

Computer Aided Program -"DCB" for retrieval of references*

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In the present paper a computer program is presented for search retrieval of references on palynology and allied aspects related to Gondwana Sequence.

Key-Words - Computer, References, Gondwana.

INTRODUCTION

THE continuous effort for the usage of computer in palynology has resulted in the development of Data Bank pertaining to the palynology and allied aspects on Indian Gondwana. The "Data Bank-PGGP", developed in dBASE III Plus Software, has been prepared through course of time by the team of palynologists namely Drs. R.S. Tiwari, Suresh C. Srivastava, Archana Tripathi, Pramod Kumar, Vijaya, B.N. Jana, Neerja Jha, Ram Awatar, A.P. Bhattacharyya, and K.L. Meena, and the Technical Assistant, Mr. Chandrapal working in the Department of Pre-Gondwana and Gondwana Palynostratigraphy (PGGP) of Birbal Sahni Institute of Palaeobotany, Lucknow. The Data-file records about 2000 references on the subject. For the effective and purposeful utilization of this vast information, the search retrieval of references according to need-based requirement had been felt necessary. To cope with this problem it had been planned to develop a program to retrieve the references according to the fields identified for the records of data bank. The search field could be a particular author, year, basin or area, age, stage and various subjects, viz. palynostratigraphy, morphotaxonomy, boundary problems, palaeoclimate, electron microscopy of palynomorphs, palynological techniques, etc. In the present paper the program for search retrieval of references is communicated.

DATABASE-PGGP

Initially the palaeopalynological information were stored at the PGGP Department of the BSIP in a selective manner using the floppy disc in a S-810 microcomputer

STRUCTURE FOR DATABASE			
Field	Field Name	Type	Width
1	Author1	Character	20
2	Author2	Character	20
3	Author3	Character	20
4	Author4	Character	20
5	Year	Character	4
6	CITATION	Character	254
7	SUBJECT1	Character	20
8	SUBJECT2	Character	20
9	SUBJECT3	Character	20
10	SUBJECT4	Character	20
11	SUBJECT5	Character	20
12	SUBJECT6	Character	20
13	AGE	Character	30
14	STAGE	Character	30
15	BASIN	Character	30
16	AREA	Character	30
17	REPOSITORY	Character	10
Total	RECORD LENGTH		589

Fig. 1

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PALYNOLOGY	GEOLOGY	PALAEOBOTANY	PALAEONTOLOGY	GENERAL
Algae	Coal balls	Cuticle	Brachyopods	Climate modern
Angiosperm	Coal geology	Floras	Chitinozoa	Computer
Biostatistics	Code	Fructification	Fresh Water fauna	Palaeochemistry
Biota	Continental drift	Pb. boundary	Fusulinids	Palaeoclimate
Bryophytes	Extinction	Pb.dating	Invertebrate fauna	Palaeoenvironment
Classification	General Geology	Pb.evolution	Marine fauna	Palaeogeography
Degradation	Geochemistry	Pb. stratigraphy	Microforams	Stromatolites
Electronmicroscopy	Geological boundary		Pt.boundary	Tethys
Exine	Geological classification		Pt.review	
Fungal spores	Geological correlation		Pt. stratigraphy	
Gymnosperm	Geological synthesis		Scolecòdonts	
In-situ spores	Geophysics		Spirifers	
Living	Glacial sediments		Sponge-spicules	
Marine	Heavy mineral		Trace fossil	
Megaspore	Lithostratigraphy		Vertebrate fauna	
Microplankton	Marine sediments			
Miofloras	Maturation/Oil			
Morphology	Mineralogy			
Nomenclature	Orogeny			
Palynobibliography	Palaeocurrent			
Palynoboundary	Palaeogeography			
Palynocorrelation	Palaeogeomorphology			
Palynodating	Palaeomagnetism			
Palynoevolution	Petrology			
Palynopetrology	Plate-tectonics			
Palynostratigraphy	Radiometric dating			
Palynosynthesis	Sedimentology			
Palynotechnique	Stratigraphy			
Pollenchemistry	Structural geology			
Pteridophyte	Volcanic rocks			
Reworking				
Taxonomy				

Fig. 2

provided by UPTRON Digital Systems Ltd. In order to get more information in one diskette the details about authors, journal and subjects were coded and abbre-

viated (Rajagopalan, Tiwari, Srivastava, Tripathi & Singh 1984). With the availability of IBM compatible microcomputer -8088 PC/XT, now the information is

