ANNUAL SCIENTIFIC MEET & REVIEW OF ANNUAL PROGRESS REPORT 2020-2021

FLORA OF KINNERASANI WILDLIFE SANCTUARY, TELANGANA

DURATION OF THE PROJECT: JAN. 2019-2022 (2017) DR. J. SWAMY BOTANICAL SURVEY OF INDIA DECCAN REGIONAL CENTRE HYDERABAD

INTRODUCTION

According to Indian mythology, the forests of the Kinnerasani Wildlife Sanctuary are divine and holy, being the part of "Dandakaranya" which attained the holiness due to the foot prints of Lord Rama, who was said to have trekked through these areas during his exile (Aranyavasa) period.

A perennial **Kinnerasani river**, tributary to the river Godavari is flowing right through the sanctuary contributing the life supporting food, fodder, water and shelter to the Wildlife in the sanctuary. Therefore considering its contribution to Wildlife, the sanctuary is rightly named after this river Kinnerasani as **KINNERASANI WILDLIFE SANCTUARY**.

INTRODUCTION

Due to the presence and great number of Wildlife and the locality with its inaccessible forests and streams, forming congenial and suitable habitat for Wildlife, the area was selected and declared as Wildlife Sanctuary during the year 1977, with an area 635.41 sq. km to support and improve the existing wildlife.

The sanctuary lies between 17.58330⁰ (17^{0.}35') to 18.00000⁰ (18⁰.00") nortern latitudes and 80.41667⁰ (80⁰-25') to 80.50000⁰ (80⁰-30') eastern longitudes.

The Kinnerasani wildlife sanctuary is located strategically at a central location to the other protected areas (PA) in the area. The Eturunagaram sanctuary is situated to the North, Pakal WLS to the North-West and Papikonda National Park to the South-East.

Further, this sanctuary lies amidst the natural corridors connecting Pranahita, Siwaram, Pakhal, and Eturunagaram Wildlife Sanctuaries and Kawal Tiger Reserve (KTR) of Telangana and Papikonda National Park of Andhra Pradesh.

MAP OF STUDY AREA



OBJECTIVES

- Review of literature for the broad region in which the Wildlife Sanctuary is located.
- Undertake periodic botanical explorations; collect the plants in three seasons and to assess the plant diversity (angiosperms) of the area.
- To identify and document the flora, giving valid names, with synonymy, citation, descriptions with good illustrations, photographs and to build diagnostic keys based on field observations.
- Bring out a floristic account of the protected area, with detailed analysis, including identification of endemic/threatened plants, conservation and management issues, etc.

METHODOLOGY

Standard methodology for floristic surveys have been followed for this project.

Regular periodic field surveys have undertaken to the study area in different seasons to cover all species.

During the exploration tours, field details such as habit, habitat, height, features of flowers and fruits, GPS data, associated plants and distribution has been recorded in a field book.

Plants either having flowers or fruits have been collected as voucher specimens during the surveys.

The collected plant specimens will be identified using available regional/state floras and relevant revisions and monographs will also be referred, for further confirmation.

The up-to-date nomenclature of all taxa will be provided by referring to authentic databases and literature.

Detailed descriptions will be made based on fresh and herbarium specimens

WORK DONE IN 2020-21

KINNERASANI WLS

NO. OF FIELD TOURS UNDERTAKEN: 02 NO. OF FIELD NUMBERS COLLECTED: 325 NO. OF SPECIMENS IDENTIFIED: 219 NO. OF SPECIES DESCRIPTION MADE: 16

KWLS: WORK DONE FROM 2019-21

Financial year	2019	2019-20	2020- 21	Total
No. of field tours undertaken	01	03	02	06
No. of field numbers collected	200	421	325	946
No. of specimens identified	20	121	219	360
No. HCT undertaken	-	03	-	03
Total area covered (Sq.km)	100	290	200	590
Remarks	NDF (07 tours), compiled data	NDF (report submitted) Fl. India (99 taxa 42 genera)	Fl. India: 32 62 taxa and 7 genera Assessment of RS in Odisha	

