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On

**"DOCUMENTATION, BIOPROSPECTING & CONSERVATION
OF BIODIVERSITY FOR SUSTAINABLE DEVELOPMENT"**

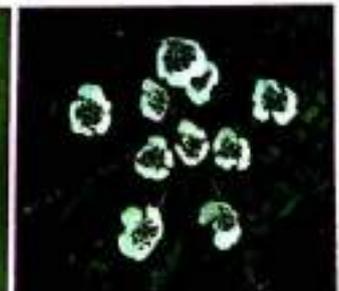
IAAT 2022

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XXXI IAAT ANNUAL CONFERENCE

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open areas and rocky slopes in the Western Ghats of Karnataka, Kerala, and Tamil Nadu. The species was collected at Papanasanam, in Tirumala of Chittoor district, Andhra Pradesh, on 26.10.2019 (S. Ganapathi 261052, KUW). So far, its occurrence is not known from Andhra Pradesh (Pullaiah, 2018), Southern Eastern Ghats region of Tamil Nadu (Britto, 2019) or the entire ranges of Eastern Ghats (Pullaiah & Karuppasamy, 2020). The present collection is obviously an extended distribution of *Arundinella mesophylla* to the southern Eastern Ghats. The species is described with a discussion on its ecology and species associates in the habitat.

Key words: India; Endemic grass; Extension of native range; Southern Eastern Ghats

Rhynchosia Schimperi: Addition to the Flora of Upper Gangetic Plain from Garhwa District, Jharkhand

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Garhwa district is a part of Palamu division in the state of Jharkhand. It is bounded with three states, Uttar Pradesh, Madhya Pradesh and Bihar and Palamu, Ranchi districts of Jharkhand. Nearly 33.36% of the forest is covered in Garhwa district. During the floristic exploration of Garhwa District, Jharkhand in Upper Gangetic Plain of India, extensive review of literature and herbarium studies revealed that *Rhynchosia schimperi* has not been found earlier in the region. Duthie's Flora of Upper Gangetic Plain includes 4 species of *Rhynchosia* (*viz.* *R. bracteata*, *R. capitata*, *R. minima*, and *R. sericea*). Authors are adding this species of into Flora of Upper Gangetic Plain. This species is new addition to the family Fabaceae of Duthie's Flora of Upper Gangetic Plain from Garhwa district, Jharkhand. It is not documented in earlier reports related to Upper Gangetic Plain. Documentation of the species is very important aspect in the field of taxonomy to complete floristic diversity as well as for further scientific research. Paper includes up to date citation, brief description, locality, field number, phenology, ecology and photographs of plant.

Riparian Forests in the Rain Shadow Region of Western Ghats: A Case Study on Chinnar River, Anamalai's

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Chinnar River flows through the eastern slopes of the rain shadow regions of the Western Ghats from West to East through Kerala - Tamil Nadu state boundaries within the tropical dry deciduous forests of Chinnar Wildlife Sanctuary and Anamalai Tiger Reserve. Phytosociological assessments of the riparian forests of Chinnar showed riparian vegetations dominating with *Terminalia arjuna*/*Mangifera indica*/*Pongamia pinnata*/*Hopea parviflora*/*Putranjiva roxburghii*/*Garcinia grami-gutta*. The composition is unique to the Chinnar River compared to other riparian vegetations of the Chalakudy and Periyar rivers within the Anamalais. The Vegetation map was prepared with the help of Survey of India Toposheets, Google Earth Pro and QGIS 3.16 software and aerial Images (GOOGLE). The Chinnar River's entire riparian stretch is divided into two zones. Zone A extends up to Kootar, whereas Zone B extends from Kootar to the Amaravathi reservoir. As per mapping data, the Chinnar River currently has 44.66 ha. of riparian vegetation. Degraded Rocky Riparian Forests

cover 63.13% of the river catchment, followed by Medium Dense Riparian Forest (29.48 %) and a lesser distribution of Dense Riparian Forest (7.38 %). The comparative study shows that Zone A (up to Kootar) has larger riparian vegetation (26.63 ha.) than Zone B (from Kootar to Amaravathi reservoir, 18.02 ha.). Zone B seemed to have more degradation types (16.17 ha.) community-based monitoring and eco-restoration of degraded areas can help to enhance the regeneration of the Riparian forests of Chinnar River.

Keywords: Chinnar River, Riparian Forest, Community compositions, Vegetation Mapping, Tropical Forests

Role of Seed Morphology in the Taxonomy of Wild Balsams in Southern Western Ghats

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The family Balsaminaceae was established by A. Richard (1822). It consists of about 1000 species in two genera, viz. *Hydrocera* Blume ex Wight & Arn. and *Impatiens* Riv. ex L. Being the secondary centre of diversity of the genus there are about 210 species of *Impatiens* reported from India with about 120 species endemic to Western Ghats mountain range. Bhaskar (2012) revised *Impatiens* of Western Ghats and reported 106 species, including 15 new species and 6 new varieties. The genus shows high degree of variations in habit, habitat, shape, size and colour of floral parts. The genetic stock of this vibrant genus is highly responding to various microclimates of the Western Ghats, and hence the process of speciation is very fast in comparing with other larger genera of flowering plants. It makes the species delimitations and species segregations very difficult. During the study of microclimatic adaptation of various species of wild balsams of Western Ghats we have found some interesting features. The members of this genus in exhibit a range of ornamentation patterns on seed coat such as, reticulate, granulate, laevigate and protrusive. The shape of seeds is different from one section to another, and sometimes within the section itself, varying as ellipsoid, sub-ellipsoid, globose, sub-spheroid etc. The characters of seed epidermal hairs are found with good and stable variations within the genus. It varies from short, sparse to tufted or almost cover the seeds. According to the arrangement, the seed hairs can be categorized into spiral, annular and reticulate. This study suggests that the nature of seed hairs and habitat specificity are somehow connected, and the hairs play a major role in survival of species and also a reason for endemism. Analysis of the seed hairs are also found good in tracing natural hybrids in wild balsams.

Solanum sisymbriifolium Lam. (Solanaceae): An Extended Distribution of Uttar Pradesh in India

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Solanum sisymbriifolium Lam. (Solanaceae) is an under shrub species include 49 species in India and 7 species reported from upper gangetic plain while this species published by M. B. Raizada in supplement of Duthie's flora of upper gangetic plain, reported from Rishikesh, District Dehra Dun, Uttarakhand. It is native to South America and naturalized in India. It was first time identified as an invasive species from southeastern Uttar Pradesh.

During the exploration of study area plants are collected from Sonbhadra, Chandauli and Ghazipur district which is located south-eastern part of Uttar Pradesh. It is bounded by four states