

KFRI Research Report 454

**Digitization of Indian Forest Records,
Forest Bulletins and Forest Leaflets**

[Final Report of the Project No. KFRI 582/2009]

Sarojam, N

Hussain, K.H

George, K.F



Kerala Forest Research Institute

(An Institution of the Kerala State Council for Science, Technology and Environment)

Peechi - 680 653, Thrissur, Kerala

October 2012

CONTENTS

Acknowledgements	
Project Proposal	
Abstract	
Introduction	1
Methodology	2
Conclusion	7
Appendices	8
I: Forest Bulletins	8
II: Forest Pamphlets	13
III: Indian Forest Bulletins	14
IV: Indian Forest Leaflets	18
V: Indian Forest Memoirs	20
VI: Indian Forest Records	21
VII: Indian Forest Records (New Series)	32
VIII: Leaflets Forest Zoology	45
Author Index	46
Subject Index	48

ACKNOWLEDGEMENTS

We are grateful to Dr. K.V. Sankaran, Director, KFRI for his constant encouragement and the Research Co-Coordinator Dr. K. Swarupanandan for valuable suggestions at all steps of the program implementation. We are always indebted to Dr. P. Vijayakumaran Nair and Mrs. Ricy Eliner Varkey for developing the search interface and helping in the successful implementation of the project. We are also grateful to Dr. P. Rugmini, Shri. A.R. Rajan and Dr. A.V. Raghu for their editorial comments and suggestions. Thanks are also due to Lijesh T.K and Smt. Afja for scanning and processing the documents.

PROJECT PROPOSAL

- A. Project Number KFRI 582/2009
- B. Title Digitization of Indian Forest Records, Forest Bulletins and Forest Leaflets.
- C. Funding Agency KFRI Plan Grant
- D. Duration July 2009 – June 2011
- E. Objectives 1. To collect an exhaustive collection of Indian Forest Records, Forest Bulletins and Forest Leaflets.
2. To digitize the collected documents and make it available to forestry researchers in electronic form.
- F. Investigators Sarojam, N
 Hussain, K.H
 George, K.F
- G. Expected Output Final output of this project is a digital collection of Indian Forest Records, Forest Bulletins and Forest Leaflets and makes it available for using.

ABSTRACT

Documents of Indian Forest Records, Forest Bulletins, Forest Leaflets, etc. published by Forest Research Institute (FRI), Dehra Dun available in the KFRI library are very old and brittle posing serious problems in preserving the printed copies. Due to poor circulation and documentation many of these publications fail to come to the notice of practicing foresters and researchers. So the work of digitization of these publications is undertaken and the procedures that followed for digitization and bringing it into an integrated searchable database are described.

INTRODUCTION

A series of publications in forestry under headings Indian Forest Records, Forest Bulletins, Forest Leaflets, etc. are monographic treatments of various subjects in forestry. The topics covered are of mostly practical importance based on field experience of foresters. Most of these publications have been published between 1900 – 1980 by well known authorities in forestry like Beeson C.F.C, Bor N.L, Champion H.G, Chatterjee N.C, Stebbing E.P, Troup R.S, Seth S.K, Gardner J.C.M, Griffith A.L, Hole R.S, Kleine R, Mathur R.N, Pearson R.S, Chatterjee P.N, Chaturvedi A.N, Puran Singh, Sharma R.P, etc. Many of these authors had worked at the Forest Research Institute (FRI), Dehra Dun and in the Indian Forest Services. These monographic publications of FRI in different series namely, Forest Bulletins 1911-1984 (33 numbers), Forest Bulletins New Series 1941-1975 (55), Forest Records 1908-1935 (113) and Indian Forest Records (New Series) 1931-1983 (85) are grouped under different topics like Botany, Chemistry, Entomology, Forest Management, Forest Pathology, Silviculture, Statistics, Timber Mechanics, Minor Forest Products, Utilization, Wood Anatomy and Wood Preservation.

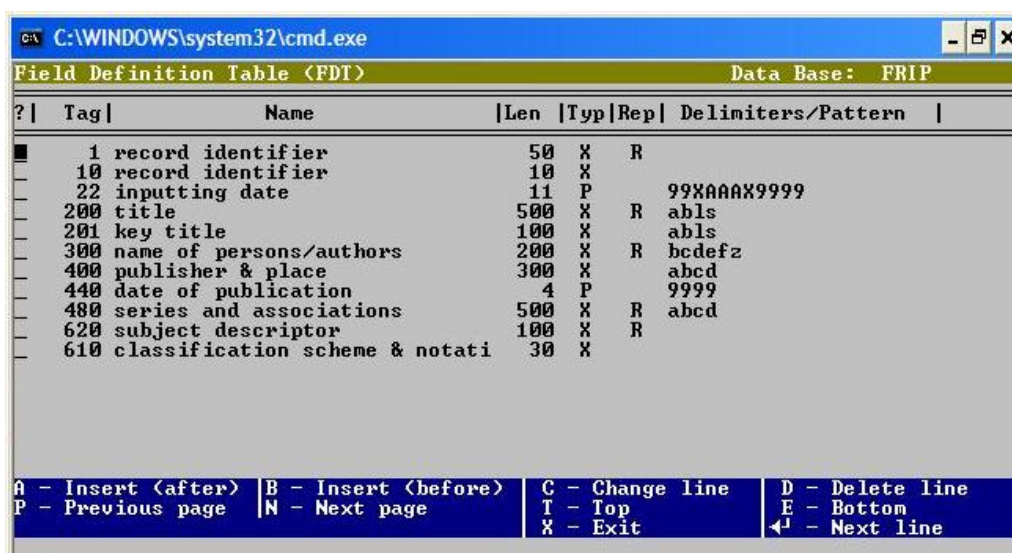
KFRI library has built up a special collection of these publications from the beginning. Most of these publications are very old and brittle posing serious problems in preserving printed copies. Due to poor circulation and documentation, many of these publications fail to come to the notice of practicing foresters and researchers.

This project is taken with the intention of making the collection as exhaustive as possible to trace out the missing titles and to archive digitally. A total number of 509 publications are digitized. For the first time these valuable documents are brought together into an integrated searchable database with full text in the library portal. Efforts are on to integrate this archive with digital archives of research reports, scientific papers, journal articles, bibliographies of bamboo and teak, etc.

METHODOLOGY

The work can be divided into three stages.

1. **Digitizing of the documents.** Since the documents were brittle, autofed scanning was not possible. A desktop flat bed scanner of A4 size was used for scanning. Pages were scanned to produce images with white background at 300 dpi as 24 bit images in PDF format. Images were cropped or subjected to image processing when necessary. These images were converted to monochrome/grey images subsequently. Once the images are scanned consecutively, a PDF document is made using Adobe Acrobat Professional 9. Each of the documents was about 2 to 5 MB in size.
2. **Constructing database.** A bibliographic database called **FRIP** is developed in CDS/ISIS software for the collected documents. Different fields such as author, title, series, volume, issue, year, subject and full text are defined for the database and the field definition table defined for the database is given (Fig. 1).



Tag	Name	Len	Typ	Rep	Delimiters/Pattern
1	record identifier	50	X	R	
10	record identifier	10	X		
22	inputting date	11	P		99XAAAX9999
200	title	500	X	R	abls
201	key title	100	X		abls
300	name of persons/authors	200	X	R	bcdefz
400	publisher & place	300	X		abcd
440	date of publication	4	P		9999
480	series and associations	500	X	R	abcd
620	subject descriptor	100	X	R	
610	classification scheme & notati	30	X		

A - Insert (after) | B - Insert (before) | C - Change line | D - Delete line
P - Previous page | N - Next page | T - Top | E - Bottom
X - Exit | ←J - Next line

Fig. 1 Field definition table

The data entry worksheet, defined to enter the details of each document is shown below (Fig. 2).

