

# S.S.RESEARCH FOUNDATION

**ACTIVITY REPORT 2022 – 2023** 

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#### **Message from the Director**



Dear all,

I am pleased to present our 6th Activity Report with details of the activities and achievements in FY 2022-2023.

Our scientists, Dr. Gunasekaran and Dr. Sundar, had the opportunity to visit Brazil as part of an international collaboration with the Federal University of Mato Grosso do Sul (UFMS) in Brazil from August 4<sup>th</sup> to 20<sup>th</sup>, 2022. This visit is part of an already established collaboration under the CAPES-PRINT Program. In addition to that, they visited the Federal University of Rondonópolis (UFR), Mato Grosso (MT), and Wetlands International Regional Office, Campo Grande, MS, Brazil.

We also organized free weekend classes for children through the S.S. Research Foundation. Weekend free student activities like reading, crafting, healthy diet preparation methods (millet laddu using kambu, thinai, solam, peanuts-padam, pista, cashew maalaadu, health mix-kolukattai), and yoga were taught by our volunteers, Dr. Mercy and Mr. Raj Steephen, during the month of May 2022 at Kallidaikurichi. Fifteen children benefited from this program.

We are proud to announce that the Tamil Nadu Forest Department has sanctioned two projects for our institution under the National Working Plan Scheme.

S.S. Research Foundation participates as one of the foreign collaborating institutions in the "Brazilian Biodiversity Observatory" under the program of INCT (National Institutes of Science and Technology), with financial support from the National Council for Scientific and Technological Development.

Thank you all for your continued support.

Best regards,

Chitra

### **Programme 1** Ecology and Environmental Sciences & Plant Sciences

#### 1.1. Free Summer Class Organized for Children

Free weekend classes Organized for children by S.S Research Foundation. Weekend free student activities like reading, crafting, healthy diet preparation methods (millet laddu using kambu, thinai, solam, peanuts-padam, pista, cashew maalaadu, health mix-kolukattai), and yoga were taught by our volunteers, Dr. Mercy and Mr. Raj Steephen, during the month of May 2022 at Kallidaikurichi. Fifteen children benefited from this program (financially supported by the trust).





#### 1.2. World Environmental day celebration

World Environment Day was organized by Aeon Charitable Trust on June 5th, 2022 at Ukkadam, Periakulam from 9-11am. The chief guest was the commissioner of Coimbatore Corporation. S.S. Research Foundation provided complete technical guidance through their scientist Dr. Gunasekaran.









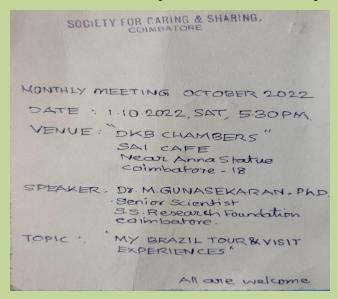
#### 1.3. Official Visit

Our scientists, Dr. Sundar and Dr. Gunasekaran, officially visited the Ministry of Environment, Forest, and Climate Change (MOEF&CC) on June 15<sup>th</sup>, 2022, where they met Dr.Muthamizh Selvam, Joint Director, Elephant Project, and discussed some potential opportunities for research projects.



#### 1.4. Monthly Meeting

The Society for Caring and Sharing organized their monthly meeting on October 1<sup>st</sup>, 2022 at 5:30 pm at DKB Chambers in Coimbatore, Tamil Nadu. The chief guest was our trustee member Dr. Gunasekaran and the topic of discussion was experiences during his visit to Brazil.



#### 1.5. Field Work - Perur Wetland

Ms. Charlett who is doing her PhD program, in Germany University, studying on the impact of Miyawaki tree planting in Coimbatore regions. Dr. Gunasekaran provides research guidance. They visited many places in Coimbatore including Vadavalli Panchayat Park, Bharathiyar University, Perur Wetland and Pachapalayam Reserve site from January 11<sup>th</sup> to 13<sup>th</sup>, 2022.







