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Floristic Diversity of Tumati Hills, Ballari District, Karnataka.

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Abstract:- This research focuses on the plant diversity of Tumati hills. Tumati hills is a scenic and historic destination that offers a unique blend of natural beauty and cultural significance in the Ballari district of Karnataka, India with an elevation of 745 meters (2,444 ft) above sea level, the hills provide a panoramic view of the surrounding landscape. The region is characterized by scrub forests, grasslands, and agricultural land, supporting a diverse range of flora. Current study reveals the diversity of plant species, with 124 species documented. Among them, Trees were 24 with 19%, Herbs were 65 with 52%, Shrubs were 22 with 18%, Climbers were 14 with 11%. IUCN status of collected species- Least Concern were 45 species with 36%, Not Evaluated were 77 with 62%, Endangered were 1 with 1%, Data Deficient were 1 with 1%. Dominant species include *Acacia nilotica* (L.) Willd. Ex Delile, *Albizia lebbeck* (L.) Benth., *Ficus benghalensis* L.

Keywords:- *Biodiversity, Scrub Forests, Conservation Status, Tumati Hills, Ballari District.*

I. INTRODUCTION

The flora of India is made up of well over 17000 species of flowering plants under 320 families (Flora of India, Vol. 1 1993). The total number of flowering plants (angiosperms) so far recorded in Karnataka is about 4,700 species belonging to 1,512 genera under 189 families. Out of these, over 600 species are endemic to southern India and 95 are exclusively endemic to Karnataka (aranya.gov.in). The flora of Tumati Hills, located in the Bellary district of Karnataka, India, is a treasure trove of botanical diversity. This lesser-known hill range is home to a unique and fascinating array of plant species. The hills scrub forests, grasslands, and rocky outcrops support a wide range of vegetation, including different habit, such as Trees, shrubs, climbers and herbs. This introduction provides a glimpse into the fascinating world of Tumati Hills flora, highlighting its diversity, uniqueness, and importance. Further exploration and research are essential to uncover the full extent of this botanical treasure trove.

II. MATERIALS AND METHODS

A. Study Area:

Tumati hills is located in Ballari district, which covers an area of approximately 5,791 acres, with elevation of 745 meters above sea level and tropical dry climate with hot summers and mild winters. Tumati hills has the vegetation of scrub forests, grasslands, and agricultural land surrounding by Ballari, Hospet, Vijayanagara.

B. Field Survey, Collection & Documentation:

Plant species were photographed with Camera, co-ordinates are recorded with GPS camera identified using Flora of the Presidency of Madras and POWO & IPNI used for authentication. Collected species were stored in VSKU Herbariums for future research.

