

GSOP/135 - GS20 CHARACTERIZATION of TROPICAL BIODIVERSITY (species, genetics, and landscape)

Friday 2, August / 10:00-12:00 - Grenat

Malagasy inselbergs: Neglected but floristically diverse and in need of conservation

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Globally, inselbergs which are isolated mountain rock outcrops, mostly of granitic or gneissic origin, constitute old terrestrial habitat islands and are widespread throughout the tropics. They form prominent landscape features, mainly in the central highland regions and have clearly been neglected by the botanical and conservation communities in Madagascar. It was demonstrated that this specific habitat provides important ecosystem services such as source of mineral water. Besides, only few Inselbergs are currently encompassed within the Madagascar System of Protected Areas. The selection of inselbergs took into account parameters such as accessibility, relative intactness and sites known to be under-collected. General plant collecting method used by Missouri Botanical Garden was applied. Furthermore, local vernacular names for the plants provided by local informants were recorded, as well as their local uses. Extensive fieldwork has been conducted in more than 50 Malagasy inselbergs. More than 900 species of vascular plants have been recorded on Malagasy inselbergs, which represents a high species richness for these ecosystems, particularly amongst some groups such as succulents, terrestrial orchids, resurrection, and carnivorous plants. This habitat is home to many desiccation-tolerant plants that survive in a dry state for at least several months. Direct observations in the field indicated that Malagasy inselbergs are currently threatened by habitat degradation due to human pressures. Many of the species encountered on inselbergs are highly endangered and classified as threatened. From 177 species assessed for their risk of extinction, four are classified as Critically Endangered, 37 as Endangered, and 35 as Vulnerable. Inselbergs are under-represented within the Protected Area network of Madagascar. Conservation of this unique ecosystem is urgently needed at regional, national as well as international levels.

GSOP/064 - GS10 CHARACTERIZATION of TROPICAL BIODIVERSITY (species, genetics, and landscape)
Thursday 1, August / 14:00-16:00 - Grenat

The importance of searching for lost plant species for biodiversity conservation in Madagascar
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According to Global Wildlife Conservation, lost plant species are plants that have gone unrecorded for years or decades and may be considered as lost. Lost species may therefore be considered as presumably extinct species. New records of their existence in the field will allow to change their status. There can be many causes to the lack of records: 1) the species natural habitat has been degraded or has been completely transformed; 2) the habitat is intact but the species is reduced in size and has not been collected again during posterior collects; 3) there has not been any inventory conducted after the last collection. In this study, we inventoried the species that have not been collected since 1967, taking into consideration rare species that are only known from the type specimen or from one locality since these species are the most threatened with extinction. We mapped their distribution using the Tropicos Madagascar Vascular Plants Catalogue database. By overlaying the distribution map with those of the Madagascar protected areas system and the Madagascar vegetation atlas, we were able to assess the possible status with regards to extinction of the targeted species. The species that occur inside protected areas or in undisturbed area outside protected areas might be rediscovered. By using the maps of the history of deforestation between 2003 and 2016, we were able to identify the species that have possibly gone extinct when their distribution matched with degraded ecosystems or even cultivation fields. We censused 1740 SPE of which 413 are rare. This study allowed us to identify the sites to be investigated in priority for the future inventories.