioxidant activity slows down the ageing process.

Kapoor Tulsi : Uses of Kapoor Tulsi can help in the treatment of bronchitis, malaria, diarrhoea, dysentery, skin disease, arthritis, eye diseases and insect bites.



Anita Newar
Puja Pathak
Purnima Ghorsai
Chayanika Sharma
B.Sc 5th semester

Aquatic Angiosperm of Biswanath district, Assam

Aquatic plants (angiosperm) are plants that have adopted to living in aquatic environment (saltwater & freshwater). They are also referred as hydrophytes or macrophytes. A macrophytes may be either emergent or floating. They have special adaptations for living submerged in water, or at the water's surface. They are regarded as the primary producers of food web for

many organisms. About 50 species of macrophytes has been collected till date. Names of some of the aquatic angiosperms found in and around Biswanath district are *Nymphoides indica* (L.) Kuntze, *Altemanthera sessilis* (L.) R.Br. ex DC, *Aponogeton undulatus* Roxb., *Lobelia zeylanica* Linn., *Lobelia chinensis* Lour., *Commelina benghalensis* Linn., *Murdannia nudiflora* (L.) Bren,

Ipomea aquatica Forssk., *Ottelia alismoides* (L.) Pers., *Utricularia aurea* Lour., *Lindernia ciliata* (Colsm.) Pennell, *Vandellia anagalis* (Burm.f.) T.Yamaz, *Trapa natans* var. *Bispinosa* (Roxb.) Makino, *Nelumbo nucifera* Gaertn., *Nymphaea nouchali* Burm. f. etc.

Nikku Das
M.Sc 1st semester, RGU

Gastrodia agnicellus: The World’s ugliest orchid

Gastrodia agnicellus is a species of orchid in the genus *gastrodia*, found in madagascar. It has been said to be “the ugliest orchid in the world,” with brown, fleshy, and grotesque flower. It is leafless and mycotrophic. *Agnicellus* means “little lamb” or

“lambkin “. The name refers to the wooly covering on the rhizome, the ear – like petals. *Gastrodia agnicellus* has only been found in the vatovavy – fitovinany region in the south-east of madagascar. It lives in the shade in the forests of Madagascar, often under leaf

...*Gastrodia agnicellus* has only been found in the vatovavy – fitovinany region in the southeast of Madagascar...

Umesh shah
Dipika paul
B.Sc 5th semester

Organic Farming

Organic farming in simple terms is a kind of agricultural practice where harmful chemical fertilizers, pesticides and insecticides are not used. It is primarily based on developing and cultivating land using only natural input such as soil, water, and air. The purpose of organic farming is to develop healthy and nutritious crops as well as save our environment from degradation and pollution.

Organic farming helps countries achieve sustainable use

of natural resources. Non-renewable natural resources such as water and coal are increasingly used by the agriculture industry and hence inculcating organic farming will help save our natural resources.

The trend of consumption of organic food is increasing every day in the world market. Once the consumers get to know the health benefits of organic food, then the organic agriculture market will start to boom.

Organic produce is in high demand today because of the health-conscious consumer. Consumers are aware that toxic chemicals and chemical fertilizers are used in growing crops which can have negative health effects on them and as a result of which people around the world are increasingly consuming products of organic farming.



Anil uzir
B. Sc. 5th semester

Some Interesting Facts!!!

- * The oldest trees in the world: California Bristlecone pines and Giant Sequoias are regarded as the oldest trees and have been known to live 4000 to 5000 years.
- * The first certified botanical garden was founded by Pope Nicholas III at the Vatican in 1278 AD.
- * The largest flower in the world is the titan arums. The size of each flower is about 10 feet high and 3 feet wide i.e. even bigger than an elephant.
- * An average pomegranate has more than 1000 seeds.
- * The tiniest tree in the world is Dwarf Willow, its size is about two inches is found in Greenland.
- * The world's tallest tree is a Sequoia (or California Redwood) in California; it is more than 360 feet tall.

- * The very first type of aspirin, or pain killer and fever reducer came from the tree bark of the willow tree.
- * Bananas contain a natural chemical which can make a person happy.
- * The largest single flower is the Rafflesia or "corpse flower". They are generally 3 feet in diameter with the record being 42 inches.
- * Cricket bats are made of a tree called Willow & base-balls bats are made out of wood of tree called Hickory.
- * The world's fastest growing plant is Burma's giant bamboo it can grow 17 centimeters in a day.

Siba Kumar Gupta &
Sangita Devi
B. Sc. 1st semester

Peperomia Pellucida Kunth: A tropical medicinal Herb

Peperomia Pellucida is a tropical plant found in warm climatic areas of the world. But is mostly popular in South-East-Asia countries as a medicinal herb and vegetables. In Assam (NE India), this plant commonly known as it is called as "Pononoa" is in luxuriant growth in wild habitat and

is considered as weed and is lesser known for its medicinal values. But in many countries of South-East-Asia it has been traditionally used to treat fever, cough, Gout, High Blood Pressure, arthritis and also used as a food item both cook and raw. Some people grow it as an ornamental

...but in many countries of South-East-Asia it has been traditionally used to treat fever, cough, Gout, High Blood Pressure, arthritis and ...



Peperomia Pellucida

plant. Because of highly medicinal value, it is often marketed at high price.

Manjan Kro
B. Sc. 3rd semester



Biswanath College
Chariali-784176

STUDENTS' PROGRESSION INTO HIGHER EDUCATION DURING 2019-20

Sl. No	Name of the Student	Enrolling Higher Education Institute
1	Anjima Baglary	M. Sc. in Tripura University
2	Annesha	M. Sc. in Tripura University
3	Bhattacharjee Bhavna Das	M. Sc. in Assam University
4	Kalpana Kropi	M. Sc. in Tripura University
5	Lata Subedi	M. Sc. in Tripura University
6	Marami Mili	M. Sc. in Tripura University
7	Niku Das	M. Sc. in Rajiv Gandhi University, Arunachal Pradesh
8	Sangeeta Tanti	M. Sc. in Tripura University
9	Rashmi Upadh- yaya	M. Sc. in Tripura University
10	Mayuri Bhagawati	M. Sc. in Tripura University

EDITORIAL

It is with great pleasure we are presenting the 1st edition of the "Antheia" to esteemed readers. It is unique approach of communication related to botanical issues. "Antheia" is an annual news bulletin of Botany Department of Biswanath college. The scope of the Bulletin is to enhance the scientific writing and research skill of undergraduate students of Botany and also to highlight the various innovative activities of the Department which has been carried out throughout the year. Coverage includes news on various research activities such as Plant taxonomy, microbiology, plant ecology, Plant genetics and breeding, Plant pathology, Plant physiology, Paleobotany etc.

The question is how much we are capable of to deal with crippling natural disasters followed by the human interventions? What should we do now? We have been gravely remiss about natural sustainability and biological puzzles. It is the stage from which we have to take grip towards overcoming unsolved mysteries, adaptability and sustainability. Prerequisites includes exchange of ideas and combined effort to conserve nature, biodiversity, optimal utilization of natural resources and follow up of the philosophy "take for need, not for greed".

Small steps...At a glance



Antheia

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Our Activity in NEWS

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