#### 1.6. Quiz Programme - Nature Lovers:



கண்டுபிடியுங்கள் என்ன மரம்? இந்த மரத்தின் சரியான பெயர் தாலிப்பனை என்பது ஆங்கிலத்தில் Talipot Palm என்பது.இதன் தாவரவியல் பெயர் Corypha Umbraculifera. இந்த முறை நிறைய பேர் இந்த போட்டியில் கலந்து கொண்டு சரியான பதிலை சொல்லி இருக்கிறார்கள் ஆனால் கூட விரைவாக முதலில் இந்த சரியான பதிலை சொன்னவர் திருமிகு குணசேகரன் அவர்கள் இவர் Nature Lovers என்ற whatsapp குழுவை சேர்ந்தவர். திருமிகு. M. குணசேகரன் அவர்களுக்கு எனது பாராட்டுக்கள்! வாழ்த்துக்கள்! அவருக்கு எனது பூமியை யோசி மரங்களை நேசி புத்தகம் பரிசாக வழங்கப்பட்டது - நூல் ஆசிரியர் பூமி ஞான சூரியன்.

#### 1.7. Simplicity News

Senior Scientist Dr. Gunasekaran presented the Rodent Controllers Project at a launch event in Coimbatore on March 12, 2023. The project aims to increase tree cover in urban areas by using rodents as natural seed dispersers. The SIMPLICITY news team covered the event, which was attended by nearly 30 people. Visit the site link for detailed information.

https://simplicity.in/coimbatore/english/news/53463/Project-launched-to-increase-tree-cover-in-urban-areas-of-Coimbatore







#### 1.8 Discussion / Meeting:



A meeting of the Ecology and Environmental Sciences & Plant Sciences Team Members was held on 10/03/23. The agenda was to discuss the survey for biodiversity status and assessment of regeneration in Dindigul Forest Division 2023. The meeting was organized by the Trust.

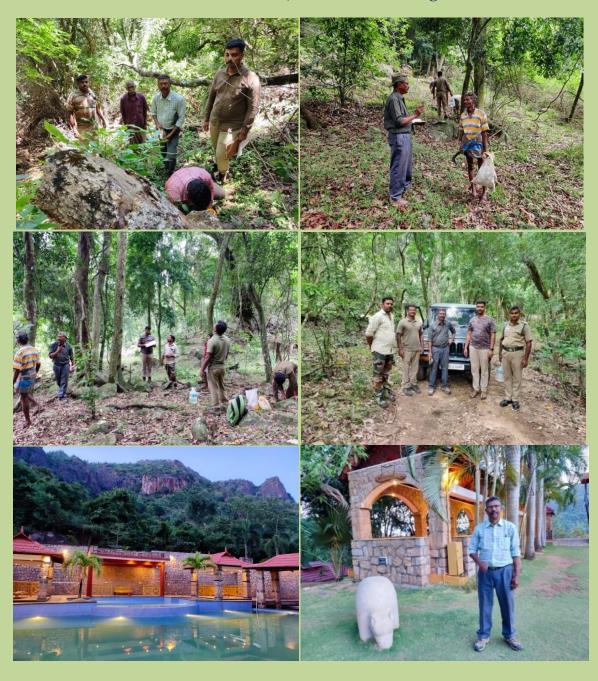
#### 1.9 Field Work - Dindigul Forest division

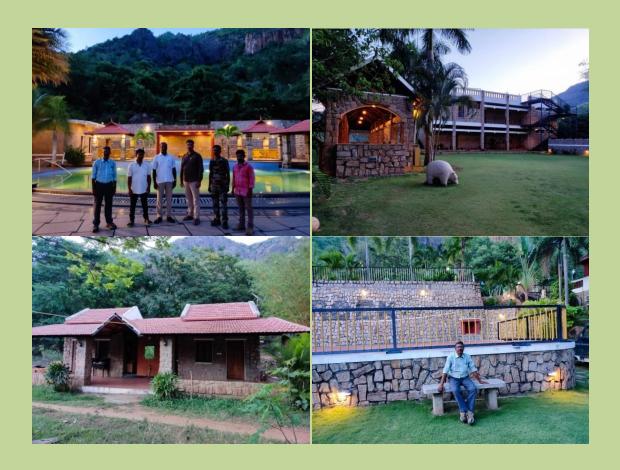
- A project on "**Biodiversity Assessment of Dindigul Forest Division**", financially supported by the Coimbatore Forest Division, TN Forest Department under National Working Plan Code 2014. Our team of experts conducted a field visits for biodiversity assessment in Dindigul Forest Division from 23<sup>rd</sup> to 31-03-2023 and 15<sup>th</sup> to 20-06-2023 and surveyed the following places:
  - Pandrimalai Range
  - Kannivadi Range
  - Ayyalur Range
  - Megalithic dolmen site of Paliya tribes
  - Megalithic dolmen site of Paliya sacred plants

Our target diversity included Plants, freshwater insects, and fish. The team collected data on their distribution, abundance and conservation status and also documented the cultural and ecological significance of the megalithic dolmen sites and their associated flora and fauna. The report submitted to the working plan division, Coimbatore for further action and feedback.

