

Creation, retrieval and distribution of bibliographic contents in KSCSTE libraries: Experimenting with a new text based search engine.

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KLA National SAemin, 14-16 July 2011, Thiruvananthapuram

Three aspects are covered

- 1. What is achieved**
- 2. How it is done**
- 3. Strength and weakness**

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Library contents of KSCSTE institutions brought into centralized system

Institutions	Integration	Target
KFRI: Libsoft, ISIS TBGRI: Libsoft CESS: Soul CWRDM: Alice KSCSTE: Libsoft NATPAC: Libsoft	Data brought into uniform format in centralized server	Combined search of Library books, nearly 70,000 of all. Combined search of publications of all with full text storage and retrieval capacity



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Achievements



KERALA STATE
COUNCIL FOR
SCIENCE,
TECHNOLOGY AND
ENVIRONMENT

Digital Library

KSCSTE DIGITAL LIBRARY

Integrated catalogue R & D Institutions

Publications (Research Reports , Scientific
Papers etc.)

Special Information System

Bamboo Bibliography

Teak Bibliography

1

Books

Search for '**climate plants**' has yielded
four **books**, two from KFRI, one from
TBGRI and one from CESS

KSCSTE Digital Library

Integrated catalogue R & D Institutions
Libraries

 Brief display Detailed display

Concepts: Dr. P
Vijayakumaran Nair
Programming &
Designing: Ricy Eliner
Varkey
Data Compilation:
Hussain KH & Sarojam N

4 Results

1. Jones, H.G.
Plants and microclimate. 1983 .
KFRI Library 581.54 JON
2. Jones, H.G
Plants and microclimate. 1983 .
KFRI Library 581.54 JON
3. Hawkins, Belinda; Sharrock, Suzanne et. al.
Plants and climate change which future. 2008 .
TBGRI Library 581 HAW



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Digital Library

Search for 'teak wood' has yielded 28 publications, the first is shown below. Please note the full text document which can be displayed by following the link

KSCSTE DIGITAL LIBRARY

Integrated catalogue R & D Institutions
Publications (Research Reports , Scientific Papers etc.)
Special Information System
Bamboo Bibliography
Teak Bibliography

2

The screenshot shows the KSCSTE Digital Library search results for 'teak wood'. The search bar contains 'teak wood' and the results are displayed in a list format. The first result is 'Micropropagation of teak, rosewood and sandal. 1997 . KFR I Research Report 119: 20p' by E.M. Muralidharan. The link 'KFR I-RR119.PDF' is provided for the full text document. The page also shows navigation links like 'Home, About KFRI', 'Institutions', 'Divisions', 'Research Areas', 'Collections/Facilities', 'Library', 'Publications', and 'Advertisements'. A watermark 'KLA National SAeminar 14-16 July 2017' is visible across the page.

Publications



KLA National SAeminar, 14-16 July 2011, Thiruvananthapuram

Methods

Books

Nbr	Author	Year	Title	Source	KW	Address
102	Nair, PV; Ramachandran, KK; Thomas, PT.	2007	Mapping biodiversity of Myristica swamps of southern Kerala	Kerala Forest Research Institute	Frogs, amphibians, snakes, reptiles	nairpv@kfri .org

102. Nair, PV; Ramachandran, KK; Thomas, PT. (2007) Mapping biodiversity of Myristica swamps of southern Kerala. Kerala Forest Research Institute. **Frogs, amphibians, snakes, reptiles**. nairpv@kfri.org. **Abstract:** Faunal biodiversity of the *Myristica* swamps consisted of Platyhelminthes- 3 species, Nematelminthes – 1 species, Annelida 4 species, Mollusca- 10 species, Unidentified Crustacean-1 species, Insecta-281 species belonging to 83 identified families, Myriapoda- 6 species and Arachnidae 54 species, Pisces 14 species, Amphibia 56 species, Reptilia 55 species, Aves 129 species and Mammalia 27 species.

