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The role of *Solenopsis geminata* in affecting health and routine activities: A case study of undergraduate students at Eastern University, Sri Lanka

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The tropical fire ant, *Solenopsis geminata*, is an invasive species that damages agriculture, infrastructure, and human health globally. In Sri Lanka, research is limited. This study examines the impact of *Solenopsis geminata* on undergraduate students' health, daily activities, and campus experience at Eastern University. A structured interview-type questionnaire survey, using both closed and open-ended questions, was conducted to investigate details about allergic responses caused by *S. geminata* stings and other related issues experienced by undergraduate students at the Eastern University of Sri Lanka from July to December 2023. The questionnaire consisted of 20 questions in three major sections, demographics, sting incidents, and other related information. A randomly selected general undergraduate sample of 120 students participated in the questionnaire survey and were shown live samples and photographs of *S. geminata* for identification. Seventy-eight (n = 78) students who identified the species continued with the survey. Their ages ranged from 21 to 30 years old, with a male-to-female ratio of 4:5. In the group surveyed, 100% reported experiencing *S. geminata* stings. The most frequent symptoms were a combination of redness, itching, and swelling (51.7%), or just redness and itching (24.1%). Additionally, 13.79% exhibited oozing, and 5.2% developed long-term scars. According to Turkey's HSD, there is no correlation between the number of bites received and gender (p = 0.46), but a significant correlation was found between the average reaction to bites and age (p = 0.005). The survey also revealed that 10.34% reported damage to stored staples, 10.34% to crops, 11.2% to selling items, 8.6% to physical equipment, and 4.3% to seeds. These descriptive statistics highlight the significant impact of *S. geminata* stings on students' health and daily life, the economic damage to their stored staples, crops, and equipment. Future recommendations include increasing education on the prevention, urging the usage of biopesticides and management of *S. geminata* stings among students and implementing effective control measures to reduce the population of these ants.

Keywords: Victim experiences, Physiological impact, Victim perception, Tropical fire ant, *Solenopsis geminata*