

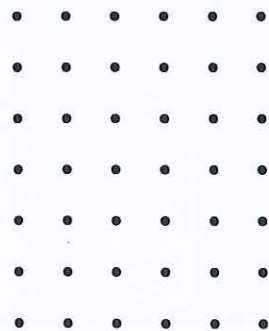
**4<sup>TH</sup> INTERNATIONAL CONFERENCE  
ON SCIENCE AND TECHNOLOGY**



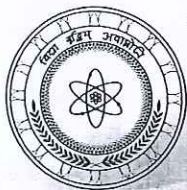
# **BOOK OF ABSTRACTS**

**16<sup>th</sup> OCT 2024**

**"Exploring Innovative Horizons through  
Modern Technologies for a Sustainable Future"**



**In Collaboration with**



**SLAAS (Eastern Chapter)**

**Faculty of Technology**

**South Eastern University of Sri Lanka**



# Beetle Pests in Sri Lanka: Current Challenges, Knowledge and Emerging Threats to Agriculture and Biodiversity

W.M.H.U. Wijerathna<sup>1</sup>, U.G.S.L. Ranasinghe<sup>2</sup> and S.P. Benjamin<sup>3</sup>

<sup>1,2,3</sup>National Institute of Fundamental Studies, Kandy, Sri Lanka

<sup>1</sup>hansaniwijerathnauw@gmail.com, <sup>2</sup>sasanka.zfink@gmail.com, <sup>3</sup>suresh.benjamin@gmail.com

## Abstract

Beetles represent a significant portion of Sri Lanka's biodiversity, with 115 families (ca. 3,033 species) documented, making them the largest faunal group on the island. The larval and adult phases of about 75% of beetle species are phytophagous and considering their significant damage to economically important crops for agriculture. Substantial agricultural yield is lost each year due to rapid insect infestations could significantly impact national food availability. It is extremely necessary to document insect pests in the country fundamental to pest management strategies. This review focuses on enhancing the understanding of major beetle pest species that affect crops such as vegetables, fruits, grains, coconut, rubber, rice and tea. The review encompasses 60 species from 14 families, with a predominant presence of pests from the Chrysomelidae, Scarabidae, Curculionidae, Cerambycidae and Meloidae families. Recent field observations suggest significant damage to cashew plants in Wanathawilluwa. Phytophagous beetles significantly impact vegetable crops in the Solanaceae and Cucurbitaceae families by feeding on soft tissues. Larvae contribute to damage by attacking roots and stems, causing necrosis. Within families Coccinellidae, Carabidae, and Cicindelidae, many beetles exhibit predatory behaviours, while some demonstrate phytophagous tendencies as opportunistic feeders. Beetle pests in families Curculionidae, Cerambycidae, and Scolytidae are predominantly associated with woody crops. Understanding the economic pest status of these beetles and their sporadic population dynamics is crucial due to past outbreaks in neighbouring countries, highlighting potential risks to agriculture and ecosystems.

**Keywords:** Beetle, Pests, Agriculture, Crops, Phytophagous