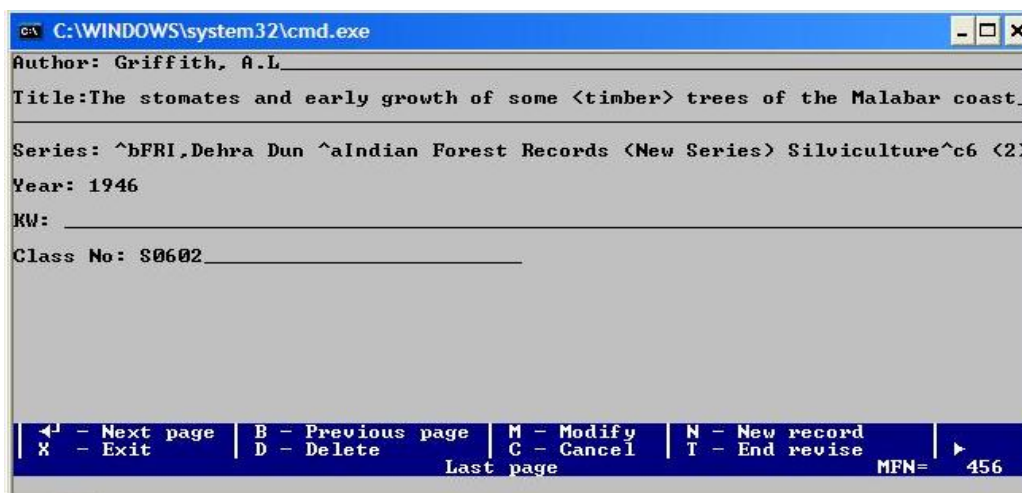


Fig. 2 Data entry work sheet

Citations of the Forest Records are entered in the worksheets of CDS/ISIS database. Author, title, series, volume, issue, year, subject and name of the PDF file of each document is entered separately by filling the worksheet. The PDF files were systematically named and the link is included in one of the fields of the database.

3. **Publishing online.** In order to make the catalogue available online through intranet and internet, the database was exported to the format used by the software employed for this purpose. Software and a search engine developed in KFRI are used. This software requires data in text file format. This file is prepared from CDS/ISIS using the print format FRIP.PFT (Fig. 3 and 4)



Fig. 3 Print format

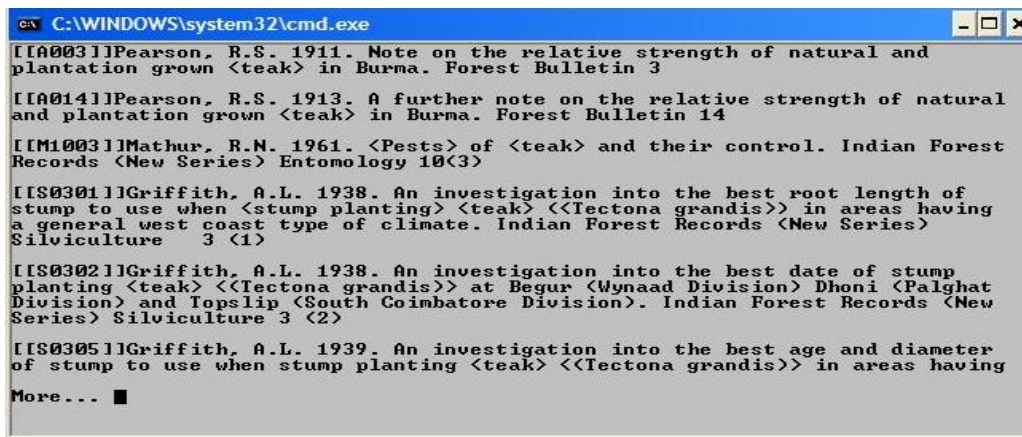


Fig. 4 Sample output

Online implementation consisted of providing a menu item in the KFRI library portal/website and linking the menu item to the controlling program (Fig. 6). The controlling program is written in PHP language. Both this program and associated database are kept in a separate directory inside web folder. When the link is invoked the following search term collection display will appear (Fig. 5).



Fig. 5 Search term collection screen

The user can give one or more keywords. Parts of keywords can also be entered. Keywords can be entered in lower case or upper case. In case of multiple keywords, occurrence of both keywords in each record will be

searched. Keywords can be parts of name of author, title, subject or keywords. Matching records will be shown on the screen (Fig. 7).

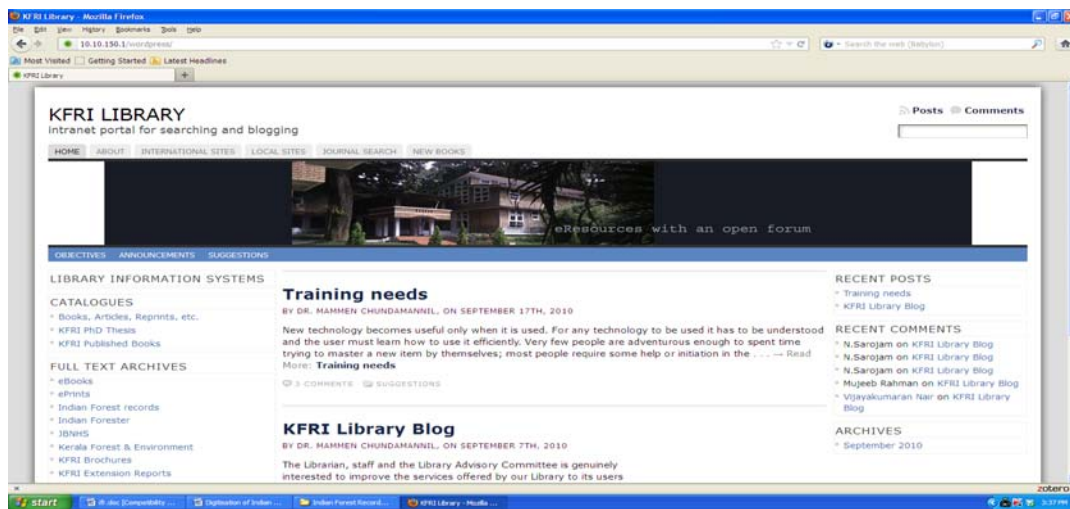


Fig. 6 KFRI Library Intranet Portal

The display consists of full bibliographic citation including author, year, title and series. File name of each record is given with the details of the record with a link to the full text (Fig. 8).



Fig.7 Search and Display

For example, searching for the keyword 'TEAK' will produce 13 hits. Additional keywords have to be supplied for arriving at specific requirements. In order to search for plantation grown teak, users have to give 'PLANT GROWN TEAK'. Successful usage will depend on intelligent

choice of keywords. Much typing can be avoided by truncating words. One can also include year, source or parts of author name if these are known, to reach at a specific result.

The mechanism employed is very versatile and can be used for preparing stand alone CDs of Indian Forest Records. For this purpose, a self running local server is included in the CD. For instance, the starting server will be renamed as KFRI.EXE (Free software Server2go, which is an implementation of Apache-PHP is used). The search engine and the database will be placed in the /htdocs folder of the CD. Further search will be as illustrated before. Frequent users or for use in library, contents of CD can be copied to hard disk of PC. A stand alone CD containing Indian Forest Records is included in this report. The report contains author and subject index also.

