



KERALA STATE BIODIVERSITY BOARD

EKAA

Environment. Kerala. Awareness. Action

E -Newsletter of the Kerala State Biodiversity Board

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Dr. Usha Titus IAS
Principal Secretary to Govt.
Environment Department &
Chairperson, KSBB

A Message from chairperson, KSBB

'EKAA' is a Sanskrit word for 'unique' or 'matchless'. It is apt to describe our nature and biodiversity. In this year of 2021 which the whole world welcomes with new hope and dreams of resilience, the Kerala State Biodiversity Board is reaching out with a small, new venture, an e newsletter on biodiversity, conservation and activities of Board, to bring it all together, at your fingertips. Kerala has the praiseworthy record of being the first State that completed BMC constitution, updated PBRs and much more. All were possible with public participation. Urging similar support and cooperation to 'EKAA' and all other activities of KSBB, I wish a happy, healthy and resilient 2021 to all our readers.

Biodiversity Heritage Sites (BHSs)

Heritage is a term mostly connoted with ancient monuments or structural wonders. This general thought got some refinement through the declaration of serial sites of Western Ghats as World Natural Heritage Site. Likewise we have many areas of natural heritage value- locally, nationally and globally. BDA, 2002 provides for declaring such areas of significance as Biodiversity Heritage Sites, thus ensuring their long term conservation for posterity. Asramom, a small mangrove area in the Kollam District of southern Kerala is the first such Biodiversity Heritage Site of Kerala. Yes, the area holds a good population of mangroves and their associates, even though nestled in the epicenter of urban development in Kollam. These halophiles could be termed as the wonder group of plant kingdom with upward growing roots and vivipary, where propagules show varying levels of germination, still while attached to the parent tree. The warm waters gushing between their intertwined roots form breeding grounds to myriads of fishes, prawns and clams and all the while serving as the ever strongest beach protectors, armouring against all high speed winds or cyclones.

As a part of conservation of biodiversity rich patches in a small State like Kerala with the full participation of local bodies, a new initiative in the Country had started by KSBB which is termed as 'Local Biodiversity Heritage Sites (LBHS)'. These could be biodiversity rich areas or biodiversity rich tree identified and proposed by BMCs through the support of Technical Support Groups set up by the KSBB. Till now KSBB had declared 10 such LBHS from State. The conservation plans for these LBHS are undergoing with the full support of local bodies.

Asramom BHS, Kollam

Sugathakumari Teacher - Real loss to Biodiversity

'An irreparable loss to Kerala': Kerala mourns death of renowned poet and voice of silent valley Sugathakumari Teacher: Celebrated Malayalam poet and Kerala's pioneering environmental activist Sugathakumari teacher, died on December 23rd 2020 due to post-COVID complications. She leaves behind a rich legacy of decades of engagement with poetry, environmental activism, charity works, and socio-cultural initiatives. Till she died, the poet-activist remained a guardian angel of Kerala's forests, rivers, mountains, coastal regions, wildlife, and precious



natural resources. Teacher played a key role in the Save Silent Valley Movement, one among the earliest modern-day environmental movements in India, which began in 1978 and ended in 1983 when the then Prime Minister Smt. Indira Gandhi declared abandoning the controversial hydroelectric power project which might have ruined precious forests in 89.52 square kilometres of land. She had been closely associated with KSBB for long time in various environmental activities.

Species Discoveries

Species Discoveries

Rediscovery of *Madhuca diplostemon* (Sapotaceae)

-a threatened species of the Western Ghats, India, after a hiatus of 184 years:

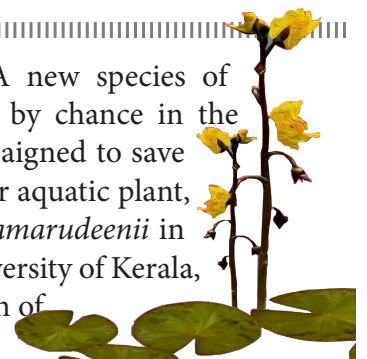
A tree species, long believed extinct, has been rediscovered after a gap of more than 180 years from a sacred grove in Kollam district. Scientists at the Jawaharlal Nehru Tropical Botanic Garden and Research Institute (JNTBGRI) at Palode here have identified the tree as *Madhuca diplostemon* (family Sapotaceae), a threatened species of the Western Ghats whose specimen was first collected in 1835. (10.22244/rheede.2020.30.03.03).

In order to protect such invaluable biodiversity of sacred groves, KSBB is implementing various a model

conservation projects such as Theme based conservation project at Poredom Sree Mahadeva temple sacred grove of Chadayamangalam Grama Panchayat in Chadayamangalam Legislative Constituency with the support of JNTBGRI, Palode and also many other model BMC projects in various local bodies of Kerala such as Grama Panchayats of Ayiroor, Kozhenchery, Veeyapuram, Vellinezhi etc.