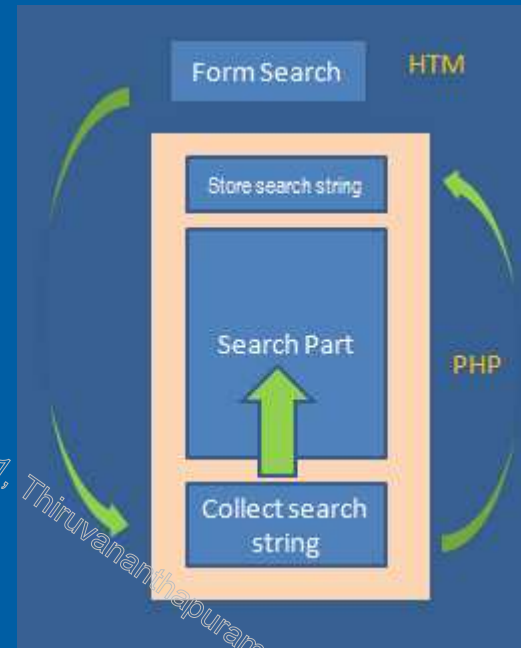
[Upto 9 key words. Subject, author, year, genus, species, place, list, map or adm. unit]

syz cum

SEARCH

Searching

1. Up to nine key words
2. Uppercase or lower
3. Part of words can be used
4. Words separated by space
5. Hits if all words present
6. Help when 'help' entered



The HTML-PHP code is about 250 lines

Additional features

By adding names of linked files in `[[...]]`, the search engine will produce hyperlinks in the hit record displays. Files in `/links` folder.

`[[timbers.pdf]]` {{Timbers.lst}} Bhat, KM; Hussain, KH; Thulasi Das. 2010. A hand book of lesser known Indian timbers. Kerala Forest Research Institute. Peechi.

2. Bhat, K.M; Thulasidas, P.K; Hussain, K.H
A handbook of lesser-known timbers. 2007 .
KFRI Research Report 304: p225
[KFRI-RR304.pdf](#)

Integrated search

Integrated search is made possible by modularizing the program. The search routine needs only few arguments, list of key words and the file to be searched. Integrated search is achieved by repeatedly calling the module with different data sets.

Books

SEARCH

Publications

SEARCH

Flora

SEARCH



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Importance

KERALA STATE

- [Introduction](#)
- [Kerala state](#)
- [Local bodies: Dvp. plans](#)
- [Local bodies: Resources](#)
- [Adm. Taluks and villages](#)
- [Climate and topography](#)
- [Forests and vegetation](#)
- [Forest statistics](#)
- [Animals and plants](#)
- [Social aspects](#)
- [Books and publications](#)
- [Water bodies](#)

[SUBMIT FILE](#)

Local bodies: Dvp. plans

- [Dist. Thrissur](#)
- [Dist. Kozhikode](#)

Dist. Thrissur

- [Block Ollukkara](#)

Block Ollukkara

- [GP Kolazhy](#)
- [GP Madakkathara](#)
- [GP Nadathara](#)
- [GP Pananchery](#)
- [GP Puthur](#)
- [GP Vilvattom](#)



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HTML Commands are sufficient for displaying a list of books. But providing a list of **16,072** (KFRI) may not be useful.

Search string: periyar
=====

BOOKS Matches: 15/16072

1. Vijayan, V.S. et al. 1979.
Periyar tiger reserve: A
reconnaissance report.
06024. 599.742.7 VIJ.

KSCSTE Digital Library

SEARCH

[Home](#)

[List Books](#)

[List Research Reports](#)

[List Research Papers](#)

[Search Books](#)

[Search Research Reports](#)

[Search Research Papers](#)

[About](#)

Help. You can enter key words in the search box.
Narayanan Nair, P. 1961. Regeneration of forest
Lodha, Charan Dass. Nursery practices in forest
FAO, Rome. 1955. Eucalyptus for plantation
Department of Forestry, Canada. 1961. Nursery
Brown, H.P. 1925. Elementary manual on forest
Gorrie, R.M. 1946. Soil and water conservation
FRI, Dehradun. 1959. Proceedings of All India
FAO. 1970. Preinvestment survey of forest
Shagaev, V.A. 1971. Preinvestment survey of forest
Von Monroy. 1960. Integration of forest
Bhalla, B.K. Svanguist, N. 1968. Optimum
Sood, Vishnukumar. Starrang, Lennart. 1968. 1st
Indian Forest Service Association, New Delhi
Hari Krishnan, M. 1960. Some important forest types
Chandrasekaran, C. 1960. Forest types of India
Sandy Hill fourdrinier machines. Sandy Hill
1975. Guidelines before establishing a forest
FAO. 1958. Fiberboard and particle board
FAO. 1966. Plywood and other wood-based
Reed, F. L. C. 1974. Markets and market
United Nations Economic Commission for Africa