ACHIEVEMENTS

NEW DISCOVERY

Amorphophallus konkanensis var. *kinnerasaniensis* J. Swamy & Rasingam

NEW GENERIC RECORDS FOR STATE

Adenosma indina Centranthera tranquebarica Erycibe paniculata Paulopis imbricata

NEW RECORDS TO THE STATES: 06

COMMUNICATED: 07

01- South India 06- State

ACHIEVEMENTS

PUBLISHED ONE BOOK AND 14 RESEARCH PAPERS

INCLIDING FOUR NEW DISCOVERIES TO SCIENCE

- 1. Amorphophallus konkanensis var. kinnerasaniensis J. Swamy & Rasingam
- 2. Brachystelma telanganense Rasingam & J. Swamy
- 3. Corynandra telanganensis J. Swamy & Rasingam
- 4. Dillenia thirupathiensis J. Swamy & Rasingam

NEW RECORD FOR ASIA

Tripogonella minima

NEW RECORDS TO THE STATES: 07

COMMUNICATED 11 PAPERS

WORK DONE IN 2020-21

FLORA OF INDIA

VOLUME 31: 99 TAXA BELONGING TO 42 GENERA (corrected)

VOLUME 32: 62 TAXA BELONGING TO 07 GENERA

TOTAL: 161 TAXA

49 GENERA

<u>Flora of India format</u> <u>39 TAXA</u> ARUNDINELLA (26) GARNOTIA (13)

WORK DONE IN 2020-21

Name of the Project:ASSESSMENT OF CYCLONEAFFECTEDREDSANDERS(PTEROCARPUSSANTALINUSL.F.)POPULATIONSINPARLAKHEMUNDI FOREST DIVISION, ODISHA

Executing Scientist (s): Dr. L. Rasigam & Dr. J. Swamy

Date of initiation and completion: June 2020

Summary: A tour has been undertaken to Odisha State from 11th to 14th June 2020 for the assessment of cyclone affected Red Sander trees (*Pterocarpus santalinus* L.f.) in Mahendra Range of Paralakhemundi Forest Division. Prepared and submitted the report of the same to the directorate on 30th June 2020.

PUBLICATIONS

BOOK :01

- SWAMY, J. AND A. SONIBALA DEVI (2020). *Anantagiri Hills A Treasure Trove of Medicinal Plants*. Telangana State Medicianal Plants Board. ISBN 978-81-948125-0-0
- RESEARCH PAPERS: 14
- SWAMY, J. AND L. RASINGAM (2020). A new variety of *Amorphophallus konkanensis* (Araceae) from Telangana, India. *Nelumbo* 62 (1): 4-11.
- SWAMY, J. AND S. NAGARAJU (2019). Schonefeldia gracilis (Poaceae: Chloridoideae): An addition to the flora of Telangana, India. Journal of Economic and Taxonomic Botany 43 (1-4): 56-57.
- **3. SWAMY, J.** (2020). *Pancratium zeylanicum* L. (Amaryllidaceae): An Addition to the Flora of Telangana, India. *Indian Forester*146 (5): 459-460.
- 4. SWAMY, J., L. RASINGAM, S. NAGARAJU & P.R. MANE (2020). A new species of Dillenia (Angiosperms: Dilleniaceae) from the Eastern Ghats of Andhra Pradesh, India. *Journal of Threatened Taxa* 12(11): 16636–16640 <u>https://doi.org/10.11609/jott.5529.12.11.16636-16640</u>
- SWAMY, J. AND L. RASINGAM (2020). Notes on the distribution of *Tephrosia noctiflora* Bojer ex Baker (Leguminosae) in Andhra Pradesh. *Plantasia* #20, *In: Zoo's Print* 35(5): 113–116.
- 6. SWAMY, J. AND P.V. RAMANA 2020. *Rhynchosia nummularia* (L.) DC. (Fabaceae): An Addition to the Flora of Andhra Pradesh, India. Indian Forester146 (4): 361-362