CONCLUSION

A digital collection of Indian Forest Records, Forest Bulletins and Forest Leaflets has been successfully implemented with the search mechanism. In fact, it is doubtful whether there is a collection of Indian Forest Records and related documents anywhere else. All the documents are not available in the central library of FRI, Dehra Dun. The digital collection will be useful to the teachers, students, researchers, planters and foresters to get information on Indian trees and its plantation technology. The task of digitizing nearly 500 documents is completed successfully and loaded into server. Public domain SW is used (Apache, Linux).

Forest Bulletins

- 001 Puran Singh. 1911. Note on calorimetric tests of some Indian woods. Forest Bulletin 1
- 002 Leete, F.A. 1911. Memorandum on teak Plantations in Burma. Forest Bulletin 2
- 003 Pearson, R.S. 1911. Note on the relative strength of natural and plantation grown teak in Burma. Forest Bulletin 3
- 004 Caccia, A.M.F. 1911. A glossary of technical terms for use in Indian forestry. Forest Bulletin 4
- 005 Stebbing, E.P. 1911. The blue pine tomicus bark- borer. Forest Bulletin 5
- 006 Everret, W.H. 1906. Memorandum on mechanical tests of some Indian timbers. Forest Bulletin 6
- 007 Stebbing, E.P. 1906. Note on the Chilgoza forests of Zhob and the Takht-I-Suliman. Forest Bulletin 7
- 008 Puran Singh. 1911. Note on the chemistry and trade forms of lac. Forest Bulletin 7
- 009 Stebbing, E.P. 1906. A note on the life history of *Hoplocerambyx spincornis* (The singhbhum sal borer). Forest Bulletin 8
- 010 Troup, R.S. 1912. A note on some germination tests with sal seed (*Shorea robusta*). Forest Bulletin 8
- 011 Eardley-Wilmot, S. 1906. Note on the influence of forests on the storage and regulation of the water supply. Forest Bulletin 9
- 012 Puran Singh. 1912. Note on the resin value of *Podophyllum emodi* and the best season for collecting it. Forest Bulletin 9
- 013 Stebbing, E.P. 1907. A note on the duki fig-tree borer of Baluchistan. (*Batocera rubus*). Forest Bulletin 10
- 014 Hole, R.S. 1912. Bark- boring beetle attack in the coniferous forests of the Simla catchment area, 1907-1911. Forest Bulletin 10
- 015 Stebbing, E.P. 1907. On some Assam sal (*Shorea robusta*) insect pests with notes upon some insects predaceous and parasitic upon them. Forest Bulletin 11
- 016 Subramania Iyer, V. 1912. A further note on some casuarina insect pests of Madras. Forest Bulletin 11

- 017 Stebbing, E.P. 1912. The bark eating and root boring beetles (*Coleosterna scabrata*, F. and *Psiloptera fastuosa*, F.) of the babul (*Acacia arabica*). Forest Bulletin 12
- 018 Pearson, R.S. 1913. Note on ligno protector as a possible means of preventing timber from splitting while seasoning. Forest Bulletin 13
- 019 Pearson, R.S. 1913. A further note on the relative strength of natural and plantation grown teak in Burma. Forest Bulletin 14
- 020 Pearson, R.S. 1913. Note on the technical properties of timber with special reference to *Cedrela toona* wood while seasoning. Forest Bulletin 15
- 021 Rodger, A. 1913. Note on gumhar (*Gmelina arborea*, Roxb.). Forest Bulletin 16
- 022 Rodger, A. 1913. Note on bija sal or vengai (*Pterocarpus marsupium*, Roxb.). Forest Bulletin 17
- 023 Rodger, A. 1913. Note on sain or saj (*Terminalia tomentosa*, W.&A.). Forest Bulletin 18
- 024 Rodger, A. 1913. Note on benteak or nana wood (*Lagerstromia lanceolata*, Wall.). Forest Bulletin 19
- 025 Rodger, A. 1913. Note on sandan (*Ougeinia dalbergioides*, Benth.). Forest Bulletin 20
- 026 Rodger, A. 1913. Note on dhaura or bakli (*Anogeissus latifolia*, Wall.). Forest Bulletin 21
- 027 Troup, R.S. 1913. A note on the causes and effects of the drought of 1907 & 1908 on the sal forests of the United Provinces. Forest Bulletin 22
- 028 Hole, R.S. 1913. Note on the preparation of Indian forest floras and descriptive lists. Forest Bulletin 23
- 029 Puran Singh. 1913. Note on turpentine of *Pinus khasya*, *P. merkusii* and *P. excelsa*. Forest Bulletin 24
- 030 Hole, R.S. 1914. Development of the culms of grasses. Forest Bulletin 25
- 031 Smythies, E.A. 1914. The resin industry in Kumaon. Forest Bulletin 26
- 032 Benskin, E. 1915. Note on black wood (*Dalbergia latifolia*, Roxb.). Forest Bulletin 27
- 033 Benskin, E. 1915. Note on dhauri (*Lagerstroemia parviflora*, Roxb.). Forest Bulletin 28
- 034 Pearson, R.S. 1915. Note on sundri timber (*Heritiera minor*, Lam.). Forest Bulletin 29

- 035 Troup, R.S. 1915. The compilation of girth increments from sample plot measurements. Forest Bulletin 30
- 036 Puran Singh. 1916. Note on Indian sumach (*Rhus cotinus*, Linn.). Forest Bulletin 31
- 037 Puran Singh. 1916. Note on the Burma myrabolans or "Panga" fruits as a tanning material. Forest Bulletin 32
- 038 Hill, M. 1916. Note on the enquiry by the Government of India into the relation between forests and atmospheric and soil moisture in India. Forest Bulletin 33
- 039 Whitehead, T.A. 1917. Note on red sanders, *Pterocarpus santalinus*, Linn. f. Forest Bulletin 34
- 040 Pearson, R.S. 1917. Note on kokan or lampatia timber, *Duabanga sonneratioides*, Ham. Forest Bulletin 36
- 041 Pearson, R.S. 1917. Note on the contraction and warping which takes place in *Pinus longifolia* timber while seasoning. Forest Bulletin 37
- 042 Beeson, C.F.C. 1919. The construction of calcareous opercula by longicorn larvae of the group *Cerambycini*. Forest Bulletin 38
- 043 Pearson, R.S. 1919. Note on hollong timber, *Dipterocarpus pilosus*, Roxb. Forest Bulletin 39
- 044 Pearson, R.S. 1920. Note on pyinma, aajhar or jarul wood, *Lagerstroemia flos reginae*, Retz. Forest Bulletin 40
- 045 Howard, S.H. 1920. Note on weights of seeds. Forest Bulletin 41
- 046 Howard, S.H. 1928. Note on weights of seeds. Forest Bulletin. Silviculture Series 41 (Revised)
- 047 Cox, C.E.C. 1921. Note on haldu (*Adina cordifolia*, Hook.f). Forest Bulletin 42
- 048 Cox, C.E.C. 1921. Note on Odiana wodier. Roxb. Forest Bulletin 43
- 049 Cox, C.E.C. 1921. Note on semal or cotton wood. Forest Bulletin 44
- 050 Smythies, E.A. 1921. Note on the miscellaneous forests of the Kumaon bhabar. Forest Bulletin 45
- 051 Howard, S.H. 1921. Rate of growth of Bengal sal (*Shorea robusta*) I quality. Forest Bulletin 46
- 052 Pearson, R.S. 1922. Note on kindal or hongal (*Terminalia paniculata*, W. & A. Forest Bulletin 48
- 053 Rodger, A. 1922. Note on thingan (*Hopea odorata*, Roxb.). Forest Bulletin 49
- 054 Robertson, W.A. 1922. Note on gurgan or kanyin. Forest Bulletin 50