CATALOGUES

- Books, Articles, Reprints, etc.
- KFRI PhD Thesis
- KFRI Published Books

FULL TEXT ARCHIVES

- eBooks
- ePrints
- Indian Forest records
- Indian Forester
- JBNHS
- KFRI Brochures
- KFRI Information Bulletins
- KFRI Newsletter-Evergreen
- KFRI Research Reports
- KFRI Scientific Papers
- Paper Clippings

BIBLIOGRAPHIES

- Bamboo
- Teak

One may be able to make attractive layouts using packages such as WORDPRESS. But to do any kind of meaningful search with large sets of data, one will need search engines of this sort.

KFRI Library
Integrated catalogue of Books, Articles, Reprints . . . [Home](#)

Concepts: Dr. P Vijayakumaran Nair
Programming & Designing: Ricy Eliner Varkey

fresh water

Brief display Detailed display

200 Results

1. Muirhead-Thomson, R.C
Pesticides and freshwater fauna. 1971 .
BOOK 632.95:595(28) MUI
2. Ricker, W.E
Methods for assessment of fish production in fresh waters. 1971 .
BOOK 639.21 RIC
3. Clegg, John
Freshwater life. 1974 .
BOOK 577.426.32 CLE

The search engine developed could be used for distributing searchable, self contained CDs with or with out full text. A sample file set can be located by search <http://www.kfri.org> for 'digital library'.



<http://www.kfri.org>

The screenshot shows the 'KSCSTE Digital Library' website. The header is yellow with the text 'KSCSTE Digital Library'. Below the header, there is a search section with a search bar containing the text 'bam' and a 'SEARCH' button. To the left of the search bar, there are several navigation links: 'Home', 'List Books', 'List Research Reports', 'List Reasearch Papers', 'Search Books', 'Search Research Reports', 'Search Reasearch Papers', and 'About'. The search results section shows 'Search string: bam' followed by a dashed line and 'RES_REP Matches: 2/5'. The results list two items: 1. Chacko, KC 2002. . Manual of seeds of forest trees, bamboos and rattans. Kerala Forest Research Institute. Peechi. [seeds.pdf](#) and 2. Muktesh Kumar. 2002. Field identification key for native bamboos of Kerala. [bam_ker.pdf](#). A faint watermark 'KLA National SAeminar, 14-16' is visible across the screenshot.

Code revealed !

Details are available in public domain with sample data. You can try it. Each of the librarians present here can make their digital libraries in one day. Documentation, this presentation and sample web site included.

A sample file set can be located by search in <http://www.kfri.org> for 'digital library'.

<http://www.kfri.org>

Download and unzip, copy to root folder such as `c:/xamp/htdocs` of server

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Strength and weakness

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One can use database of one's choice. CDS/ISIS, Libsoft, Soul, Alice, Koha, Dspace, etc.

Make ascii files for the digital library proposed.

Include HTML format if needed.

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Data base vs. Text format:

- ✓ In database, direct location of record is possible.
- ✓ Index based search is also possible. Indexing of whole field, inside title and abstract is possible only in databases such as ISIS.
- ✓ Other databases cannot index multiple author/keywords. Author initials also likely to create problems.
- ✓ These problems are solved by present format. Speed achieved by multiple smaller files (Instances of same files used simultaneously minimized) .
- ✓ Need for keeping linked documents inside MySql avoided.

- ✓ Search history kept for each database, user interest can be monitored.
- ✓ Written in HTML and PHP. PHP runs in server which is usually a very fast machine.
- ✓ Additions can be in separate file. This save upload time.
- ✓ Text reading is buffered by OS and PHP. Need of database speed not felt.
- ✓ Hit records are displayed on screen which is a slow process. Therefore slight delay is un noticeable.

- ✓ **Search of Wordpress, Drupal and other packages not comparable. These packages will not go into sub fields or inside linked documents. Search in these are done through complicated metadata management.**
- ✓ **Backup easier, being user created folders.**
- ✓ **Mechanism is suitable for making self contained CD, intranet or internet.**



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Thank You ...