PUBLICATIONS

- RASINGAM, L. AND J. SWAMY (2020). Brachystelma telanganense (Apocynaceae: Asclepiadoideae-Ceropegieae) a new species from Telangana, India. Rheedea 30(3):379-382.
- 8. PRAMEELA, R. J. SWAMY AND J. PRAKASH RAO (2020). Notes on distribution of Xanthosoma sagittifolium (L.) Schott (Araceae) in Peninsular India. J. Indian Bot. Soc. 100 (1&2): 87-90.
- 9. HARIKRISHNA, P., J. SWAMY, VINOD MAINA AND RAMESH KUMAR (2019). Ocimum filamentosum Forssk. (Lamiaceae): A new distributional record for the flora of Rajasthan, India. Indian Journal of Forestry 42 (4): 337-338.
- **10. SWAMY**, **J.** (2020). *Tripogonella minima* (Poaceae: Chloridoideae: Cynodonteae: Tripogoninae), a new record for Asia from Peninsular India. *Rheedea* 30(3):396-399.
- 11. SAILU, G. AND J. SWAMY (2020). Avifaunal Diversity of Pocharam Wildlife Sanctuary, Medak. Pitta 17 (12): 8-15.
- PRAMEELA, R., M. VENKAIAH, J. SWAMY, AND J. PRAKASARAO (2020). Amaryllids of Andhra Pradesh, India. Tropical Plant Research 7(3): 594-603.
- **13. SWAMY, J.**, NAGARAJU, S., POOJA, R. MANE AND T.J. SHAIKH (2021). *Bothiochloa insculpta* (Hochst. Ex.A. Rich.) A. Camus (Poaceae): A new record for the flora of Telangana, India. *Indian Forester* 147 (1): 89-90.
- 14. SWAMY, J. & L. RASINGAM. 2021. Corynandra telanganensis (Cleomaceae), a new species from India. Ann. Bot. Fennici 58: 79–82. https://doi.org/10.5735/085.058.0113

SERVICE RENDERED



- NINETY (90) PLANT SPECIMENS VARIOUS INSTITUTIONS
- 410 PLANT SPECIES ANANTAGIRI HILLS, VIKARABAD DISTRICT, TELANGANA.
- 283 TREE SPECIES FOR BHADRADRI-KOTHAGUDEM DISTRICT, TELANGANA
- ACTED AS A MEMBER OF THE COMMITTEE FOR THE SELECTION OF PROJECT FELLOWS IN LACONES (CCMB)

SERVICE RENDERED

ORGANIZED TWO (2) WEBINARS

DELIVERED 7 LECTURES IN WORKSHOPS/WEBINARS

- 1. HERBARIUM METHODOLOGY AND ITS ROLE IN PLANT TAXONOMY AND CONSERVATION AND ENDEMIC AND THREATENED PLANTS OF ANDHRA PRADESH AND TELANGANA AND IUCN CLASSIFICATION
- 2. ENDEMISM WITH SPECIAL REFERENCE TO TELANGANA
- 3. TAXONOMIC TOOLS: HERBARIUM, FLORAS, BOTANICAL KEYS & GPS
- 4. VIRTUAL EXPLORATION, IDENTIFICATION OF PLANTS AND HERBARIUM METHODOLOGY
- 5. HERBARIUM ROLE IN CONSERVATION
- 6. DEVELOPMENT OF GRASSLANDS AND ALSO REMOVAL OF INVASIVE WEEDS AND EXPLAINED ABOUT FOREST TYPES AND IDENTIFICATION OF SPECIES
- 7. HERBARIUM METHODOLOGY WITH SPECIAL REFERENCE TO DIGITAL/VIRTUAL HERBARIA

PARTICIPATED IN 6 WEBINARS

WORK TO BE DONE IN 2021-22

Two herbarium consultation tours (CAL & SKU) and a field tour to kwls Identification, preparation and submission of report



THANK YOU