- 055 Champion, H.G. 1922. An investigation of certain factors concerning the resin -tapping industry in *Pinus longifolia*. Forest Bulletin 51
- 056 Pearson, R.S. 1922. Summary of results of treated and untreated experimental Sleepers laid in the various railway systems of India, brought up to date. Forest Bulletin 53
- 057 Rogers, C.G. 1925. Animal haulage, caterpillar tractors and portable sawmills being extracts from a note on American logging practice. Forest Bulletin 55
- 058 Pilgrim, J.A. 1924. Tan investigation of the urma hill pine, *Pinus khasya*, bark and pyinkado, *Xylia dolabriformis*. Forest Bulletin 57
- 059 Howard, S.H. 1924. General volume table for chir (*Pinus longifolis*) classified by diameter (and girth) and height. Forest Bulletin 58
- 060 Wilson, C. Claude. 1925. Note on ainee, *Artocarpus hirssuta*, Lamk. Forest Bulletin. Economy Series 60
- 061 Parker, R.N. 1925. Eucalyptus trials in the Simla hills. Forest Bulletin. Botany Series 63
- 062 Kamesam, S. 1925. Summary of results of laboratory experiments with different wood preserving antiseptics (Results of 14 year's experiments). Forest Bulletin 64
- 063 Atkinson, D.J.1926. *Hoplocerambyx spinicornis*- an important pest of sal. Forest Bulletin. Entomology Series 70
- 064 1931. A list of trade names of Indian timbers. (reprinted). Forest Bulletin 71
- 065 Kapur, S.N.1929. Instructions for the operation of timber seasoning kilns. Forest Bulletin. Economy Series 72
- 066 Parker, R.N. 1931. The herbarium of the Forest Research Institute. Forest Bulletin. Botany Series 73
- 067 Popham, F.J. 1931. Summary of results of treated experimental sleepers laid in the various railway systems of India, brought uptodate. Forest Bulletin 74
- 068 Popham, F.J. 1931. Preservation of Indian timbers- the open tank process. Forest Bulletin. Economy Series 75
- 069 1931. List of plants collected in West Nepal. Forest Bulletin. Botany Series 76
- 070 Chowdhury, K.A. 1932. The identification of important Indian sleeper woods. Forest Bulletin. Economy Series 77
- 071 Champion, H.G. 1932. The problem of the pure teak plantation. Forest Bulletin. Silviculture Series 78

- 072 Krishna, S; Ramaswami, M.A. 1932. Calorific values of some Indian woods. Forest Bulletin 79 (Chemistry Series)
- 073 Kamesam, S. 1925. Testing and selection of commercial wood preservatives. Forest Bulletin. Economy Series 81
- 074 Champion, H.G; Mahendru, I.D. 1934. Provisional yield table for *Quercus incana* Roxb. (Banj or Ban oak). Forest Bulletin. Silviculture Series 83
- 075 Kamesam, S. 1934. A record of the results obtained with experimental treated sleepers laid in the Indian Railways between 1911 and 1916. Forest Bulletin. Economy Series 85
- 076 Champion, H.G. 1934. Cold weather planting in Northern India. Forest Bulletin. Silviculture Series 86
- 077 Champion, H.G. 1934. Von Wulfing's yield tables for teak plantations in Java. Forest Bulletin. Silviculture Series 87
- 078 Champion, H.G. 1934. Seasonal progress of height growth in trees. Forest Bulletin. Silviculture Series 88
- 079 Champion, H.G. 1934. The effect of defoliation on the increment of teak saplings. Forest Bulletin. Silviculture Series 89
- 080 1934. Official list of trade names of Indian timbers. Forest Bulletin. Economy Series 90
- 081 Nautiyal, B. 1935. Damage by frost at New Forest, Dehra Dun, during the period 1930 to 1934. Forest Bulletin. Silviculture Series 91
- 082 Limaye, V.D. 1941. Indian timbers for tool helms and handles. Forest Bulletin. Utilisation 93
- 083 Rehman, M.A. 1941. Drying of wood fuel of *Shorea robusta* (Sal) *Eugenia jambolana* (Jaman) *Machilus duthiei* (Kaula). Forest Bulletin. Utilisation 96
- 084 Krishna, S; Varma, B.S. 1941. A note on the active principles of *Embelis robusta*, Roxb. *Myrsine semiserrata*, Wall. and *M. capitellata* Wall. Forest Bulletin. Chemistry 102
- 085 Bhargava, M.P. 1941. Jute cuttings for paper pulp. Forest Bulletin. Utilisation 103
- 086 Narayanamurti, D; Ranganathan, V. 1941. Studies on coal tar creosate as a wood preservative. Part I Creosate extracted from timbers in service. Forest Bulletin. Utilisation 104
- 087 Narayanamurti, D. 1941. The variation of the electrical resistance of Indian timbers with moisture content. Forest Bulletin. Utilisation 105

Forest Pamphlets

- 088 Caccia, A.M.F. 1908. A glossary of technical terms for use in Indian forestry. Forest Pamphlet. Working Plan Series No. 13
- 089 Troup, R.S. 1909. Andaman marble-wood (*Diospyroskurzi*, Hiern). Forest Pamphlet. Forest Economy series No. 27
- 090 Caccia, A.M.F. The collection of statistical data relating to the principal Indian species. Forest Pamphlet. Working plan Series No. 28
- 091 Caccia, A.M.F. 1910. Tables showing the progress in working plans in the provinces outside the Madras and Bombay presidencies up to the 31st December 1908 with special reference to the application of the various silvicultural systems. Forest Pamphlet. Working Plan Series No. 39
- 092 Troup, R.S. 1909. Burmese leza wood (*Lagerstroemia tomentosa*, Presl). Forest Pamphlet. Forest Economy Series No. 310
- 093 Troup, R.S. 1909. Carallia wood (*Caralliaintegerrima*, DC.). Forest Pamphlet. Forest Economy Series No. 411
- 094 Troup, R.S. 1910. Petwun or Trincomali wood (*Berrya ammonilla*, Roxb.). Forest Pamphlet. Forest Economy Series No. 512
- 095 Troup, R.S. 1909. Burmese in wood (*Dipterocarpus tuberculatus*, Roxb.). Forest pamphlet. Forest Economy Series No. 613
- 096 Troup, R.S. 1909. Burma padauk (*Pterocarpus macrocarpus*, Kurz.). Forest Pamphlet. Forest Economy Series No. 714

