

506/E1

Development of a computerized herbarium catalogue and a taxonomic database for the herbarium of University of Colombo

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The herbarium can be considered as a collection of preserved plants stored, catalogued, and arranged systematically for study by the different stakeholders from many walks of life. Well developed information systems are an urgent need to fully manage both the information and the functions of herbaria. But, in Sri Lanka the huge amount of information stored in the herbaria are underutilized due to lack of proper information management.

This study was emphasized on the development of a computer system for the herbarium of Department of Plant Sciences, University of Colombo by incorporating computer and botanical knowledge. The major objective of the project was the establishment and management of a flexible integrated database of herbarium botanical information, to improve the efficiency of herbarium usage.

It was designed for three main components. Initially, total of over 4000 plant specimens belong to 176 angiosperm plant families were systematically arranged. The families were arranged alphabetically, following the genera within each family and the species within each genus. The second phase comprised of the interface designing and coding of the system, which was done using the programming language: Visual Basic.NET. The developed Herbarium Information Catalogue (HerbCat) Beta Version comprised of approximately 5000 lines of Visual Basic codes and the Microsoft Access database contained 24 fields in 10 tables and this system included data entry and search facilities. These options were allowed to access by different users depending on the user type; Administrator or Limited User. Users with limited accessibility privileges were only allowed to search the herbarium information in the database and view the basic herbarium information with in the University of Colombo herbarium. In addition they are allowed to view the herbarium database information summary. Unlike the limited users, the users with administrator privileges are allowed to access lot of other advanced options such as data insertion and information revision with all the accessibility options of the limited users. Both users can search the taxonomic database for the full information of a specific angiosperm plant species using the Family, Genus, common names, locality, etc. Finally, the information in the herbarium was inserted in to the developed system. As the initial trial, 252 of herbarium sheet data were inserted in to the system those belong to 4 angiosperm plant families. This completely novel system requires time to become accepted by different stakeholders and further continuation of the data entry is needed to develop a fully functioning taxonomic database for the herbarium of University of Colombo.

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