as a medium: \((\text{NH}_4)_2\text{SO}_4\) 24 mg/l  
K\text{SO}_4 64  
Mg\text{SO}_4 44  
K\text{NO}_3 55  
K_2\text{HPO}_4 25  
Ca(\text{NO}_3)_2 29  
Citric acid 3

Algal growth may inhibit *Aldrovanda* growth in which case add desiccated alum and change the water frequently.

**NEPENTHES AND I - MT. KINABALU (BORNEO, MALAYSIA) TRIP**

by Yoshiwo Toyoda

Mt. Kinabalu, located in Sabah State, North Borneo, Malaysia, is the highest mountain in southeastern Asia, 4101 m. alt. (13,455 ft.). Since this area is called Mt. Kinabalu National Park (433 km² wide), the Malaysian government supports this park and protects its wildlife, animals and plants. This mountain is very famous as a *Nepenthes* source, especially four endemic species.

A chance to go there came to me in 1971: the governmental office of the park was looking for a person who could make a field trip for *Nepenthes* collecting with some workers there. I applied and they were very cooperative with me. I joined their field trip from April to May, 1971. According to previous literature, most of the *Nepenthes* in Mt. Kinabalu grow in the zone between open mixed forests (alt. 900-1800 m.) and moss forests (alt. 1800-3150 m.), called the *Nepenthes* zone. We planned a visit to this zone first and then to Marai-Parei where the king of *Nepenthes*, *N. rajah* grows.

First of all, we reached the headquarters of Mt. Kinabalu National Park (alt. 1615 m.). Around this foggy area, we found *Nepenthes tentaculata*, the first species of the trip. Next day, we left the 9100 base camp for further searching. *Nepenthes stenophylla* was found in a grassy area along the trail by the electric power station, alt. 2145 m. Soon after that, hundreds of beautiful *Nepenthes tentaculata* were seen along the trail. Then we entered into the moss forest with thousands of mosses, orchids, and many other tropical plants and *N. tentaculata* in wonderful natural gardens. If you could see it, you would never forget it. According to our observations, the humidity was 50% and the temperature was 23.5°C.

After that, in the next zone, we found *Nepenthes lowii* which was climbing up trees. Pitchers of this species were very peculiarly shaped. In this area the humidity was 40%, temperature 25°C. Soon after we saw the building of the radio station (Radio Sabah, alt. 2590 m.) and found another species, *Nepenthes villosa*. Then at 3:00 p.m. we reached our first camp (alt. 2654 m.). The next day, at altitude around 3047 m., there was the biggest population of *Nepenthes villosa* we have ever seen.
Another day, we left the base camp for Marei-Parei. After two hours' walk on the second day, we found Nepenthes tentaculata and knew we were already in the Nepenthes zone. Later, Nepenthes rajah was found. In a sunny wet boggy area N. edwardtiana was seen. Three hours after we left the first camp we arrived at Marei-Parei, alt. 1828 m. There was the biggest population of *Nepenthes rajah* (800 m²) I have ever seen. Thousands of seedlings of *N. rajah* were there. There was also a good population of *Drosera spatulata*. It was the shortest day in my whole life when I found *Nepenthes rajah*. Readers might understand my feeling for a time when I found something new that I wanted if you have had similar experiences to this.

**SPECIAL NOTICES**

**JAPANESE CARNIVOROUS PLANT BOOKS**

The following books were written in Japanese on the subject of carnivorous plants. These books can be ordered from our offices by sending in your check or money order made out to J. A. Mazrimas before March 1, 1973. I will order the books at that time and there may be a delay of two months or more before you receive your books. The books have pictures in black and white and color as well as line sketches, many captions being in standard Latin nomenclature as well as Japanese.

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<th>Author</th>
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<th>Pages</th>
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<tbody>
<tr>
<td>1. Shimizu</td>
<td>Insectivorous Plants (Photo. Illust.)</td>
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<td>2. Suzuki</td>
<td>Insectivorous Plants (Cult. and Collect.)</td>
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<td>5. --------</td>
<td>&quot;New Flower&quot; Magazine (Special edition) (English)</td>
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<tr>
<td>6. Komiya</td>
<td>Systematic Studies on Lentibulariaceae</td>
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*Price includes overseas and domestic postage and represents cost only.

NORMAN LEFKOVITZ (617 Treeside Drive, Akron, Ohio 44313) would like to directly communicate with anyone who is or has grown carnivorous plants under artificial lights, or who is interested in doing so. Norman is gathering quite an experience in this area.

**RECENT LITERATURE**


Nepenthes crude secretions had four proteases, the purified extracts one, the latter similar in electrophoretic mobility to the purified extract of *D. peltata*. Characterizations with pH