Available online at www.pelagiaresearchlibrary.com

Pelagia Research Library

Asian Journal of Plant Science and Research, 2016, 6(2):27-29

ISSN : 2249-7412
CODEN (USA): AJPSKY

Brachystelma nallamalayana K. Prasad and B. R. P. Rao: A new distributional record for Telangana, India

***B. Sadasivaiah, B. Kalpana[1], A. Narasimha, M. Sharath Goud and Nirmala Babu Rao[1]**

Department of Botany, Govt. Degree & P G College, Wanaparthy, Mahabubnagar District, Telangana
[1]Department of Botany, Osmania University, Hyderabad, Telangana

---

ABSTRACT

The type specimen of rare and edible tuberous plant Brachystelma nallamalayana K. Prasad & B.R.P. Rao was collected and described for the first time from Nallamalais. The species was inventoried from a different locality and is being described as new distributional record for the newly formed state Telangana.

Key words: Amended description, Other type locality, New record, Telangana.

INTRODUCTION

The genus *Brachystelma* Sims. is represented by about 160 species distributed mainly in Africa, India, Sri Lanka, Southeast Asia and northern Australia. In India it is represented by 22 species [1] and no species is reported from Telangana state [2].

MATERIALS AND METHODS

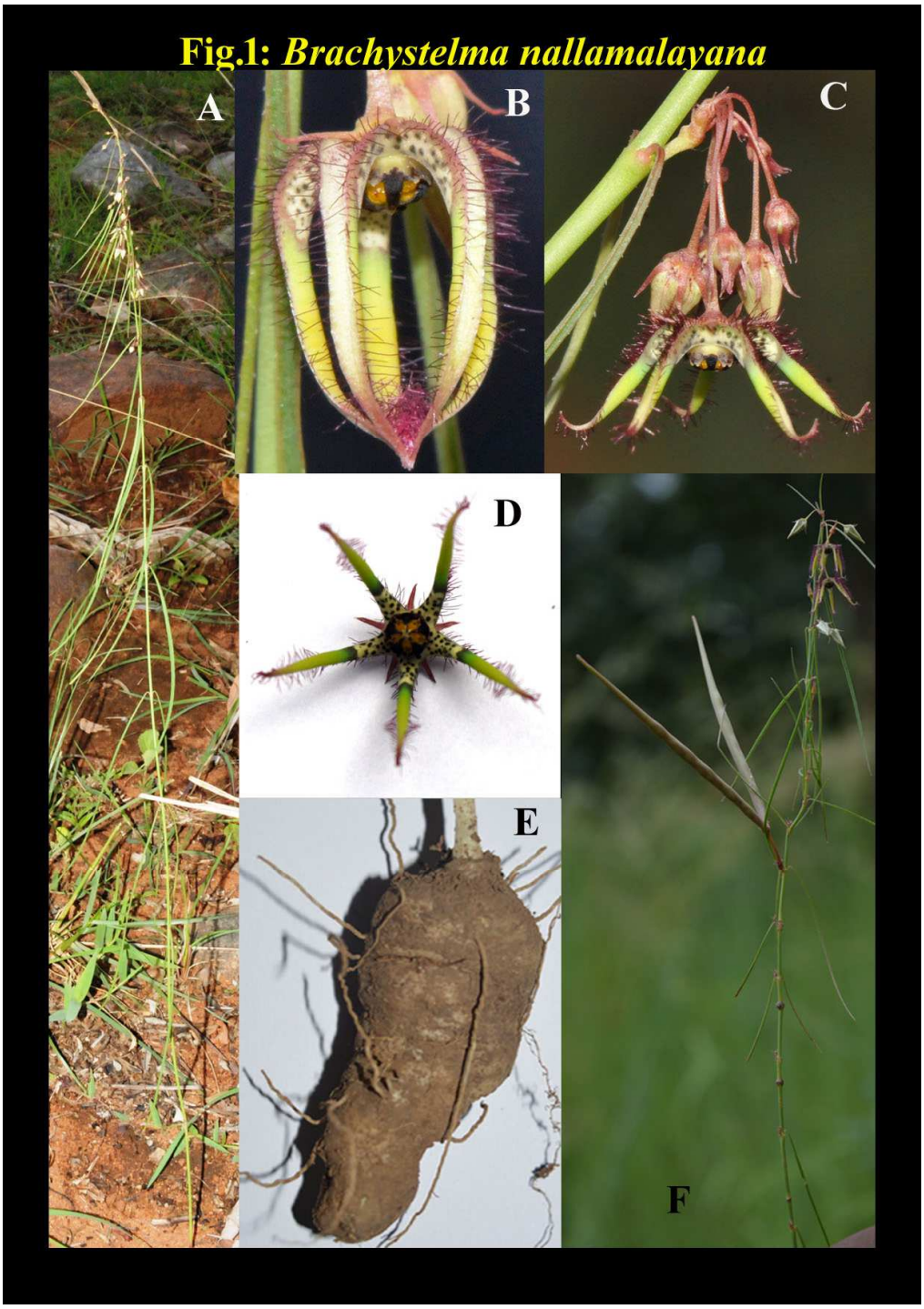
In the Assessment of Plant Diversity in dry deciduous forests of Northern Nallamalais, Mahabubnagar, the authors have located a few populations of the Genus *Brachystelma* in June 2015. Specimens were collected and made into herbarium followed by standard method. The complete phenological record of the plant, habitat, associated species, soil type, geographical coordinates, elevation were noted in the field.

