

## ***ABSTRACTS AND BIOGRAPHY OF THE GUEST SPEAKERS TREUB/UVA SYMPOSIUM 17-10-17***

### **“Introduction to the Society for the Advancement of Research in the Tropics”**

**René Boot**, Tropenbos International | Ecology and Biodiversity, University of Utrecht | Chair Treub

**Biography:** Rene Boot studied ecology and graduated (PhD) in 1990 at Utrecht University. After graduating he worked for fifteen years in forest research and development projects in the field in Guyana and Bolivia. Currently he is Chair of the Treub Maatschappij, a Dutch society that promotes academic research in the tropics. He also is director of Tropenbos International, a Dutch foundation governed by an international board and funded by the Dutch government, EU and other donors. The mission of this foundation is to improve governance and management of tropical forests through research, capacity building and promoting dialogue. Furthermore Rene is special professor in Sustainable Tropical Forest Management at Utrecht University, where he teaches research policy linkages to MSc and PhD students. He also is member of the editorial board of the Journal Tropical Ecology, Chair of the Tresor Foundation, and member of the board of the Prince Bernhard Chair for International Nature Conservation. The Tresor foundation manages a tropical forest reserve in French Guyana and the Prince Bernhard Chair for International Nature Conservation promotes academic research in support of nature conservation.

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### **“Hyperdiversity and Hyperdominance in the Amazon Tree Flora”**

**Hans ter Steege**, Naturalis | Vrije Universiteit Amsterdam

**Abstract:** With over 5 million km<sup>2</sup>, the Amazon is one of the largest natural ecosystems in our world. The area hosts vast diversity and is also a large carbon store. Recent work showed that while 16,000 species of trees may inhabit the area, just 227 (1.4%) of them contribute 50% of all individuals. Over 11,000 (62%) species have populations less than 1 million individuals and make up less than 0.12% of all individuals of the Amazon. The fact that the area is dominated by so few may simplify the research into its functioning, focusing on the hyperdominants but the extreme rarity of so many species makes the study of diversity a challenge. How is this diversity distributed in space and is there a link with its functioning? Can we predict how the Amazon will be affected by global change?

**Biography:** Hans ter Steege is keenly interested in the study of plant diversity and mechanisms generating and regulating diversity at regional and local scale with a focus on the Amazon Rainforest. He has built up large network of collaborating colleagues in the Amazon and outside: The Amazon Tree Diversity Network. With this network they study patterns and processes of species composition, relative abundance patterns, and functional behavior of the Amazon forest, and its evolution.

## **“Leapfrogging water management in Myanmar”**

**Martine Rutten**, Delft University of Technology

**Abstract:** In this talk I will give an overview of Myanmar's water system and the current pressures on this system. Myanmar is a country with abundant water resources in a still relative good state. Yet current rapid development is leading to rapid environmental degradation in the form of water and air pollution, land subsidence, deforestation etc.. The hope is that Myanmar will not embark on the typical path of severe environmental degradation followed by expensive environmental restoration, but that the country can leapfrog to an environmentally, economically and socially sustainable system. I will present some of our activities that aim to modestly contribute to sustainable development in Myanmar.

**Biography:** Martine Rutten is assistant professor Water Management at Delft University of Technology (TUDelft). Her research interests include remote sensing, citizen science and the water food energy nexus. She has been involved in research and capacity building activities in Myanmar since 2013.

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## **“Long-term research and patterns on coral reefs of Dutch Caribbean islands”**

**Erik Meesters**, Wageningen University

**Abstract:** Long-term data sets of living coral reefs are hard to come by. Research on Bonaire and Curacao has generated the longest time series of coral reef data in the world. Started in 1973 by Professor Rolf Bak (Carmabi and NIOZ) this data set provides a good overview of the impact of environment and humans on the status of Caribbean coral reefs. In this presentation I will show the latest result and discuss the new findings against a background of shifting baselines, design of monitoring programs, and local and regional spatial variation.

**Biography:** Erik Meesters (PhD 1995) is a coral reef ecologist at Wageningen Marine Research. He has worked in the Caribbean and the Indo-Pacific. Currently, his research is mainly applied and in support of management, focussing on the coral reefs of the former Netherlands Antilles and the Saba Bank. Erik tries to continue Rolf Bak's data monitoring against all odds.

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## ***“Islands as model systems: from Krakatau to Hawaii”***

**Robert J. Whittaker**, School of Geography and the Environment, University of Oxford | Centre for Macroecology, Evolution, and Climate, University of Copenhagen

**Abstract:** Krakatau is generally considered to have self-sterilized in eruptions in 1883, which culminated in catastrophe on August 23<sup>rd</sup> of that year. This set the scene for the longest- running monitored “natural experiment” in both tropical ecosystem recovery from disturbance and in island colonization and species turnover. Melchior Treub, who was based at the botanic garden at Buitenzorg at the time, played a key role in this story by initiating the first botanical surveys of the islands post-sterilization. In this presentation, I shall reflect on insights gained from over a century of (intermittent) records of the flora and dynamics of the Krakatau system, and how attempting to build on this work lead to a new look at the dynamics of other, more remote island systems. In illustration of which I will briefly considered the dynamics of hotspot island systems such as Hawaii. This in turn may prompt questions as to whether the tropical nature of Krakatau or the insular nature of Krakatau is the more significant feature.

See also: <http://pvdijk57.home.xs4all.nl/Krakatau/Krakatau-eng.html>



*Photo 1 - Krakatau, June 1886, three years after the eruption. Melchior Treub, Director of the Buitenzorg Botanical Gardens (standing left) is the first biologist visiting Krakatau, as member of a party led by the geologist Rogier Verbeek (middle).*



*Photos 2 & 3 Krakatau then and now (credits Robert Whittaker).*

**Biography:** Rob Whittaker is a Professor of Biogeography at University of Oxford and a fellow of St Edmund Hall, a constituent college of the University. He also currently holds a fixed term part-time Full Professor position in the Centre for Macroecology, Evolution and Climate at the University of Copenhagen. He read for a degree in Botany and Geography at the University of Hull, an MSc in Ecology at University College North Wales and obtained his PhD at University College Cardiff, with a project on vegetation succession in arctic alpine systems in Norway. He has published over 150 peer review articles and three books. He is a former editor-in-chief of *Global Ecology & Biogeography* and of *Journal of Biogeography*, and is a past President of the International Biogeography Society. His research spans island biogeography, macroecology, ecological and conservation biogeography, and diversity theory. He worked on the ecology of the Krakatau Islands, Indonesia over a 20 year period but is now more of an arm-chair, or desk-top ecologist.