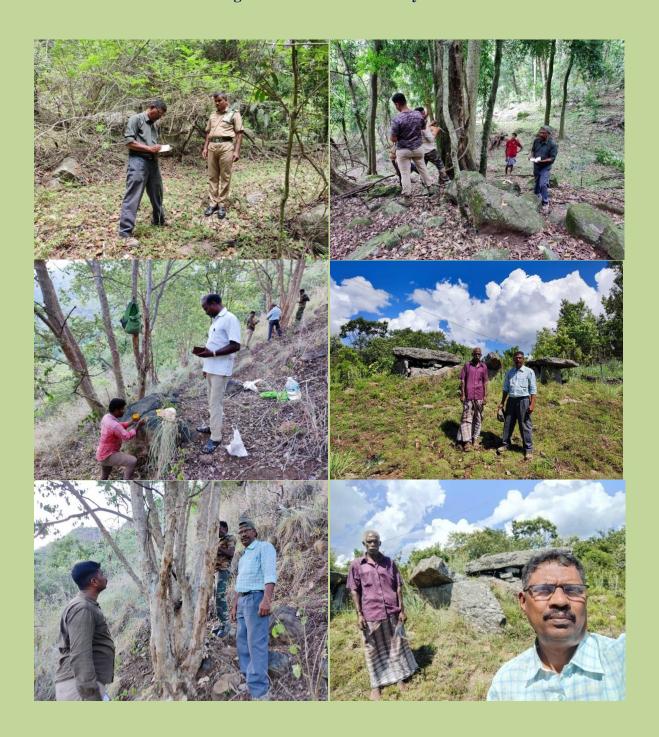
We thank all the stakeholders and collaborators for their support and cooperation in this project.

## Pandrimalai, and Kannivadi Range



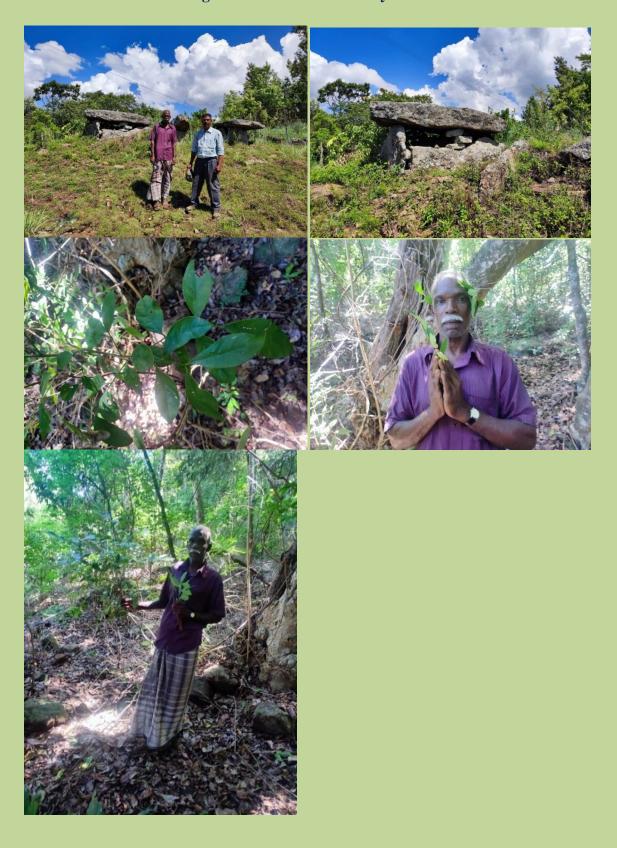


## **Megalithic Dolmon Site - Paliya Tribes**





## **Megalithic Dolmon Site - Paliya Sacred Plant**



#### **Programme 2 Membership**

**2.1.** *BGCI Membership:* SSRF has been an annual institutional member in Botanic Gardens Conservation International (BGCI) since 16<sup>th</sup> January 2022.