Indian Forest Bulletins

- 097 Prasad, J. 1941. A note on Semal (*Bombax malabaricum* D.C). Indian Forest Bulletin. Silviculture 107
- 098 Limaye, V.D. 1942. Interim report on the relation between rate of growth and strength of natural and plantation teak. Indian Forest Bulletin. Utilisation 113
- 099 Narayanamurti, D. 1942. A note on the treatment of Green hollong (*Dipterocarpus macrocarpus*) sleepers. Indian Forest Bulletin. Utilisation 114
- 100 Griffith, A.L. 1947. The determination of the characteristics of soil suitable for sal (*Shorea robusta*). Indian Forest Bulletin. Silviculture 138
- 101 1948. Studies on coal tar creosate as a wood preservative. Part II. Indian Forest Bulletin. Composite Wood and Wood Preservation 144
- 102 Mathauda, G.S. 1953. The tree species of the tropical evergreen ghat forests of Kanara (Bombay) and their rate of growth. Indian Forest Bulletin. Silviculture 169
- 103 Rehman, M.A. 1953. The seasoning behaviour of Indian timbers. Part II. Indian Forest Bulletin. Wood Seasoning 170
- 104 Roonwal, M.L; Bhasin, G.D. 1954. A list of insect pests of forest plants in India and the adjacent countries. Part I- General introduction. Part II- List of insect pests of plant genera 'A'. Indian Forest Bulletin. Entomology 171 (1)
- 105 Mathur, R.N; Balwant Singh. 1960. A list of insect pests of forest plants in India and the adjacent countries. Part VIII- List of insect pests of plant genera 'P' to 'R'. Indian Forest Bulletin 171 (7)
- 106 Mathur, R.N. 1961. A list of insect pests of forest plants in India and the adjacent countries. Part X-List of insect pests of plant genera 'T'to 'Z'. Indian Forest Bulletin 171 (9) Entomology
- 107 Krishnaswamy, V.S. 1956. Cover and nurse crops in sal and teak plantations at Dehra Dun. Indian Forest Bulletin. Silviculture 185
- 108 Mathur, R.N. 1955. Identification of Indian Lactidae and dinoderus species. Indian Forest Bulletin. Entomology 187
- 109 Rehman, M.A. 1956. The seasoning behaviour of Indian timbers. Indian Forest Bulletin. Wood Seasoning 198

- 110 Rehman, M.A. 1957. Indian woods for textile mill accessories- Part III. Indian Forest Bulletin. Wood Seasoning 199
- 111 Rehman, M.A. 1956. Indian woods for textile mill accessories. Part IV. Indian Forest Bulletin. Wood Seasoning 200
- 112 Sekhar, A.C; Rawat,B.S. 1956. Torsional properties of some Indian timbers. Indian Forest Bulletin. Timber Mechanics 202
- 113 Dey, A.C; Ramaswami, S. 1960. Indian wood tested for match manufacture. Indian Forest Bulletin. Minor Forest Products (N.S) 203
- 114 Mathur, R.N; Hussey, N.W. 1956. A new species of *Bootanomyia* from India. Indian Forest Bulletin. Entomology (N.S) 212
- 115 Sen-Sarma, P.K. 1963. Studies on the natural resistance of timbers to termites. Indian Forest Bulletin. Entomology (N.S) 220
- 116 Sekhar, A.C; Sachar, S.S; Purushottam Lal. 1960. Recent work on testing of wood poles. Indian Forest Bulletin. Timber Mechanics (N.S) 224
- 117 Mathur, R.N. 1961. Effect of clump-curing of bamboos and susceptibility to powder-post beetle attack. Indian Forest Bulletin. Entomology (N.S) 233
- 118 Mathur, R.N; Chandra, A. 1961. Insect fauna of Neapanagar and the neighbouring areas. Indian Forest Bulletin. Entomology (N.S) 234
- 119 Mathur, R.N. 1962. Sal-heartwood borer (*Hoplocerambyx spinicornis* Newm.) and its control by trap tree methods. Indian Forest Bulletin. Entomology (N.S) 238
- 120 Mathur, R.N; Chatterjee, P.N; Thapa, R.S. 1965. Prophylactic efficacy of various insecticides in the protection of freshly felled timbers in storage against insect borers and subterranean termites. Indian Forest Bulletin. Entomology (N.S) 241
- 121 Rehill, P.S; Bakshi, B.K. 1965. Studies on Indian *Telephoraceae* II. Indian species of *Peniphora* and *Corticium*. Indian Forest Bulletin 242
- 122 Venkatesh, C.S; Kedharnath, S. 1964. Breeding sandal for resistance to the spike disease. Indian Forest Bulletin. Botany (N.S) 243
- 123 Chatterjee, P.N; Thapa, R.S. 1966. Anti-termite characteristics of jute board pieces treated with 'shirlan'. Indian Forest Bulletin. Entomology (N.S) 245
- 124 Prashad, B; Sen-Sarma, P.K. 1966. Review of the genus *Trinervitermes* Holmgren from Indian region (Isoptera: Termitidae: Nasutitermitinae). Indian Forest Bulletin. Entomology (N.S) 247
- 125 Prashad, B; Sen-Sarma, P.K. 1966. Studies on the genera *Ceylonitermellus* from the Indian region (Isoptera: Termitidae: Nasutitermitinae). Indian Forest Bulletin. Entomology (N.S) 248

- 126 Sharma, S.N; Bali, B.I. 1966. Some varieties affecting the trend of unidirectional shrinkage along board width of toon (*Cedrela toona*) above the fibre saturation point in kiln drying. *Indian Forest Bulletin. Wood Seasoning (N.S)* 252
- 127 Chacko, V.J; Negi, G.S. 1966. A multivariable study of the factors distinguishing the age classes of bamboo clums. *Indian Forest Bulletin. Statistical (N.S)* 254
- 128 Sen-Sarma, P.K; Chatterjee, P.N. 1966. Humidity behaviour of termites. I. Effect of relative humidity on the longevity of workers of *Microcerotermes beesoni* Snyder (Insecta: Isoptera: Termitidae) under starvation condition. *Indian Forest Bulletin. Entomology (N.S)* 255
- 129 Chatterjee, P.N; Thakur, M.L. 1966. Description of the hitherto unknown imago caste of *Euhamitermes lighti* Snyder with descriptions of other castes. *Indian Forest Bulletin. Entomology (N.S)* 256
- 130 Mathur, R.N; Chatterjee, P.N; Thapa, R.S. 1970. Prophylactic efficacy of various insecticides in the protection of freshly felled timbers of sal in storage against insect borers. Part III. *Indian Forest Bulletin. Entomology (N.S)* 261
- 131 Guha, S.R.D; Sharma, Y.K. 1970. Manufacture of strawboard. *Indian Forest Bulletin. Cellulose and Paper (N.S)* 263
- 132 Chatterjee, P.N; Thapa, R.S. 1971. Prophylactic efficacy of various insecticides in the protection of freshly felled timbers of Sal (*Shorea robusta*) in storage against insect borers. *Indian Forest Bulletin. Entomology (N.S)* 264
- 133 Chatterjee, P.N; Misra, M.P. 1974. Natural insect enemy and plant host complex of forest insect pests of Indian region. *Indian Forest Bulletin. Entomology (N.S)* 265
- 134 Sharma, V.P. 1974. Use of insecticides for pest management in forests. *Indian Forest Bulletin. Entomology (N.S)* 266
- 135 Bakshi, B.K; Sujana Singh. 1973. Microbial degradation of pulpwood. *Indian Forest Bulletin. Forest Pathology (N.S)* 267
- 136 Sharma, S.N; Das, N.R; Bhatnagar, R.C; Lohani, R.C. 1974. Effect of treating conditions on the anti-shrink effect and bulking attained in wood by urea and sorbitol soak treatments. *Indian Forest Bulletin. Wood Seasoning (N.S)* 268
- 137 Sekhar, A.C; Gulati, A.S. 1974. Cleavage properties of some Indian timbers. *Indian Forest Bulletin. Timber Mechanics (N.S)* 269
- 138 Sharma, S.N; Mehra, M.L; Badoni, S.P. 1974. Chemical seasoning of heavy and refractory axlewood (*Anogeissus latifolia*) using