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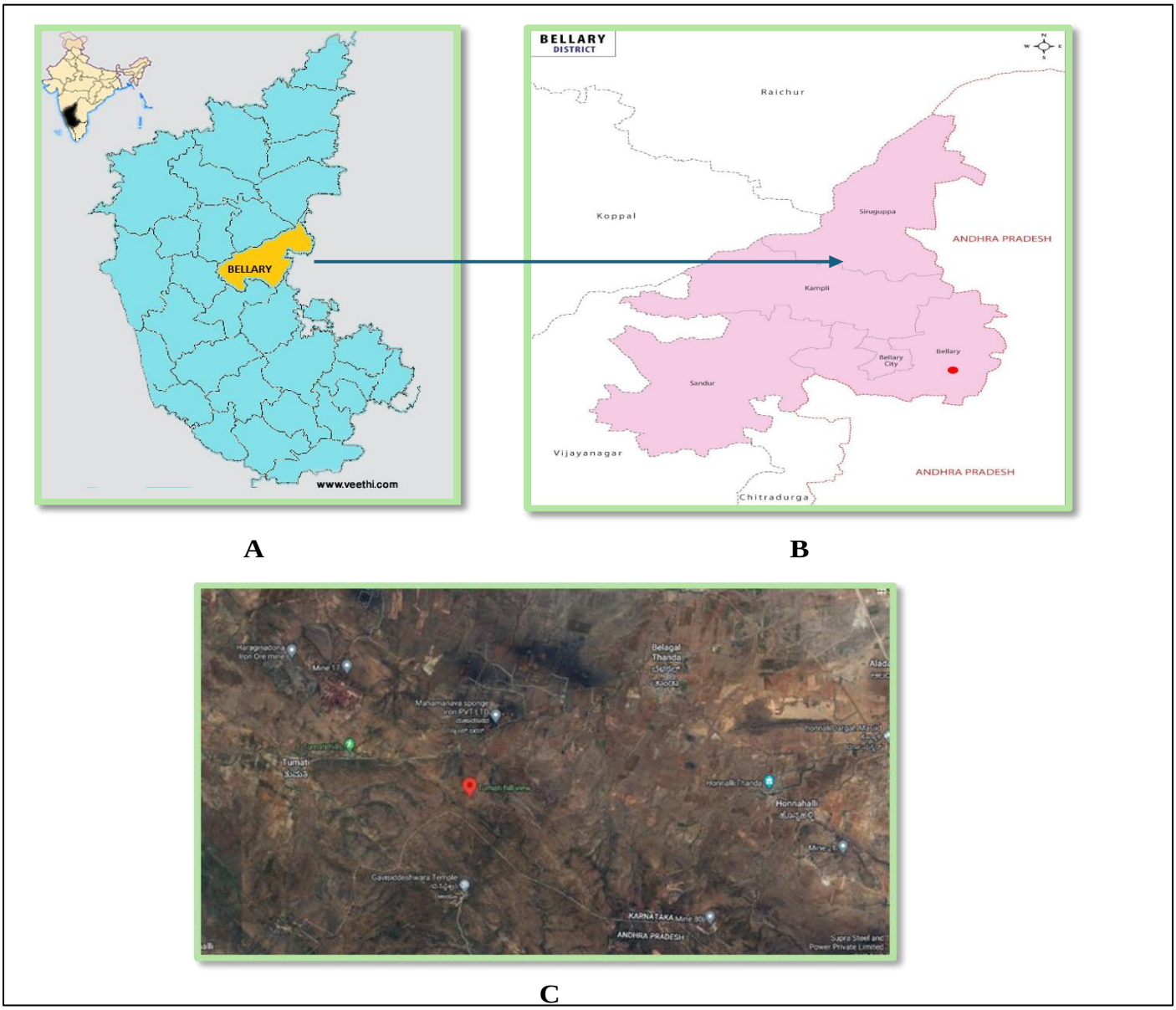

