NITheCS
National Institute for
Theoretical and Computational Sciences

C O L L O Q U I U M

Harnessing citizens to capture insect biodiversity data: Power of iNaturalist and local applications

Dr Ruan Veldtman (South African National Biodiversity Institute & Stellenbosch University) and Alex Veldtman

DATE:	Monday, 21 October 2024	16h00–17h00 SAST
VENUES:	• Neelsie Cinema, Stellenbosch University
	• Online

--- A recording of the talk will be published on the NITheCS YouTube channel afterwards ---

ABSTRACT

Insects are the most numerous group of visible organisms in the world with the highest taxonomic diversity (27 Orders). This group however does not receive enough attention due to the large number of species that have not been formally described. Many species are impossible to identify to species level - referred to as the insect taxonomic problem. There are simply not enough entomologists to cope with this incredible diversity and the problem it creates for understanding biodiversity. Citizen science is a potential solution to this dilemma. Everywhere there are people with smart phones, therefore there is a potential army of observers that can make insect observations. iNaturalist is the best platform to record biodiversity data generated by citizenry and vetted in a self-maintaining system. The rich insect diversity here is an advantage because people are in friendly competition to record the most species and there are multiple groups to become a self-taught expert. This does not replace the traditional or virtual taxonomist (i.e., curator in iNaturalist) as identifications need to be verified and data quality control maintained. On the other hand, citizen scientist can be used for specific projects, for example tracking an invasive social wasp that no one likes. We will create an application to record the invasive European paper wasp in the Western Cape of South Africa, to generate hopefully more than 40,000 records a year. This information will be valuable to map the current distribution of this invasive species, record any jump dispersal and raise awareness of biological invasions in South Africa. Further we aim to transfer the majority of this data to iNaturalist. This talk is about these initiatives to promote the general appreciation of insect species data.

SPEAKERS' BIOGRAPHIES

Dr Ruan Veldtman is active in the field of applied biodiversity research specialising in ecological entomology with a PhD from the University of Pretoria. He joined the South African National Biodiversity Institute (SANBI) in November 2006 and is associated with the Department of Conservation Ecology and Entomology at Stellenbosch University. His research interests include wild silk moth ecology, plant-insect interactions, weed biological control, pollination ecosystem services and social wasp invasions. He is an avid supporter of interdisciplinary exchanges around entomology, such as geographical spatial analysis, genetics, agricultural economics and mathematical modelling.

Alex Veldtman is a mechanical engineer turned software developer. He has developed systems in various fields, including mining, telecommunications, and fintech. He is naturally an optimist and is passionate about technology and its potential to have a positive impact and change the world.

REGISTER: https://bit.ly/3XUg1KH

science & innovation
Department:
Science and Innovation
REPUBLIC OF SOUTH AFRICA

NRF National Research Foundation

Stellenbosch
UNIVERSITY
IYUNIVESITHI
UNIVERSITEIT