A Field Trip to Gunong Trusmadi

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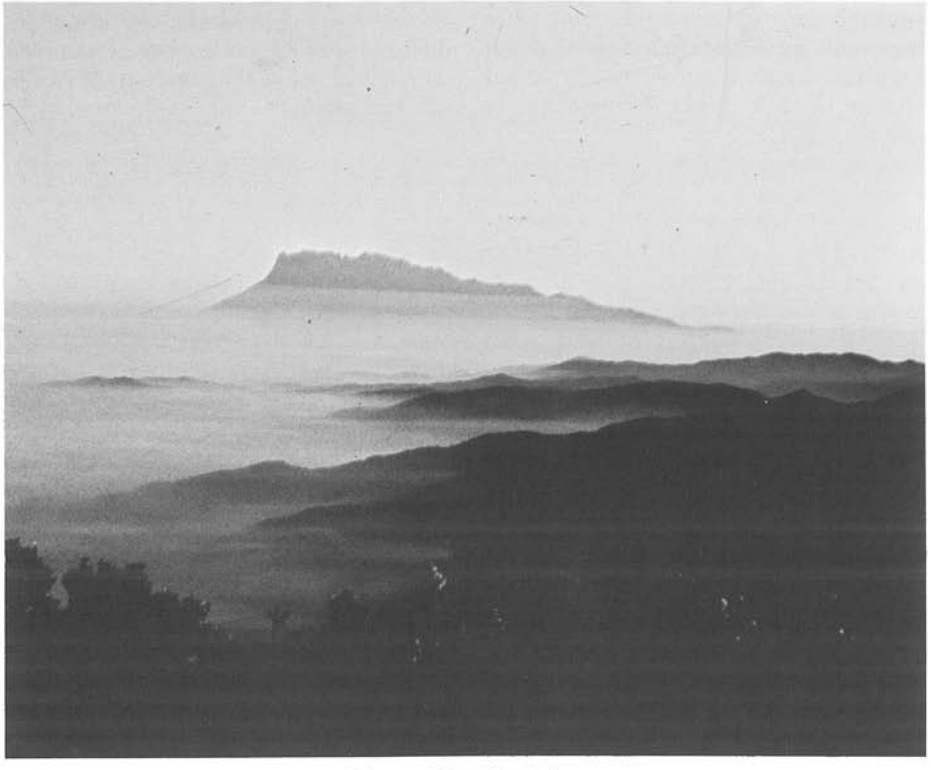
Borneo is well known as the center of *Nepenthes* species especially the higher mountain regions in Sabah, which are called "Mossy forest."

I visited Sabah in March 1983 to make an exedition to the second highest mountain in Borneo, the Gunong Trusmadi. This enterprise had to be well prepared because there is no trail up to the summit and also to the base of the mountain. The chief of the party, Mr. John Briggs, organized the guide and the porters so that my companion Mr. Paul Debbert from the Botanical Institut Munich and I could start in the early morning after spending one night in Tambunan, a small town in the Tambunan Valley.

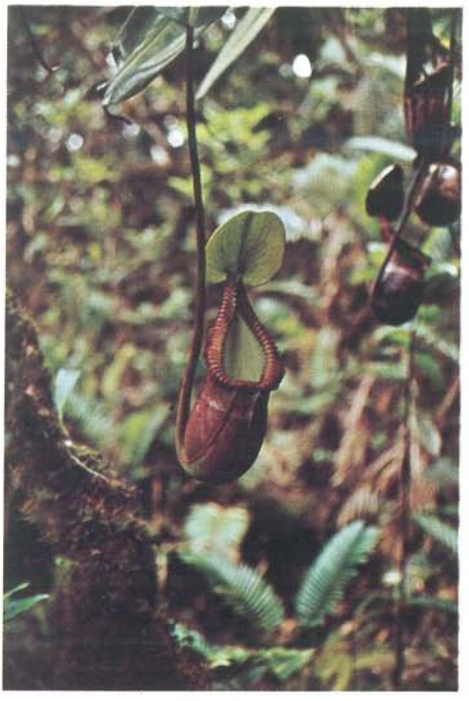
It took three days traveling through the lowland jungle to reach the base of the mountain. Gunong Trusmadi is the highest peak (2900 meters) in an east-western mountain range called the "Crocker Range." The soil consists mainly of gleyic podzol and orthic acrisols; the parent material is sandstone and mudstone compared to Mt. Kinabalu which consists of acid, igneous and ultrabasic rocks.

