

DESERT and ROCK PAVEMENT VEGETATION

INTRODUCTION

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This rock pavement vegetation offers a stunning spectacle of colourful flowering plants and unexpected life forms. Orchids and Bromelia's in full bloom next to Cacti (below) and a host of other succulents catch the eye when coming from the savanna grasslands.



Melocactus neryi

They grow on a largely barren substrate of denuded, granitic parent material, thus forming a separate, miniature landscape within the savanna.

Up to 90% of its surface area consists of pure base rock, only sparsely covered by vegetation in multiple micro-niches like opferkessels, oriçanga's, crevices and other depressions.

In these habitats a decisive role is played by the local **micro-climate**. Exposed directly to the sun, bare rock may warm up considerably with air temperatures close to the rock pavement 25 – 30 °C higher than on the savanna. In places with humus accumulation or tussock vegetation the temperature may even rise to 80 °C (personal communication by Dr. P. Stoutjesdijk), while the macro-climate doesn't differ from that of the surrounding savanna and rainforest.

During the wet season rain water may form pools of stagnant water or can run off immediately, leaving behind extremely dry conditions for plant growth. For all these reasons the rock pavement vegetation of the Sipaliwini area may be classified as a **desert** formation rather than a savanna, in line with the definition of Dansereau (1951) for a desert vegetation: 'an open, discontinuous cover, with considerable unoccupied space' (see also Van Donselaar, 1965). To be more specific, we are dealing with an **edaphic desert**, not with a 'rocksavanna' (sensu Lindeman and Moolenaar, 1945, 1959). Van Donselaar (1965) too admits that this is not a 'genuine savanna'.

So we didn't include the vegetation of these granitic outcrops in our survey of savanna vegetation types, another reason being that we were not able to use our standard Braun-Blanquet method of sampling for this sparse and irregular plant cover. We did monitor the occurring species though. A list will complete this paper.

A special study of the Sipaliwini rock pavement flora and vegetation was made by our senior colleague and expedition leader Dr. J.P. Schulz, who also made lots of in situ photos. Together with Dr. J. van Donselaar, who discovered the 'Great Granite Plate' near the Morro Grande during a short visit to the Sipaliwini Savanna in 1966, he decided to compile all their records of granitic outcrop vegetations on Inselberg tops all over the interior of Surinam, in particular those of the Wilhelmina Mts and the Voltzberg.



Frans in front of *Furcraea foetida*