SEARCH RETRIEVAL OPTIONS MENU

1. PARTICULAR AUTHOR
2. AUTHORS & YEAR ONLY
3. SUBJECTS & OTHER SUPPLEMENTARIES
4. ALL POSSIBLE COMBINATION
0. BACK TO MAIN MENU

CHOOSE OPTION 0

Fig 3

RESPONSE FOR RETRIEVAL OPTIONS 1 & 2

AUTHOR1 (Y/N) Y
AUTHOR2 (Y/N) Y
AUTHOR3 (Y/N) Y
AUTHOR4 (Y/N) Y
YEAR (Y/N) Y

Fig 4

RESPONSE FOR RETRIEVAL OPTION 3

		SUBJECT1	(Y/N) Y
BASIN	(Y/N) Y	SUBJECT2	(Y/N) Y
AREA	(Y/N) Y	SUBJECT3	(Y/N) Y
AGE	(Y/N) Y	SUBJECT4	(Y/N) Y
STAGE	(Y/N) Y	SUBJECT5	(Y/N) Y
		SUBJECT6	(Y/N) Y

Fig 5

RESPONSE FOR RETRIEVAL OPTION 4

AUTHOR1	(Y/N) Y	SUBJECT1	(Y/N) Y
AUTHOR2	(Y/N) Y	SUBJECT2	(Y/N) Y
AUTHOR3	(Y/N) Y	SUBJECT3	(Y/N) Y
AUTHOR4	(Y/N) Y	SUBJECT4	(Y/N) Y
AREA	(Y/N) Y	SUBJECT5	(Y/N) Y
AGE	(Y/N) Y	SUBJECT6	(Y/N) Y
STAGE	(Y/N) Y	BASIN	(Y/N) Y
		YEAR	(Y/N) Y

Fig 6

OUTPUT USING OPTION 1 OR 2

1971

ACHARYYA, S.K.
RANGIT PEBBLE SLATE- A NEW FORMATION
FROM DARJEELING HILLS. IND. MIN. 25: 61-64
MARINE FAUNA PALAEOENVIRONMENT
PERMIAN DARJEELING RANGIT PEB.SL. E.
HIMALAYA

Fig 7

stored in its original form without abbreviating or coding in dBASE III Plus Software. The structure of the file is given in Fig.1. The record has seventeen fields with a total length of 589 bytes. The subjects of the references are as identified earlier (Fig. 2).

SEARCH RETRIEVAL PROGRAM-"DCB"

The present program is coded in dBASE-III-Plus Database Software at the Department of Pre-Gondwana and Gondwana Palynostratigraphy, Birbal Sahni Institute of Palaeobotany, Lucknow. The program, written in a selective manner, is designed in a very user-friendly manner. It is classified as 4 retrieval options, such as – particular author, author and year, subjects and other supplementaries, and solitary or all possible combination of fields (Figs 3-6) for easy use by the persons untrained in computer. Sample output of the Program is given in Figs 7-8. The Program is of

OUTPUT USING OPTION 3 OR 4

1962

BHARADWAJ, D.C.
THE MIOSPORE GENRA IN THE COALS OF
RANIGANJ STAGE (UPPER PERMIAN), INDIA.
PALAEOBOTANIST, 9:68-106
MORPHOLOGY
PERMIAN RANIGANJ DAMODAR RANIGANJ

1965

BHARADWAJ, D.C., SAH, S.C.D., TIWARI, R.S.
SPOROLOGICAL ANALYSIS OF SOME CAR-
BONACEOUS SHALES AND COAL FROM BAR-
REN MEASURE STAGE (LOWER GONDWANA) OF
INDIA. PALAEOBOTANIST, 13:22-226
MORPHOLOGY
PERMIAN BMEASURE DAMODAR JHARIA

Fig. 8

generalised nature and can be modified to similar needs for other branches of science as well.

This Program has been named "DCB" in the memory of Late Dr. Dinesh Chandra Bharadwaj, Ex-Deputy Director, Birbal Sahni Institute of Palaeobotany, Lucknow who initiated the cataloguing of references in

a big way at the PGGP Department and planned to develop the Data Bank on Computer. We are happy that we could continue the work along the path he had shown.

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Pre-Gondwana and Gondwana Palynostratigraphy, Birbal Sahni Institute of Palaeobotany, Lucknow for their initial contribution in cataloguing of the palynological literature providing the basic material for the present computer program.

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