- polyethyleneglycol-600. Indian Forest Bulletin. Wood Seasoning (N.S)
270
- 139 1975. Preservation plots in India. Indian Forest Bulletin. Silvics (N.S)
271
- 140 Santhakumaran, L.N; Alikunhi, K.H. 1983. Natural resistance of
different species of Indian timbers to marine wood-borers in Bombay
waters. Indian Forest Bulletin. Wood Preservation (N.S) 272
- 141 Ghosh, R.C; Kaul, O.N; Subba Rao, B.K. 1982. Environmental effects
of forests in India. Indian Forest Bulletin. Silvics (N.S) 275
- 142 Dakshini, M.N. 1984. Role of forest trees in landscaping. Indian
Forest bulletin. Botany (N.S) 277

Indian Forest Leaflets

- 143 Roonwal, M.L; Bhasin, G.D; Pant, G.D; Misra, S.D. 1951. A systematic catalogue of the main identified entomological collection at the Forest Research Institute, Dehra Dun. Parts 4-8. Orders Orthoptera (concluded), Dermaptera and Plectoptera. Indian Forest Leaflet. Entomology 121(2)
- 144 Roonwal, M.L; Mathur, R.N; Bhasin, G.D; Balwant Singh; Pant, G.D; Chandra, A; Katiyar, K.N; Mathur, R.K. 1953. A systematic catalogue of the main identified entomological collection at the Forest Research Institute, Dehra Dun. (Parts 9-21). Orders Isoptera, Embioptera, Psocoptera, Anoplura, Ephemeroptera, Odonata, Thysanoptera, Hemiptera. Indian Forest Leaflet. Entomology 121(3)
- 145 Roonwal, M.L; Mathur, R.N; Bhasin, G.D; Chatterjee, P.N; Sen-sarma, P.K; Balwant Singh; Chandra, A; Thapa, R.S; krishna, K. 1963. A systematic catalogue of the main identified entomological collection at the Forest Research Institute, Dehra Dun. Parts 22-38. Orders Neuroptera, Mecoptera, Trichoptera and Lepidoptera. Indian Forest Leaflet. Entomology 121(4)
- 146 Roonwal, M.L. 1951. Errata to C.F.C. Beeson's (1941) book: The ecology and control of the forest insects of India and the neighbouring countries. Indian Forest Leaflet. Entomology 122
- 147 Hingorani, G.R. 1953. Indian belladonna (*Atropa acuminata* Royle ex Lindl.). Indian Forest Leaflet. Minor Forest Products 132
- 148 Badhwar, R.L; Karira, G.V; Ramaswami, S. 1955. *Rauwolfia serpentina*: The wonder drug of India. Indian Forest Leaflet. Minor Forest Products 142
- 149 Badhwar, R.L; Dey, A.C; Ramaswamy, S. 1956. Canes (Rattans): Their occurrence, cultivation and exploitation in India. Indian Forest Leaflet. Minor Forest Products 146
- 150 Badhwar, R.L; Beri, R.M; Karira, G.V; Ramaswami, S. 1957. *Rauwolfia serpentina*: Methods of propagation and their effect on production and alkaloidal content of roots. Indian Forest Leaflet. Minor Forest Products 148
- 151 Kuldip Rai; Chatterjee, P.N. 1963. Studies on the morphology and taxonomy of Indian Bostrychidae. I. Contribution to the morphology of *Heterobostrychus aequalis* (Waterh.) (Coleoptera: Bostrychidae: Bostrychinae). Indian Forest Leaflet (New Series). Entomology 171

- 152 Kuldip Rai; Chatterjee, P.N. 1963. Biological observations on the habits of *Sinoxylon crassum crassum* Lesne (Coleoptera: Bostrychidae). Indian Forest Leaflet (New Series). Entomology 172
- 153 Fernandez, R.R. 1964. Gums and resins. Indian Forest Leaflet. Minor Forest Products 174
- 154 Chatterjee, P.N; Thapa, R.S. 1966. Termite control service at the Forest Research Institute and Colleges, New Forest Estate, Dehra Dun. Indian Forest Leaflet. Entomology 176
- 155 Rehman, M.A; Gupta, P.G. 1968. Timber for Pencil slats, its conversion, seasoning and treatment. Indian Forest Leaflet. Wood Seasoning 188
- 156 Masani, N.J; Pruthi, K.S. 1974. Effects of grain alignment of wooden disc-dowels made from radial (quarter-swain) and tangential (plain swain) planks on the strength of structural joints. Indian Forest Leaflet. Timber Engineering 195

Indian Forest Memoirs

- 157 Puran Singh. 1908. A note on the analysis of catch and the preparation of pure catechin. Indian Forest Memoirs. Chemistry Series 1 (1)
- 158 Puran Singh. 1909. A note on the manufacture of pure shellac. Indian Forest Memoirs. Chemistry Series 1 (2)
- 159 Troup, R.S. 1909. Indian wood and their uses. Indian Forest Memoirs. Economic products Series 1 (1)
- 160 Troup, R.S. 1910. The prospects of the match industry in the Indian Empire, with particulars of proposed match factory sites and wood suitable for match manufacture. Indian Forest Memoirs. Economic Products Series 2 (1)
- 161 Pearson, R.S. 1913. On the economic value of *Shorea robusta* (Sal). Indian Forest Memoirs. Economy Series 2 (2)
- 162 Stebbing, E.P. 1909. On some undescribed Scolytidae of economic importance from the Indian region II. Indian Forest Memoirs. Forest Zoology Series 1(2)
- 163 Stebbing, E.P. 1910. A note on the lac insect (*Tachardia lacca*), its life history, propagation and collection. Indian Forest Memoirs. Forest Zoology Series 1 (3)
- 164 Stebbing, E.P. 1911. On some important insect pests of the Coniferae of the Himalaya with notes on some insects predaceous and parasitic upon them. Indian Forest Memoirs. Forest Zoology Series 2 (1)
- 165 Stebbing, E.P. 1911. On some important insect pests of the Coniferae of the Himalaya with notes on some insects predaceous and parasitic upon them. Indian Forest Memoirs. Forest Zoology Series 2 (2)
- 166 Imms, A.D; Chatterjee, N.C. 1915. On the structure and biology of *Tachardia lacca*, Kerr. with observations on certain insects predaceous or parasitic upon them. Indian Forest Memoirs. Forest Zoology Series 3 (1)
- 167 Troup, R.S. 1916. *Pinus longifolia*, Roxb: A silvicultural study. Indian Forest Memoirs. Silvicultural Series 1 (1)

Indian Forest Records

- 168 Stebbing, E.P. 1908. A note on the lac insect (*Tachardia lacca*), its life history, propagation and collection. Indian Forest Records 1 (1)
- 169 Caccia, A.M.F. 1908. A preliminary note on the development of sal in volume and in money-value. Indian Forest Records 1(2)
- 170 Osmaston, B.B. 1908. *Pterocarpus dalbergioides*, Roxb.: Andaman padouk. Indian Forest Records 1 (3)
- 171 Stebbing, E.P. 1908. A further note on the Chilgoza bark-boring beetle of Zhob. Indian Forest Records 1 (3)
- 172 Troup, R.S. 1908. A note on the present position and future prospects of the Cutch trade in Burma. Indian Forest Records 1 (3)
- 173 Puran Singh. 1908. Note on the manufacture of Nagi camphor. Indian Forest Records 1 (3)
- 174 Puran Singh. 1909. A chemical investigation of the constituents of Burmese varnish (*Melanorrhoea usitata* Sap.). Indian Forest Records 1 (4)
- 175 Caccia, A.M.F. 1909. The selection system in Indian forests as exemplified in working plans based on this system, with a short description of some continental methods. Indian Forest Records 1 (4)
- 176 Rama Rao, M. 1910. Notes on sandal (Germination and growth of sandal seedlings). Indian Forest Records 2 (3)
- 177 Drake, C.J; Poor, M.E. 1936. New Indian Tingitidae (Hemiptera). Indian Forest Records 2 (5)
- 178 Pearson, R.S. 1912. Note on antiseptic treatment of timber in India, with special reference to railway sleepers. Indian Forest Records 3 (2)
- 179 Puran Singh. 1912. Note on the preparation of tannin extracts with special reference to those prepared from the bark of mangrove (*Rhizophora mucronata*). Indian Forest Records 3 (4)
- 180 Pearson, R.S. 1913. Note on the tea-box industry in Assam. Indian Forest Records 5 (1)
- 181 Troup, R.S. 1913. Note on the blue gum plantations of the Nilgiris (*Eucalyptus globulus*). Indian Forest Records 5 (2)
- 182 Raitt, W. 1913. Report of the investigation of savannah grasses as material for production of paper-pulp. Indian Forest Records 5 (3)