On the fourth day we started to climb the mountain. After a few hours we reached the first spur which was covered by mossy forest. It was at an altitude of nearly 1800 meters. All the stems of the trees and the surfaces of the rocks were covered by moss. It didn't take a long time until I found the first pitcherplant: *Nepenthes fusca.* This plant grew as a epiphyte in the crown of a small *Eleocarpus* tree. The other species which was wide-spread from there on was *Nepenthes tentaculata,* also well known from Kinabalu. This dainty species grew on the ground and many pitchers were imbedded in the moss. Our guide

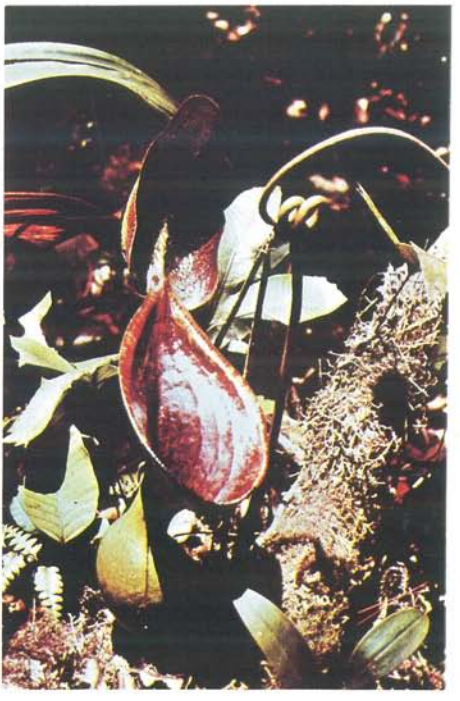


View to Mt. Kinabalu

Photo by J. Marabini

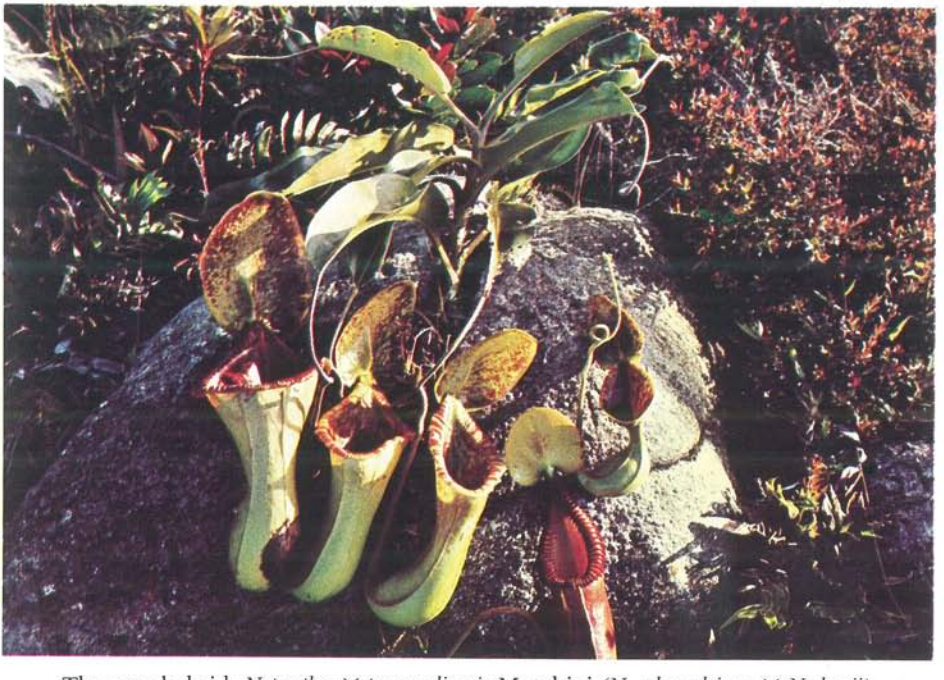


Nepenthes edwardsiana on Trusmadi



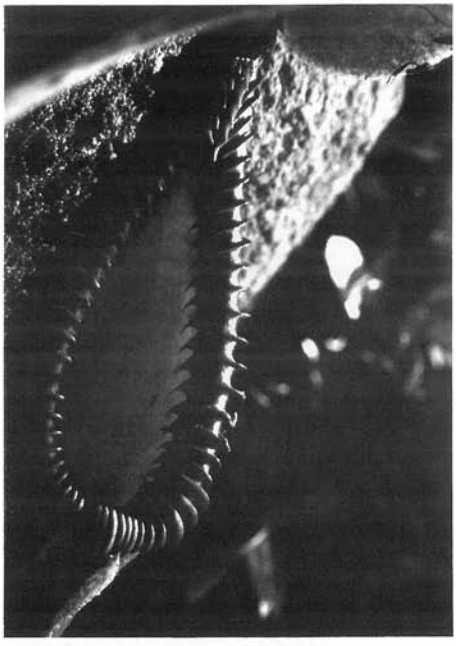
Nepenthes lowii Hook. f.

Photos by J. Marabini



The new hybrid: *Nepenthes* × *trusmadiensis* Marabini *(N. edwardsiana* × *N. lowii)*

Nepenthes tentaculata
Hook. f.



Peristome of *N. edwardsiana*
Hook. f.
Photos by J. Marabini

led us through dried-out brook valleys and sometimes along ridges. After we climbed again 300 meters I found the first example of *Nepenthes lowii* with its really imposing pitchers. The difference of size between these pitchers and those from Kinabalu was clearly recognizable. These pitchers were much larger than the Kinabalu ones. A few meters distant we also found *N. edwardsiana* with immense pitchers. The leaf-blades were nearly 60 cm long, but their shape was quite different from those on Kinabalu. These were not so slender, more cylindrical and the peristome not so extremely padded. From there on we walked through a gallery of pitchers, consisting of *Nepenthes lowii, Nepenthes edwardsiana* and *Nepenthes tentaculata.*

In the late afternoon we reached the summit. I used the rest of the day to explore the near summit region and after a while I found a hybrid between *Nepenthes lowii* and *Nepenthes edwardsiana.* The pitchers were very large and combined the characteristics of both species. It could be possible that this hybrid is endemic on Trusmadi as the locations of *Nepenthes lowii* and *Nepenthes edwardsiana* do not overlap so much on Kinabalu. Therefore I gave this hybrid the name *Nepenthes* × *trusmadiensis.* From all species I took herbarium material for the University Erlangen (West Germany). It should help to compare the plant association on Trusmadi with that on Kinabalu. We had sunny weather all the time and the temperatures at noon reached up to 30° C. In the late evening the top of the mountain was covered by clouds and we felt the misty rain. The next morning we got up early and we had a wonderful view to Mt.Kinabalu. The minimum-maximum thermometer showed us a nightly low temperature of 5° C.

This big temperature difference makes clear how difficult it is to imitate in culture the natural conditions which are essential for these highland plants. It's not only the low temperature which is necessary for growing but rather the change of temperature between day and night. And this is only one factor which is necessary for survival in culture.

Hybrid name officially published in Mitt. Bot. München *19*:449-452.1983.