

SUMMARY

Title of Project – Floristic composition and vegetation structure of
Labugama – Kalatuwawa Forest reserve

Institution where research was carried out: Dept of Botany, University of Colombo

Chief Scientific Investigator and co-investigators:

Dr. (Mrs.) G. I. Seneviratne & Prof. K. Abeynayake

Period of Contract : 1 July 1994 to 31 January 1999

Scientific Background and Objectives of the Project :

Labugama-Kalatuwawa is the forest reserve linked to the water supply of Colombo. It is a relic forest in the most degraded floristic region of the country and it had not been researched upon before. The reserve includes natural forest patches as well as recovering forest in the previous village settlements. The objectives of the project were;

- a. To identify the plant species and make a check-list for the reserve.
- b. To study the composition and structure of different plant communities / associations in areas with varying degree of disturbance.
- c. To highlight the significance of protecting / improving the reserve

Experimental Methods :

Using the land use and vegetation map (1960) and the Awissawella sheet (1992), a map indicating the present boundaries as well as the previous vegetation pattern was prepared.

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Using this, a general survey was carried out to see the differences in vegetation with respect to habitats, altitude and the degree of disturbance. Neither the examination of aerial photographs nor camping within the forest was allowed due to security reasons. The selected transects were examined during single day visits carried out at intervals through out the study period. Specimens were collected (except in the case of rare species) where possible and were identified using the standard methods. Voucher specimens have been deposited in the herbarium, Dept. of Botany, University of Colombo. In addition to the general collection, A total of 42 plots of 25mx25m were marked in six selected areas and all species over 10cm diameter at breast height were enumerated.

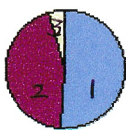
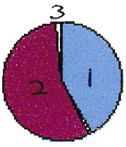
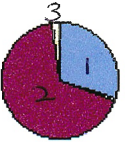
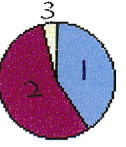
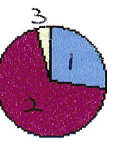
Results

A total of 348 angiosperm species belonging to 239 genera in 81 families have been identified and the check-list prepared is given in appendix ii. Of the total 43% is endemic to the country and 3% is introduced. The results are summarized in table 3.

Within the reserve there are 21 highly threatened and 36 threatened species (National list of IUCN, 1999). It is home to 9 endangered, 10 vulnerable, 17 rare and 7 indeterminate species (Globally threatened species list, 1997) A total of 26 very rare and 53 rare species which needs attention in future programs is also given. One such species is *Eriocaulon fluviatile*, a species found only in Labugama - Kalatuwawa reserve but no where else in the country. The details of the enumerated species are given in appendix iii. Of the six areas examined, Wewila is the least disturbed and most of the other areas show very little recovery.

Table 3. Species Diversity at Labugama-Kalatuwawa Forest Reserve

Angiosperms	
No. of species	348
No. of genera	239
No. of families	81
Ferns and fern allies	
	29
Bryophytes	
	7

	Trees	Shrubs	Herbs	Epiphytes	Climbers
1. Endemic	85	24	16	11	12
2. Indigenous	75	32	36	15	30
3. Introduced	7	1	1	1	2
Total	167	57	53	27	44
					

Conclusions

Although the forest has been disturbed heavily in the past, 43% of the angiosperm species found are endemic to the country. Out of the six areas sampled Wewila is the least disturbed area and the rest have mostly secondary forest tree species. As it is both

ecologically and economically important to the country, a proper management plan considering the reserve as well as reservoirs is urgently required.

Publication: Seneviratne, G. I., Abeynayake, K. and Lenagala, M. R. K. 1996.
Floral Diversity of Kalatuwawa – Labugama Forest Reserve. Proceedings of the
Regional Seminar on Forests of Humid Tropics of South and Southeast Asia, NSF

Public Lecture on Labugama-Kalatuwawa Forest Reserve- a catchment area for
Colombo water supply 3 April 1998, SLAAS

**FLORISTIC COMPOSITION AND
VEGETATION STRUCTURE OF
LABUGAMA-KALATUWAWA
FOREST RESERVE**



To the people who have left their homes behind