#### **Programme 3 Achievements:**

#### **BRAZIL VISIT:**

This visit is a part of the collaboration between S.S. Research Foundation, India, and the Federal University of Mato Grosso Do Sul (UFMS), Brazil, under the CAPES-PRINT Program and also aims to strengthen further long-term research cooperation between both institutions. Our researchers, Dr. S. Sundar and Dr. M. Gunasekaran, representing SSRF, visited UFMS during the period from August 04/08/2022 to 20/08/2022. In addition, they visited the Federal University of Rondonópolis (UFR) and Wetlands International, Regional Office, Campo Grande, MS Brazil, to expand the network of international research collaborations.

The impact of research collaborations with our foreign colleagues will create a myriad of opportunities for researchers and students via exchange programs and initiatives related to our global activities. It also enables us to better understand the cultures of other nations. It also supports the development of sustainable collaborative partnerships between India and Brazil to generate new approaches to the most significant and complex problems faced by the two countries. Furthermore, the visit will strengthen research capacity, knowledge sharing, and skills exchange between research groups in both countries and even other collaborative partner countries.



Federal University of Mato Grosso do Sul (UFMS), Brazil, <a href="https://www.ufms.br/">https://www.ufms.br/</a>
Department of Ecology and Conservation







With Prof.Rudi Laps



Dr.Sundar & Dr.Gunasekaran with Prof.Luis Gustavo (Coordinator Capes-Print Program)



Presentation & Interactive session in the Department of Ecology and Conservation, Federal University of Mato Grosso do Sul (UFMS).



Departmental Visits in UFMS – Animal Sciences Zoological Collections

### **Department of Plant Biology**



Dr.Gunasekaran and Dr.Sundar had discussions with the Professors Reinaldo, Camila, Flavia & Letícia

### **Visit to the Botanical Collections of UFMS**



Discussion with Professors Geraldo Alves Damasceno Júnior & Ieda Maria Bortolotto

Some field visits including a permanent environmental conservation sites, Campo Grande, Brazil



Dom Bosco museum of cultures, Campo Grande, Brazil



## Pantanal Biopark, Campo Grande, Brazil





## Federal University of Rondonópolis (UFR), Brazil, <a href="https://ufr.edu.br/">https://ufr.edu.br/</a>



Visited the Laboratories of Biological Sciences, UFR



Presentation by Dr.Gunasekaran and Dr.Sundar at the Federal University of Rondonópolis (UFR)

#### Visit to Wetland Internationals, Regional Office, Brazil



Our Researchers discussed with Raphael Nicola (Executive Director), Aurea Garcia (Policy Officer) & other key members on various topics specifically conservation practices, approaches of wetland ecosystems in Brazil and the potential collaborative projects between S.S.Research Foundation and Wetland Internationals. During this discussion, Prof.Fabio and Prof.Rudi from UFMS also took part.

### LIST OF PROJECTS/GRANTS RECEIVED

## Regional (Ongoing)

Title	Financial Support	Principal Investigator	
Biodiversity Assessment of Dindigul Forest Division 2023	National Working Plan Code - 2014, Coimbatore Division, Tamil Nadu Forest Department	Dr.M.Gunasekaran	
Assessment of Regeneration in Dindigul Forest Division 2023	National Working Plan Code – 2014 Coimbatore Division, Tamil Nadu Forest Department	Dr.M.Gunasekaran	

## **International (Approved & Yet to be implemented)**

Title of the	Name of the	Role &	Financial Support	
Project	Researchers	Program(s)		
Brazilian	Dr. Sundar	Team members	National Council for Scientific and	
Biodiversity		& National	Technological Development (CNPq)	
Observatory	Dr.Gunasekaran	Institutes of	https://biologiadaconservacao.com.br/ppbio-	
		Science and	observatorio-biodiversidade	
		Technology –		
		INCT Program		

