



EUROPEAN | PARIS  
CONFERENCE OF | 26-29 MARCH  
**TROPICAL ECOLOGY** | 2018

ANNUAL MEETING OF THE SOCIETY FOR TROPICAL ECOLOGY (GTÖ)

**CHALLENGES IN  
TROPICAL ECOLOGY AND CONSERVATION -  
GLOBAL PERSPECTIVES**



# EUROPEAN | PARIS CONFERENCE OF | 26-29 MARCH **TROPICAL ECOLOGY** | 2018

ANNUAL MEETING OF THE SOCIETY FOR TROPICAL ECOLOGY (GTÖ)



## IMPRINT

### **Editors**

Pierre-Michel Forget – Muséum National d'Histoire Naturelle

Catherine Reeb – Sorbonne Université

Jérémy Migliore – Université Libre de Bruxelles

Heike Kuhlmann – KCS Kuhlmann Convention Service

### **Concept, Layout and Cover**

roman.tschirf@gmail.com

This book is available at [www.gtoe.de](http://www.gtoe.de)

ISBN: 978-3-00-059300-0

The respective authors are solely responsible for the contents  
of their contributions in this book.

Printed on 100% recycled paper



## BIODIVERSITY AND CONSERVATION VALUE OF AN ATLANTIC CENTRAL AFRICAN FOREST: THE NGOVAYANG MASSIF (CAMEROON)

Christelle Gonmadje<sup>1,2</sup>, Charles Doumenge<sup>2</sup>, Doyle McKey<sup>3</sup>

<sup>1</sup>*Department of Plant Biology, University of Yaoundé I, Yaoundé, CM, cgonmadje@yahoo.fr*

<sup>2</sup>*CIRAD, Campus International de Baillarguet, Montpellier, FR*

<sup>3</sup>*Centre d'Ecologie Fonctionnelle et Evolutive, UMR CNRS 5175, Montpellier, FR*



The Ngovayang Massif of southern Cameroon is a range of small hills near the Atlantic coast, in the Lower Guinea floristic region. This region is known to harbor forests with high levels of biodiversity and endemism, but this Massif is botanically poorly known. We assessed tree species diversity and level of endemism of the Ngovayang forest, comparing it with other sites in Central Africa. Fifteen 1-ha permanent plots within old-growth forests of the Ngovayang Massif were censused.

A total of 7967 individuals with dbh  $\geq 10$  cm were recorded, belonging to 583 species, 267 genera and 71 families. The mean number of stems was  $532 \pm 75$  stems ha<sup>-1</sup>. The mean Fisher's alpha index was  $42.4 \pm 6.5$ . Taking into account other data available, the list of vascular plants known in the Massif reaches a total of 1497 species. We found 224 species of high conservation value, including Cameroon endemics and other rare and threatened species. Species richness and endemism are comparable to those of the richest known sites in Central African forests. Topographic heterogeneity, high precipitation and atmospheric humidity owing to the proximity of the ocean, and permanence of a forest cover during past geological times probably all contribute to explaining the Massif's high tree diversity and endemism. This study highlights the botanical importance of the poorly studied Ngovayang forest within the Lower Guinea region, justifying efforts for improved assessment of this value and for the development of suitable national conservation strategies.