RESULTS AND DISCUSSION

After critical study of collected specimens, they were identified as *B. nallamalayana*. The original description of *B. nallamalayana* [3] from Bheemuni Kolanu area of Kurnool district of Andhra Pradesh lacks the information about fruits/seeds. In the present study, along with description of the morphological features of fruits/seeds, the flowering period from July to October and fruiting from mid October to December (flowering was also observed along with fruits) was observed. Seed dispersal was found to be of around 15 days from mid December to end of the December. According to Prasad and Rao [3] the plants were collected from only one population with about 60 individuals, while in present exploration, authors have identified two populations in Northern Nallamalais with about 60 individuals in one site and about 30 individuals in another site. Hence the present collection of *Brachystelma nallamalayana* forms a new distributional record for the state of Telangana as it was collected for the first time from other than the type locality.

Brachystelma nallamalayana K. Prasad & B.R.P. Rao, J. Threat. Taxa, 2013, 5(14), 4904. **Fig.1**
Erect herbs, ca. 120 cm high. Roots tuberous, fusiform, 6–8 x 3–4 cm diam., brownish. Stem solitary rarely branched, terete, 1–2 mm in diam., ridged, glaucous green. Leaves sessile, linear, 10–20×0.1–0.2 cm, acute at apex, margins undulate with few hairs, glabrous. Inflorescence crowded at apical nodes, lateral, shortly peduncled, umbellate, 5–8 flowered, pendulous; pedicels filiform, ca. 1.5 cm, glabrous. Bracts and bracteoles persistent, linear.

Calyx lobes pinkish-green, linear, 3 x 0.5 mm, 3–5 veined, glabrous. Corolla tube ca. 1–2 mm long, shallow; lobes erect, linear, 5–9×2 mm, acute, faintly 5-veined, margins involute with 1–2 mm long pink hairs throughout, more dense at apex; basally pale white with black spots and yellow above. Corona ca. 3 mm across, biseriate, glabrous; interstaminal corona obscurely 5-angled, cupular, forms a continuous ring around the gynostegium; staminal corona black, 5-lobed; lobes appressed to the back of the anthers, exceeding and hooded on the style apex. Pollinia yellow, globose, ca. 200 µm long, margins pellucid at apex, attached by light brown tubular caudicles to a red-coloured corpuscle. Style apex pentangular. Follicles paired, linear, ca. 6 × 0.3 cm, glabrous, glacous. Seeds comose, 5-7×3-5mm, ovate-oblong, 15–20 in each follicle, light brown at centre.



A. Habit, B. Bud, C. Inflorescence, D. Flower, E. Tuber, F. Fruit

Flowering: July–November

Fruiting: October-December (fruiting observed in very few individuals)

Representative specimens: Way to Saleswaram, Mahabubnagar, B. Sadasivaiah & B. Kalpana, **2073**; Way to Srisailam, Near Rasamola Baavi, Mahabubnagar, B. Sadasivaiah & K. Prasad, **2142**.

Habitat: This species grows in crevices on rocky ground in grass dominated dry deciduous forests, especially associated with *Cymbopogon* spp. and *Heteropogon contortus*.

CONCLUSION

The tubers of *Brachystelma nallamalayana* are found to be eaten by local tribal people and wild boars, which may led to decrease in its population. The studies on few *Brachystelma* species report that they are extensively used in ethno medicine to cure headache, stomach ache, and cold among children in Satara district of Maharashtra and *Brachystelma edulis* has the potential to yield starch as well [4]. Hence it indicates that there is a need to estimate the nutritional and medicinal values of the tubers of *Brachystelma nallamalayana* also in the context of prevailing forest fires and due to human interference in these forests, which may reduce its population. Hence, there is an urgent need to conserve the species in both *In-situ* and *Ex-situ* methods.

Acknowledgements
The authors are thankful to UGC-SERO, Hyderabad for financial support; Officers of Telangana Forest Department for their help in field explorations and Dr. K. Prasad, Botanical Survey of India, Deccan regional Circle, Hyderabad for confirmation of identity.

REFERENCES

[1] P. Venu, K. Prasad; *Current Science*, **2015**, 109 (4): 680-682.
[2] T. Pullaiah; Flora of Telangana. The 29th state of India. Vol.2. Regency Publications, New Delhi, **2015**.
[3] K. Prasad, B.R.P. Rao; *Journal of Threatened Taxa*, **2013, 5**(14): 4904–4906.
[4] M.R. Seema, Jadhav Rathod, Varsha Dilip; *World Journal of Pharmacy and Pharmaceutical Sciences*, **2014**, 3(6): **1958-1965**.