## LIST OF PROJECTS (Under consideration in various Central Govt. Schemes)

S. No	Title of the Project	Name of the	Role (s)	Funding Body/Agency
1.	A comprehensive documentation and comparative studies on Ethno-medicinal knowledge of Tribe of Nilgiris Biosphere Reserve, Tamil Nadu (File No. CRG/2023/005530)	Researcher(s) Dr.M.Gunasekaran	Principal Investigator	Science and Engineering Research Board (SERB), Government of India.
2.	Documentation of Medicinal, Conservation and Ritual practices associated with ancient Sthalavriksha worship traditions in temples of Tamil Nadu (File No. DST/SHRI CELL/2023/672)	Dr.M.Gunasekaran	Principal Investigator	Department of science & Technology, Government of India
3.	Predicting climate- driven changes in the geographic distribution patterns of stoneflies (Insecta:Plecoptera) using species distribution models (File No. CRG/2023/008323)	Dr.S.Sundar	Principal Investigator	Science and Engineering Research Board, Government of India

#### **Published Article:**

# 1. M. Gunasekaran &C. Kalidass 2022. Ethnobotanical investigation in Masagoundanur village, Erode district, Tamil Nadu, India. *J.Geophytology*.52)1-6.

ISSN 0376-5156 Geophytology 52(1&2): 00-00 November 2022

# Ethnobotanical investigation in Masagoundanur village, Erode District, Tamil Nadu, India

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#### ABSTRACT

Gunasekaran M. & Kalidass C. 2022. Ethnobotanical investigation in Masagoundanur village, Erode District, Tamil Nadu, India. Geophytology 52(1&2): 00 00.

The present investigation provides first hand information on 67 taxa belonging to 57 genera and 30 families. They are used as medicinal plants for various ailments, viz. diabetes, poisoning, fever, astlma, bone fracture, diaphoresis, indigestion, diuresis, eye pain, injury and wounds, jaundice, constipation, leg pain, rheumatism, scabies, skin diseases, stomach ache, toothache, ulcer, etc., by the people of Masagoundanur Village, Erode District, Tamil Nadu. Ethnobotanical research can provide a wealth of information regarding relationship between plants and traditional

Keywords: Ethnobotany, medicinal plants, Masagoundanur, Tamil Nadu, India

#### INTRODUCTION

Since ancient times, plants have been an exemplary source of medicine to cure various ailments. Herbal drugs constitute a major source of all the codified systems of traditional medicines in India, such as Ayurveda, Homeopathy, Naturopathy, Siddha, Unani and Yoga (Vaidya & Devasagayam 2007, Kanneboyena et al. 2015, Pandey et al. 2016). Medicinal plants help in alleviating human suffering and are widely used for subsistence, home remedies and trade (Kunwar et al. 2006). Typically, people living near forest area are ethnomedicinally knowledgeable (Raj et al. 2018). The villagers in the Masagoundanur village have sound knowledge on the medicinal properties of their plant resources. Therefore, they use many plant species for

the treatment of various day-to-day ailments. On this basis, it was decided to undertake the present ethnobotanical investigation among the people of Masagoundanur. Erode district, Tamil Nadu.

Masagoundanur village is located between Lat, 11°74' N to 11°76' N and Long. 77°66' E to 77°67' E and is surrounded by well protected forest, viz. Bargur Reserve Forest in Erode District. The study area occupies an area of 250 ha. The average temperature ranges from 10° to 35° C. The inhabitants of Masagoundanur are mainly involved in agriculture and are cultivating commercial crops such as turmeric, banana, maize, groundnut, green gram, black gram and cowpea. These villagers depend upon the local plants for the treatment of various diseases as native medicines.

#### **Publications under preparation**

- 1. Muralidharan, M. Sundar, S, & Ram Prabhakar, 2022. Species composition and diversity of aquatic insects of the Srivilliputhur Megamalai tiger Reserve in India.
- 2. Gunasekaran, M & Sundar, S. 2022. Potential impacts of climate change on aquatic flora in Wetland Ecosystems.
- 3. Davidson Gomes Nogueira, Rudi Ricardo Laps, Fabio Roque, Sundar, Gunasekaran, 2022. The biases and gaps on studies about the importance of fruits: a comparison between aquatic and terrestrial environment.

#### **Publication Accepted:**

1. Fabio de Oliveira Roque., Bindiya Rashni....... Sundar Shunmuga Velayutham 2023. Insect Conservation in Tropical Forests. In: Routledge Insect Conservation Handbook, Springer.