Preface and acknowledgements

Over the past 30 years, numerous monographs on the biodiversity of different forest sites on Madagascar have been published. Generally, the inventories have been carried out in scientifically poorly known or completely unknown forest areas within or outside the network of protected areas. The detailed information and new data obtained during these explorations have made it possible to better appreciate the diversity and geographic distribution of animal and plant species, to discover new forms for science, and to provide critical tools for decision-making associated with biodiversity management and conservation actions. These field inventories also supply reference data, for example, necessary for subsequent comparative analyses for better understanding the dynamics of biological communities and ecosystems over time and space.

In recent years, climate change has become a major concern on a global scale because of its considerable impacts on our planet's health and resulting in extreme climatic events, which include flooding, intense cyclones, and considerable variation in temperatures resulting in severe heatwaves in some parts of the world. These impacts are complex and affect several domains, including socio-economic aspects, human health, biodiversity, and ecosystem functioning. On Madagascar, this phenomenon is also beginning to be felt at various levels and in different areas. For example, the unpredictability of the rainy season, fairly significant drought in certain wetland areas, and natural cataclysms of varying intensity that occur on the island.

From an ecological perspective, Madagascar has exceptional landscapes with unique biodiversity and constituting a measurable portion of our planet's natural heritage. This natural wealth is declining under the combined influence of factors related to both direct human impact and indirect climatic change, leading to the disappearance of sensitive ecosystems and thus resulting in the decline of numerous species, pushing many towards extinction. The evaluation of the responses of biological communities to these vicissitudes is complex and difficult to decipher given the interdependence of several variables and different levels of tolerance of certain species to change.

Marojejy National Park, located in the northern part of Madagascar, is biologically very rich and home to many local or regional endemic species. The exceptional universal values representing the splendor of this site have earned it inclusion in a UNESCO World Heritage Site known as Rainforests of the Atsinanana, composed of disjunct protected areas. However, the human pressures that have unfolded at the site during different socio-political crises on Madagascar have impacted the local ecosystems and constituent species, thus classifying it in the list of World Heritage Sites as Endangered. In order to support the various steps needed to remove this site from this unfavorable listing, considerable efforts have been made both in Marojejy and in the other associated protected areas, all managed by Madagascar National Parks, including the contribution of the BIOCOM project, financed by the Korea International Cooperation Agency (KOICA) through UNESCO.

In this monograph and largely based on field research carried out in late 2021 and within the framework of the BIOCOM project, a series of contributions are presented concerning the Marojejy protected area and surrounding areas. These topics include meteorology, flora and vegetation, and different animal groups along an elevational transect of the eastern slopes of the protected area. The inventory conducted in late 2021 was in parallel to one conducted in 1996, paying very close attention to the placement of survey sites, seasonal timing of the fieldwork, and similar methodological techniques. A comparison of the data across 25 years provides important insights on trends in forest cover and altitudinal distribution of different organisms. With new discoveries and insightful data, the details presented herein underline the unique biota of the Marojejy National Park. We hope that the different

studies and comparisons contained herein will bring new insights and motivation to the importance of this unique protected area and its long-term conservation.

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Steven M. Goodman & Marie Jeanne Raherilalao
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