

An ecological bibliography for southern Africa

A. J. ENGELBRECHT*, D. EDWARDS* and D. J. B. KILLICK*

ABSTRACT

An ecological bibliography for southern Africa up until 1975 is currently being compiled. References recorded by researchers at the Botanical Research Institute, Pretoria are being expanded and incorporated into a computer data base. All references are annotated with codes, key words, biomes and regions where applicable. The IBM/STAIRS programme package is used for retrieving references by means of authors and subject headings as well as sorting alphabetically.

RÉSUMÉ

UNE BIBLIOGRAPHIE ÉCOLOGIQUE POUR L'AFRIQUE DU SUD.

Une bibliographie écologique pour l'Afrique du Sud jusqu'en 1975 est en cours de préparation. Les références relevées par les chercheurs à l'Institut de Recherche Botanique de Pretoria sont en train de s'accumuler et elles sont incorporées dans une base de données. Toutes les références sont annotées avec leurs codes, leurs mots clefs, les formations végétales et les régions qui les concernent. Le progiciel (produit logiciel) IBM/STAIRS est utilisé pour extraire les références sur base des noms d'auteurs et des intitulés des sujets, aussi bien que pour classer alphabétiquement.

INTRODUCTION

Because of the strong involvement of the Botanical Research Institute in plant ecological studies it was considered necessary to produce an ecological bibliography for southern Africa. By southern Africa is meant southern Africa in its broad and systematic sense, i.e. South Africa and South Tropical Africa. At the start of projects, ecologists require literature references relating to the areas which they intend studying. Usually this is time-consuming work involving much bibliographical research and reliance on the memory of the Institute's librarian. In addition to its own requirements, the Institute caters for the reference requirements of other institutions such as universities, conservation organizations and other institutes of the Department of Agriculture and Fisheries. From what has been said, it should be clear that there is a real need for an ecological bibliography.

METHODS

Since the beginning of their botanical careers the last two authors have kept and maintained fairly exhaustive card indexes to the literature of southern African ecology. The first step was to combine the two card indexes and expand them to include all possible relevant references and vegetation maps until 1975. The Universal Decimal Classification (UDC) system was used to provide a hierarchical subject classification currently consisting of approximately 200 subject headings and subheadings. Keywords, forming a lower rank where subject headings are insufficiently descriptive, are selected from each reference as they occur and form the basis of an ecological thesaurus. The key words are also arranged hierarchically in the ecological thesaurus

with broad and narrow terms, synonyms and related terms indicated. Additional information such as biome, taxon number, area covered and scale where applicable, are also included with each reference.

The ecological bibliography for southern Africa will form part of the Ecology Section literature index (ESLI) data bank using the IBM System/370 computer. The IBM Storage and Information Retrieval System (STAIRS) programme package, which is available for sorting and retrieving references, will be used to sort an author index and select and sort references under various subject headings. The sorted data will then be printed by a computerized photosetting machine of the South African Documentation Centre for Agricultural Information, Department of Agriculture and Fisheries, which will provide master copies for printing.

CONCLUSIONS

The ecological bibliography for southern Africa will fulfil an urgent need by researchers for a comprehensive ecological bibliography. Considerable time will be saved at the start of projects where literature searching is often time consuming. The current expansion of references in ecology, where other disciplines are often involved, makes a computerized data bank for literature essential. Loading of the data into the data bank is at an advanced stage and test runs for retrieval, sorting and printing have been conducted. Publication of the ecological bibliography for southern Africa as a Botanical Survey Memoir is envisaged for 1982, whereupon loading of data for the period 1976–1982 will commence.

* Botanical Research Institute, Department of Agriculture, Private Bag X101, Pretoria 0001, South Africa.