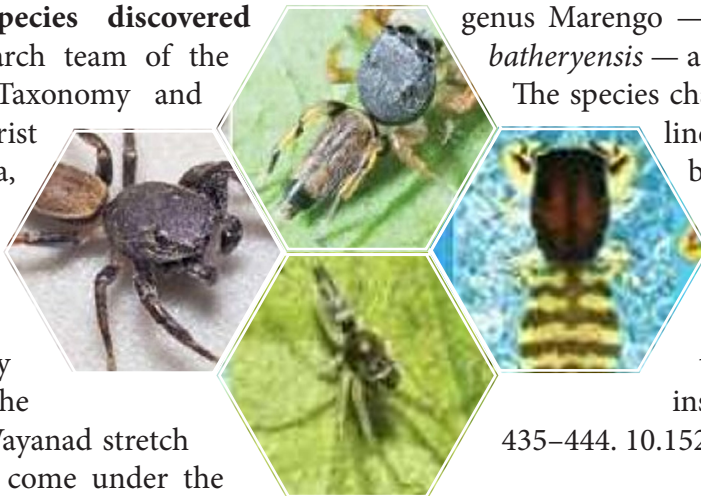


Utricularia kamarudeenii (Lentibulariaceae): a new species from Kerala: A new species of Utricularia — carnivorous plants popularly called bladderworts — discovered by chance in the paddy fields of Kottayam has been named after a botanist and teacher who campaigned to save the biodiversity-rich Myristica swamps in rural Thiruvananthapuram. The slender aquatic plant, which sports a trap for snapping up tiny prey, has been christened *Utricularia kamarudeenii* in honour of M. Kamarudeen Kunju, a former reader at the Botany Department, University of Kerala, Karyavattom who passed away in 2019. He was actively involved in the preparation of Peringamala Grama Panchayath PBR (10.11646/phytotaxa.447.1.7).



Two new spider species discovered from Kerala:

A research team of the Centre for Animal Taxonomy and Ecology (CATE), Christ College, Irinjalakuda, has discovered three new spider species from Wayanad and two from Muriyad during biodiversity exploration. Two of the species found in the Wayanad stretch of the Western Ghats come under the



genus *Marengo* — *Marengo zebra* and *Marengo batheryensis* — are small-sized jumping spiders.

The species characterised by white and black lines on its body like zebra has been named *Marengo zebra*. The other species is endemic to the Bathery locality and has been named *Marengo batheryensis*. They live in tree barks and feed on small insects. (Arthropoda Selecta. 28. 435–444. 10.15298/arthscl.28.3.08).

A new tree-spider crab of the genus *Leptarma* (*Brachyura*, *Sesarmidae*)

from mangroves in Kerala: A new species of tree-spider crab, *Leptarma biju*, has been uncovered from the mangroves at the mouth of Chithaririver in Kasargod district Kerala, by researchers from the University of Kerala and the NUS Lee Kong Chian Natural History Museum (LKCNHM). The first species from the genus *Leptarma* to be reported from India and the discovery highlights the need to document and conserve the remaining tracts of mangroves in northern Kerala, which support rich biodiversity. (Crustaceana 2020, 93 (7): 759–768).



Two new lizard species discovered from Kerala:

Two lizard species had been recently discovered in northern Kerala, one of which has been documented in a hilly region prone to persistent illegal mining. The *Cnemaspis chengodumalaensis* is named after the Chengodumala region in Kozhikode district, where it is naturally found within crevices of rocks. It is a nocturnal gecko endemic to the Western Ghats. The Chengodumala hills has been prone to indiscriminate granite mining over several

decades and has the local villagers and activists demanding a reassessment of the environment impact study of the quarry. The other species, *Cnemaspis zacharyi*, has been found in the hills of neighboring Wayanad district, which has also been prone to adverse effects of climate change arising out of activities like deforestation, propping of plantations and illegal mining. The lizard species is named after Dr. Anil Zachariah, a renowned batrachologist who has contributed immensely to new amphibian species being discovered in the Western Ghats. DOI: 10.26049/VZ70-2-2020-06