Fig 1: Map of A. India & Karnataka State| B. Ballari District| C. Tumati Hills

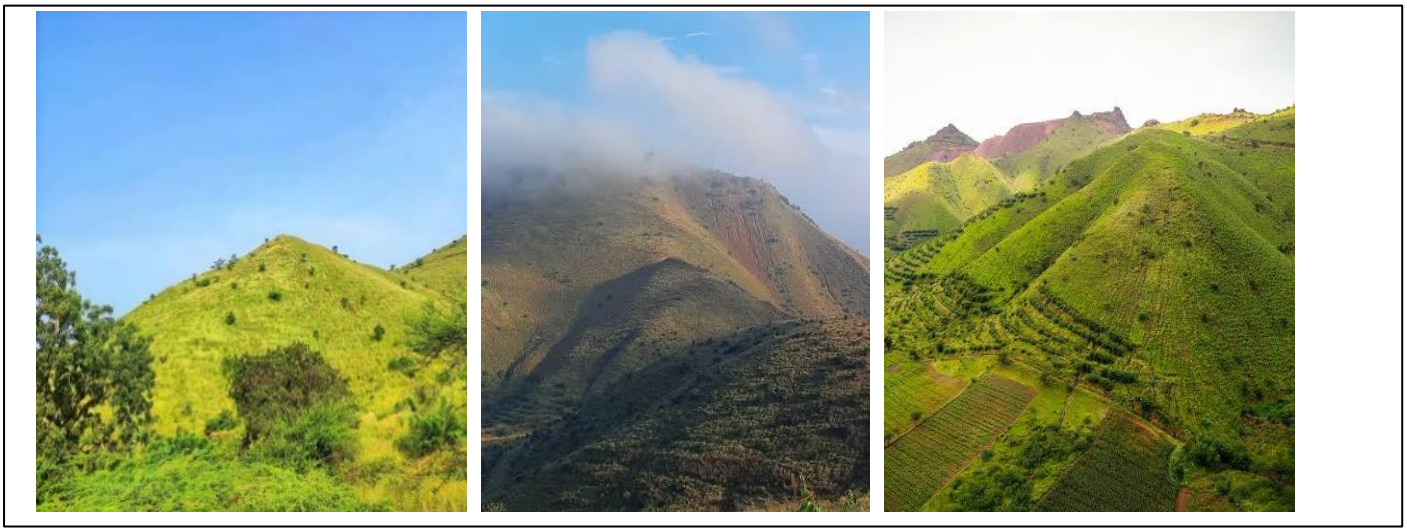

Fig 2: Panoramic View of Tumati Hills

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III. RESULTS AND DISCUSSION

Current study reveals the diversity of plant species from Tumati hills and documented total 124 plant species, including trees, shrubs, herbs and climbers. Among the collected plant species, Trees were 24 with 19%, Herbs were 65 with 52%, Shrubs were 22 with 18%, Climbers were 14 with 11% and the dominant species are,

Dominant tree species from the study area were *Euphorbia tirucalli* L., *Vachellia nilotica* (L.) P.J.H.Hurter & Mabb. , *Neltuma juliflora* (Sw.) Raf., *Pongamia pinnata* (L.) Pierre, *Dichrostachys cinerea* (L.) Wight & Arn., *Albizia lebbeck* (L.) Benth.

Shrubs were *Carissa spinarum* L., *Senna auriculata* (L.) Roxb., *Mundulea sericea* (Willd.) A.Chev., *Caesalpinia pulcherrima* (L.) Sw.

Herbs were *Indigofera tsiangiana* Metcalf, *Commelina diffusa* Burm.f., *Cleome felina* L.f., *Trichodesma indicum* (L.) Lehm., *Tephrosia purpurea* (L.) Pers., *Euploca strigosa* (Willd.) Diane & Hilger, *Cleome viscosa* L.

Climbers were *Cryptostegia grandiflora* Roxb. Ex R.Br., *Coccinia grandis* (L.) Voigt, *Abrus precatorius* L., *Clitoria annua* J. Graham, *Mucuna pruriens* (L.) DC., *Rhynchosia minima* (L.) DC., *Clitoria ternatea* L.

IUCN status of collected species- Least Concern were 45 species with 36%, Not Evaluated were 77 with 62%, Endangered were 1 with 1%, Data Deficient were 1 with 1%.