- 183 Hole, R.S. 1914. Note on oecology of sal (*Shorea robusta*), Part I- Soil composition, soil moisture, soil-aeration. Indian Forest Records 5 (4)
- 184 Hole, R.S. 1914. Note on oecology of sal (*Shorea robusta*), Part II- Seedling reproduction in natural forests and its improvement. Indian Forest Records 5 (4)
- 185 Hole, R.S. 1914. Note on oecology of sal (*Shorea robusta*), Part III- Soil-aeration and water cultures. Indian Forest Records 5 (4)
- 186 Hole, R.S. 1915. Note on *Trametes pini*. Indian Forest Records 5 (5)
- 187 Hole, R.S. 1915. Note on a new species of forest grass (*Spodiopogon lacei*, Hole). Indian Forest Records 5 (6)
- 188 Pearson, R.S. 1916. Note on the economic uses of rosha grass (*Cymbopogon martini*, Stapf.). Indian Forest Records 5 (7)
- 189 Puran Singh. 1916. Note on the constants of Indian geranium oil (motia). Indian Forest Records 5 (7)
- 190 Puran Singh. 1917. Note on the Eucalyptus oil industry in the Nilgiris. Indian Forest Records 5 (8)
- 191 Puran Singh. 1917. Note on the distillation of geranium oil in the Nilgiris. Indian Forest Records 5 (8)
- 192 Puran Singh. 1917. Note on the manufacture of Wintergreen oil in India. Indian Forest Records 5 (8)
- 193 Beeson, C.F.C. 1917. The life history of *Diapus furtivus*, Sampson. Indian Forest Records 6 (1)
- 194 FRI. 1917. Statistics compiled in the office of the Silviculturist, Forest Research Institute, Dehra Dun, during 1915-16. Indian Forest Records 6 (2)
- 195 Benskin, E; Rodger, A. 1917. A note on thitsi, *Melanorrhoea usitata*, Wall., with special reference to the oleo-resin obtained from it. Indian Forest Records 6 (3)
- 196 Pearson, R.S. 1918. A further note on the antiseptic treatment of timber, recording results obtained from past experiments. Indian Forest Records 6 (4)
- 197 FRI. 1918. Statistics compiled in the office of the Silviculturist, Forest Research Institute, Dehra Dun during 1916-17. Indian Forest Records 6 (5)
- 198 Pearson, R.S; Puran Singh. 1918. Note on the preparation of turpentine, resin and gum, from *Boswellia serrata* (Roxb.) gum-oleo-resin. Indian Forest Records 6 (6)
- 199 Pearson, R.S. 1918. Preliminary note on the seasoning of some Indian timbers, by natural methods. Indian Forest Records 7 (1)

- 200 Lindsay, H.A.F; Harlow, C.M. 1922. Report on lac and shellac. Indian Forest Records 8 (1)
- 201 Wright, F.A. 1919. A further note on the Thitsi (*Melanorrhoea usitata*, Wall.) with special reference to the oleo-resin obtained from it in the Lawsawk and Myelat States, Southern Shan States Forest Division. Indian Forest Records 7 (2)
- 202 Hole, R.S. 1922. The regeneration of sal (*Shorea robusta*) forests. A study in economic ecology. Indian Forest Records 8 (2)
- 203 Hole, R.S. 1919. Note on *Hopea canarensis*, Hole. Indian Forest Records 7 (3)
- 204 Beeson, C.F.C. 1922. The beehole borer of teak. A preliminary note on the ecology and economic status of *Duomitus ceramicus*, Wlk. in Burma, (Lepidoptera, Cossidae). Indian Forest Records 8 (3)
- 205 Hole, R.S. 1919. Note on *Ixora butterwickii*, Hole. Indian Forest Records 7 (4)
- 206 Glasson, A.K; Russel, P.T; Shebbeare, E.O; Teague, L.E.S. 1922. Notes on artificial regeneration in Bengal. Indian Forest Records 8 (4)
- 207 Beeson, C.F.C. 1919. Notes on the larvae and life histories of Prionine beetles, Coleoptera, Cerambycidae, Prionini. Indian Forest Records 7 (5)
- 208 Simonsen, J.L. 1922. The essential oil from the leaves of *Abies pindrow*, Spach. Indian Forest Records 8 (5)
- 209 Pearson, R.S. 1919. Note on the mechanical strength and seasoning properties of *Shorea robusta* (Sal) timber. Indian Forest Records 7 (6)
- 210 Beeson, C.F.C. 1919. The life history of the toon shoot and fruit borer, *Hypsipyla robusta*, Moore (Lepidoptera; Pyralidae; Phycitinae) with suggestions for its control. Indian Forest Records 7 (7)
- 211 Smythies, E.A. 1920. Afforestation of ravine lands in the Etawah District, United Province. Indian Forest Records 7 (8)
- 212 Pearson, R.S. 1922. Results of antiseptic treatment of sleepers: Note on the Indian sleeper market, record of durability tests on treated sleepers and conclusions arrived at therefrom. Indian Forest Records 9 (1)
- 213 Waterston, J. 1922. On Chalcidoidea (mainly bred at Dehra Dun, U.P. from pests of Sal, Toon, Chir and Sundri). Indian Forest Records 9 (2)
- 214 Gopal Rau, M; Simonsen, J.L. 1922. Oils and fats from the seeds of Indian forest trees, Parts 1-4. Indian Forest Records 9 (3)