Pannivelichira, Pathanamthitta



Ailyyam kadal kandam, Mudakkal, Trivandrum

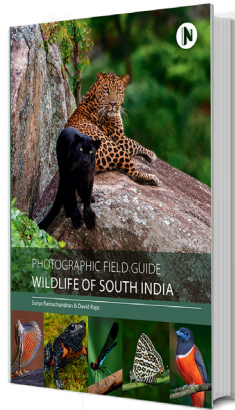


Heritage tree, Anjuthengu, Trivandrum

Local Biodiversity Heritage Sites (LBHS) from Kerala

Green Reads

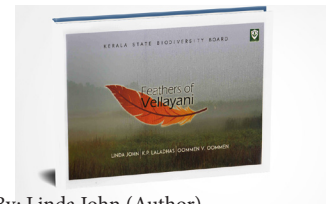
‘Photographic Field Guide – Wildlife of South India’: Young naturalists from Kerala Surya Ramachandran and David Raju have released their new book ‘Photographic Field Guide – Wildlife of South India.’ This is the first-of-its-kind comprehensive field guide covering all mammals, birds, butterflies, dragonflies, reptiles and amphibians of the six states (Tamil Nadu, Kerala, Karnataka, Goa, Andhra Pradesh and Telangana) of South India. This book is a must have for wilderness enthusiasts as it is a true ambassador to the biodiversity of South India in its own right. It is sure to transform wilderness walks and safaris and even the way people perceive urban wilderness, starting from one’s own balconies and gardens. The book, which has 360 pages, covers 1920 species belonging to the six taxa



using 1850 photographs contributed by around 280 photographers from India and beyond. The book is supported by WWF India and the Muthiah Research Foundation. The information presented in various sections of ‘Photographic Field Guide – Wildlife of South India’ have been vetted and added to by experts from the scientific world.

- Book Name: Photographic Field Guide – Wildlife of South India
- Authors: Surya Ramachandran & David Raju
- Pages: 360
- Published by: Self-Published (Publishing assistance provided by Notion Press Publishing, Chennai)
- Releasing on: December 15, 2020
- Price: INR 1500 in India
- Available at: comfor buyers within India; amazon.com for international buyers

‘Feathers of Vellayani’ is part of a project launched by the KSBB to take up conservation of the Vellayani lake as a biodiversity heritage site. Named ‘Feathers of Vellayani,’ the register is part of an attempt launched by the KSBB to take up the conservation of the Vellayani lake as a biodiversity heritage site. The book, running into 180 pages, lists 133 species of birds spotted at the Vellayani lake and surrounding wetlands. The book outlines the threats posed to the avian diversity and the ecosystem by land reclamation, use of pesticides and poaching of birds.



- By: Linda John (Author),
K.P. Laladhas (Author),
Oommen V. Oommen (Author)
- Price: INR 250 in India 180 pages, colour illustrations, colour maps
Publisher: Kerala State Biodiversity Board

Biodiversity News

The **Kerala Biodiversity Museum** first of its kind in India set up by Kerala State Biodiversity Board which was closed owing to Covid precautions is reopened. The museum is set in a unique heritage building which served as the ‘Boat Pura’ during King’s times at Vallakkadavu, Thiruvananthapuram.
https://www.youtube.com/watch?v=Yhl0qjL_7OY&feature=emb_logo

The revamped **Natural History Museum** in the museum zoo complex is now open for public in the State capital. Chief minister Pinarayi Vijayan inaugurated the museum through video conference here on 07.01.2021. It has been renovated after its establishment on 1964. The museum is now equipped with attractive and informative display systems and the exhibits related 4000 animal species in 2 floors spread over 30000 sq.ft.
<https://www.youtube.com/watch?v=nCp2UhdNkBM>

Worlds second and India’s first **Mangrove Museum** opened in Koyilandy: Claimed to be the first of its kind in the country and second in Asia (the first one being in Sri Lanka), the museum at present features pictorial representations of the 17 species of mangroves available in Kerala. It is a tribute to Kallen Pokkudan, hailed as the pioneer of mangrove preservation efforts in the State.
<https://www.youtube.com/watch?v=ZN9TxAWI3qI>

RKI projects launched: KSBB has proposed three projects under the Rebuild Kerala Initiative (RKI) Programme which was approved by RKI secretariat. These projects are ongoing and expected to be completed within the time frame.

1. Conservation of Agrobiodiversity: This project is aimed for the on farm conservation and documentation of Agrobiodiversity of Kerala through Custodian farmers in eight districts.