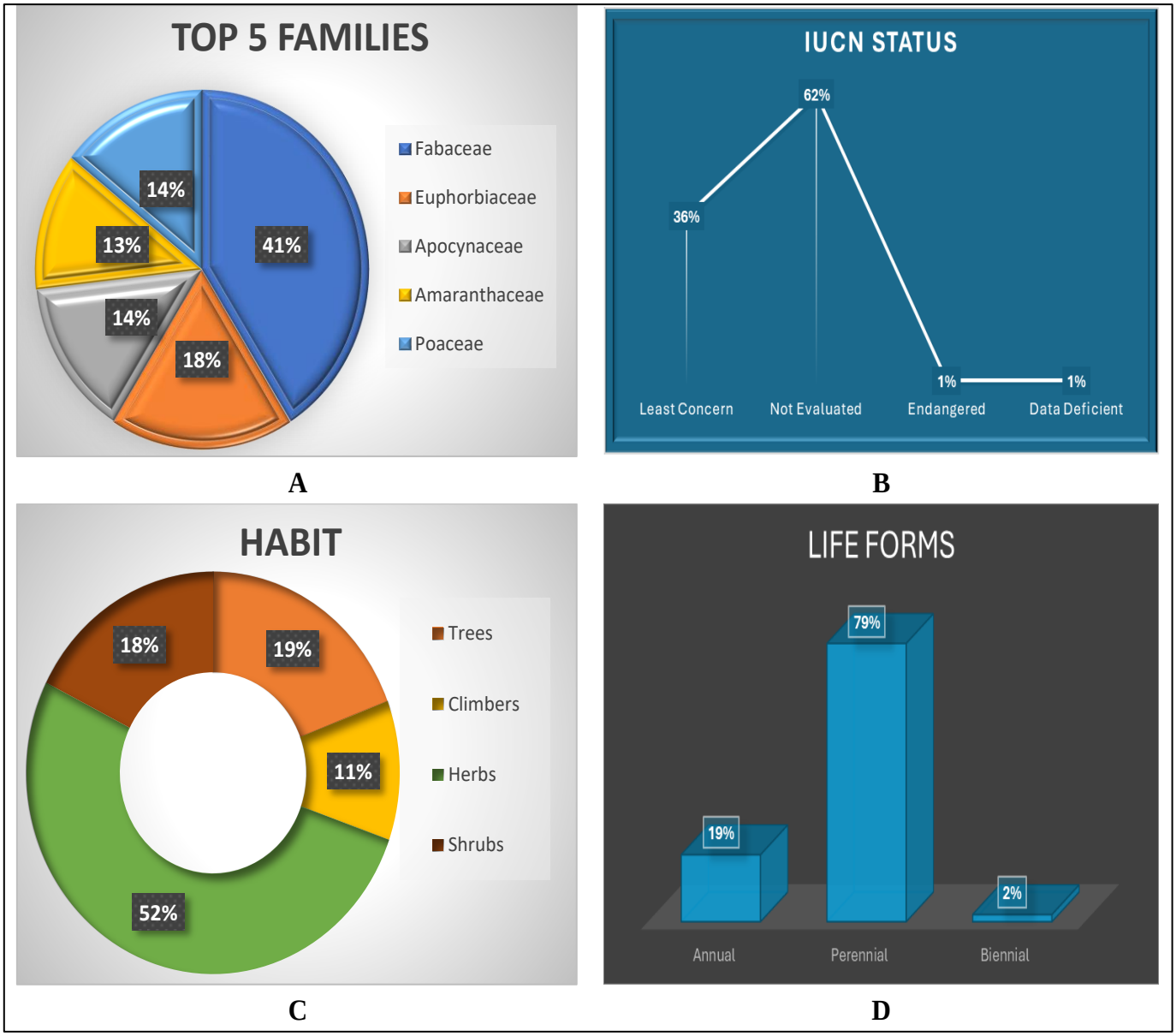

Fig 3: A. Top 5 Families of the Plant Species| B. Figure Illustrating the IUCN Status of Plant Species| C. Percentage of Plant Species based on their Habit| D. Percenage of Plant Species based on their Life Forms

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Fig 4: A- Euphorbia tirucalli L. | B- Vachellia nilotica (L.) P.J.H.Hurter & Mabb. | C- Neltuma juliflora (Sw.) Raf. | D- Carissa spinarum L. | E- Cryptostegia grandiflora Roxb. ex R.Br. | F- Coccinia grandis (L.) Voigt | G- Indigofera tsiangiana Metcalf | H- Senna auriculata (L.) Roxb. | I- Commelina diffusa Burm.f. | J- Cleome felina L.f. | K- Trichodesma indicum (L.) Lehm. | L- Tephrosia purpurea (L.) Pers. | M- Euploca strigosa (Willd.) Diane & Hilger | N- Cleome viscosa L. | O- Pongamia pinnata (L.) Pierre | P- Dichrostachys cinerea (L.) Wight & Arn.

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IV. CONCLUSION

The Tumati hills floristic diversity is a valuable natural resource and its conservation is crucial for maintaining the health of the environment, supporting local communities, and preserving the region's natural heritage for future generations. The hills support a diverse range of vegetation, including scrub forests, dry deciduous forests, and thorn forests, with a variety of tree, shrub, herb and climber species. The present research is an effort to document the plant species of Ballari region, where it is observed that majority of the species are found as natural vegetation.

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