2. Pampa Riverine Biodiversity Rejuvenation: The project is being implemented in the selected flood affected panchayats of Pamba river with an aim to conserve the natural flora of the area, ecosystem restoration of the river banks and provide a green space for academic, research and recreational purposes. This project is based on the studies conducted on the riparian vegetation in Pamba, Periyar, Chalakudy and Bharatapuzha post 2018 floods by KSBB. Hon'ble Chief Minister inaugurated the RKI Project of KSBB "Pampa riverine biodiversity Project" through video conference on 27.10.2020 https://youtu.be/U1EZIF_kLJQ

3. Database of Tradable/Commercially Potential Bioresources and their Economic Valuation in Kerala: The main challenges facing Kerala in the implementation of the ABS provisions of the Act and

regulation of unsustainable harvesting of bioresources is the fact that the state had inadequate information on biological resources, their actual and potential economic value, and the potential for their use. Hence, this project aims to document the information on traded bio-resources in the 14 districts of Kerala and aim to put in place an institutional framework for implementation of ABS in Kerala and regulation of unsustainable harvesting of bioresources.

Partnering institutes/agencies:

Pampa Riverine Biodiversity Rejuvenation project.

- MNREGS
- JNTBGRI, Palode

Database of Tradable/Commercially Potential Bioresources and their Economic Valuation in Kerala

- NCC cadets
- Ayurvedic Medicine Manufacturers Organisation of India
- Biodiversity club of Vimala College, Thrissur

53rd Board Meeting held: The 53rd board meeting of KSBB had convened in the Layam Hall of Secretariat Annexue-2 on 23rd December 2020.

Reconstitution of BMCs-action initiated: Soon after the declaration of local body election in Kerala, KSBB had requested new heads of local bodies to take necessary actions to reconstitute their BMCs as per the BD act 2002.

PHOTO GALLERY



Traditional Knowledge Corner

‘Red ant chutney’ - solution for Covid-19 ? Orissa High Court had directed the Director Generals of AYUSH Ministry and Council of Scientific and Industrial Research (CSIR) to take a decision within three months on a proposal for ‘Red ant chutney’ as a possible treatment for Covid-19. PIL was sought its intervention against alleged inaction on a proposal for research on the efficacy of red ant chutney for the treatment of Covid based on the petition filed by Nayadhar Padhial. According to him, the chutney which is primarily a mixture of red ants and green chillies, contains formic acid, protein, calcium, Vitamin B12, Zinc and iron that boost the immune system. “Tribals in Odisha, West Bengal, Jharkhand, Bihar, Chhattisgarh, Andhra Pradesh, Assam, Himachal Pradesh, Manipur, Nagaland, Tripura, Meghalaya and Kerala consume red ant chutney or use it in soup to get rid of flu, cough, common cold, breathing difficulties, fatigue and other diseases. This could be the reason for less prevalence of Covid-19 in tribal areas and hence, a thorough research on these

formulations could lead to new drug discoveries. <https://youtu.be/OMFUSHKWTqo>

Model Biodiversity Initiative:

Sulthan Bathery - ‘Sulthan’ Of Cleanliness: Sulthan Bathery is a small town in Wayanad district of Kerala, is best known for an invasion by Mysore ruler Tipu Sultan in the 18th century. But now it has another claim to fame - being one of the cleanest towns in India. This has become one of the best model for town planning and waste management which can be replicated in other local bodies of Kerala. <https://www.youtube.com/watch?v=4VGj0-kh6bM>



KSBB Online courses: KSBB had started online courses to public as a joint venture with Kerala Institute of Local Administration (KILA). The main aim is to provide awareness to people about biodiversity and its related topics. The major courses are the following: (1) Biodiversity vision and insights, (2) Sustainable development and its rules (3) School level biodiversity clubs and environment activities, (4) Biodiversity conservation and management and the role of Mahatma Gandhi National Rural Employment Guarantee Scheme (MNREGS), (5)

biodiversity management and local governments. The official inauguration was conducted through video conference by **Dr. Usha Titus IAS**, Chairperson, KSBB (Add. Charge) and Principal Secretary, Environment Department, Govt. of Kerala. The details of courses are available on <https://ecourses.kila.ac.in/>

KSBB - BOARD CONSTITUTION

CHAIRPERSON

Dr.Usha Titus IAS,
Principal Secretary,
Environment Department

MEMBERS (Ex-officio)

1. Agriculture Production Commissioner
2. Principal Secretary , Fisheries Department
3. Principal Secretary, Forest & Wildlife Department
4. Executive Vice President, KSCSTE
5. Secretary, Environment Department

KSBB MEMBERS (Unofficial)

6. Dr. K Satheesh Kumar
7. Sri. K.V Govindan
8. Dr. T.S Swapna
9. Dr. K.T Chandramohan
10. Sri. A.K Dharni, IFS (Retd)



“The earth, the air, the land and the water are not an inheritance from our fore fathers but on loan from our children. So we have to handover to them at least as it was handed over to us.”

“There is a sufficiency in the world for man’s need but not for man’s greed.”

Mohandas Karamchand Gandhi

January 30th, Martyrs Day