- 215 Simonsen, J.L; Gopal Rau, M. 1922. The constituents of some India essential oils. Part 1-7. Indian Forest Records 9 (4)
- 216 Sweet, C.V. 1922. Further experiments in the air-seasoning of Indian timbers and general recommendations as to seasoning methods. Indian Forest Records 9 (5)
- 217 Beeson, C.F.C. 1922. Damage to timber by insects. Indian Forest Records 9 (5)
- 218 Simonsen, J.L. 1923. The constituents of some Indian essential oils. Part 8: The essential oil from the gum-oleo-resin of *Boswellia serrata* (Roxb.). Indian Forest Records 9 (6)
- 219 Collier, J.V. 1923. Note on the work of broad gauge sleepers from Nepal. Indian Forest Records 9 (9)
- 220 Simonsen, J.L. 1923. The constituents of some Indian essential oils. Part 11: The essential oil from the leaves of *Cupressus torulosa*, Don. Indian Forest Records 10 (1)
- 221 Parker, R.N; Gopal Rau, M; Robertson, W.A; Simonsen, J.L. 1924. Oils and fats from the seeds of Indian forest Plants. Part 6: The oil from the seeds of *Aleurites montana*, Wils. Indian Forest Records 10 (2)
- 222 Gopal Rau, M; Simonsen, J.L. 1924. Oils and fats from the seeds of Indian forest plants. Part 7: The oil the seeds of *Salvia plebeia*, R. Br. Indian Forest Records 10 (2)
- 223 Smythies, E.A; Howard, S.H. 1925. A sal (*Shorea robusta*) yield table for United Provinces with an account of the types and distribution of sal forests in the United Provinces. Indian Forest Records 10 (3)
- 224 Pasupati, E; Pilgrim, J.A. 1924. Analysis of the tanning properties of certain Burma Igerstromias. Indian Forest Records 10(5)
- 225 Howard, S.H. 1924. General volume tables for sal (*Shorea robusta*) classified by diameter and height. Indian Forest Records 10 (6)
- 226 Simonsen, J.L. 1923. The constituents of some Indian essential oils. Part 12: The essential oil from the Oleo-resin of *Pinus mercusii*. Indian Forest Records 10 (7)
- 227 Simonsen, J.L. 1924. The constituents of some Indian essential oils. Part 13: The essential oil from a new species of *Andropogon* occurring in the Etawah District, U.P. Indian Forest Records 10 (8)
- 228 Pilgrim, J.A. 1924. Tannin investigation of some Burmese Dipterocarps. Indian Forest Records 10 (9)
- 229 Pilgrim, J.A. 1924. The mangroves of South Tenasserim being an account of an investigation of various products of the littoral forests of Southern Burma. Indian Forest Records 10(10)

- 230 Pilgrim, J.A. 1924. Burma oak and chestnut tans being the report of an investigation from the tannin standpoint of the different parts of various oak and chestnut trees, principally those growing in the Maymyo and Kalaw areas. Indian Forest Records 10 (12)
- 231 Simonsen, J.L. 1925. The constituents some Indian essential oils. Part 14-15. Indian Forest Records 11(1)
- 232 Blanford, H.R. 1925. Regeneration with the assistance of taungya in Burma. Indian Forest Records 11 (3)
- 233 Kleine, R. 1925. On some Indian Brentidae (Coleoptera). Part 1: Neue Brentiden aus Britisch Indien und den anliegenden Gebieten. Indian Forest Records 11 (4)
- 234 Beeson, C.F.C. 1925. On some Indian Brentidae (Coleoptera). Part 2: Notes on the biology of the Brentidae. Indian Forest Records 11 (4)
- 235 Gardner, J.C.M. 1925. On some Indian Brentidae (Coleoptera) Part 3: Descriptions of the larvae of *Cerobates tristriatus* and *C. sexsulcatus*, and of the pupa of *Cyohagogus corporaali*. Indian Forest Records 11 (4)
- 236 Gopal Rau, M. 1925. The constituents of some Indian essential oils. Part 16: Note on the rate of oxidation of d- Carne and other terpenes in the presence of catalyts. Indian Forest Records 11 (5)
- 237 Beeson, C.F.C; Chatterjee, N.C. 1925. The economic importance and control of sal heartwood borer (*Hoplocerambyx spinicornis* Newm., fam. Cerambycidae). Indian Forest Records 11 (7)
- 238 Gardner, J.C.M. 1925. Identification of immature stages of Indian Cerambycidae. I. Cerambycini. Indian Forest Records 12 (2)
- 239 Gardner, J.C.M. 1926. Descriptions of new species of Niponiidae and Cerambycidae from India. Indian Forest Records 12 (7)
- 240 Corporaal, J.B. 1926. On some Indian Cleridae (Coleoptera) Part I: New species of Cleridae from British India and Burma. Indian Forest Records 12 (8)
- 241 Beeson, C.F.C. 1926. On some Indian Cleridae (Coleoptera) Part II: Notes on the biology of the Cleridae. Indian Forest Records 12 (8)
- 242 Fleutiaux, E. 1926. On some Indian Coleoptera. Part I: Description of a new species of *Fornax* from India (Melasidae, Col.). Indian Forest Records 12 (10)
- 243 Gardner, J.C.M. 1926. On some Indian Coleoptera. Part II: (a) Descriptions of the early stages of *Fornax gardneri* Fleut. (Melasidae, Col.). (b) Descriptions of the larva of *Atractocerus emarginatus* Casst. (Lymexylonidae, Col.). Indian Forest Records 12 (10)

- 244 Gardner, J.C.M. 1927. Identification of immature stages of Indian Cerambycidae II. Indian Forest Records 13 (2)
- 245 Suri, P.N. 1928. Commercial volume tables for sal (*Shorea robusta*) in the wet mixed forests of the Bengal Duars. Indian Forest Records 13 (3)
- 246 Suri, P.N. 1928. Volume tables for Sundri (*Heritiera fomes*, Buch. Sym. *Heritiera minor*, Roxb.) in the Sunderbans, Bengal. Indian Forest Records 13 (4)
- 247 Muir, Wm. Angus. 1929. Epidemic attacks by the sal heartwood borer, (*Hoplocerambyx spinicornis*, Newm, fam. Cerambycidae) in the forests of South Mandala Division, Northern Circle, Central Provinces, with special reference to the period 1924-25 to 1926-27. Indian Forest Records 13 (5)
- 248 Kleine, R. 1929. On some new Indian Coleoptera, Hemiptera and Thysanoptera. Part I: Neue Indische Lycidae, nebst faunistischen Bemerkungen (Lycidae, Col.). Indian Forest Records 13 (6)
- 249 Thery, A. 1929. On some Indian Coleoptera, Hemiptera and Thysanoptera. Part II: A new *Agrilus* from India (Bupresitidae, Col.). Indian Forest Records 13 (6)
- 250 Ollenbach, O.C. 1929. New species of Cicadidae and Fulgoridae from India and Burma (Hemp.). Indian Forest Records 13 (6)
- 251 Drake, C.J. 1929. A new subgenus and species of *Tingis* from Burma (Tingitidae, Hemip.). Indian Forest Records 13 (6)
- 252 Moulton, D. 1929. New Thysanoptera from India. Indian Forest Records 13 (6)
- 253 Turner, J.E.C. 1928. Slash in chir pine (*Pinus longifolia*) forests: Causes of formation, its influence and treatment. Indian Forest Records 13 (7)
- 254 Champion, H.G; Mahendru, I.D; Suri, P.N. 1929. Volume and cut tern tables for Blue pine (*Pinus excelsa*, Wall.). Indian Forest Records 13 (8)
- 255 Champion, H.G; Mahendru, I.D; Suri, P.N. 1929. Commercial timber (Katha) and heartwood volume tables for Khair (*Acacia catchew*, Wild.) in North India. Indian Forest Records 13 (9)
- 256 Champion, H.G; Suri, P.N; Mahendru, I.D. 1929. Yield tables for Blue pine (*Pinus excelsa*, Wall.). Indian Forest Records 13 (10)
- 257 Raitt, W. 1930. The Burma bamboo pulp survey. Indian Forest Records 14 (1)
- 258 Coventry, B.O. 1930. Denudation of the Punjab hills. Indian Forest Records 14 (2)

- 259 Bagchee, K.D. 1930. Investigations on the infestation of *Peridermium complantum*, Barclay, on the needles and of *Peridermium himalayense* n. sp., on the stem of *Pinus longifolia*, Roxb. Indian Forest Records 14 (3)
- 260 Gardner, J.C.M. 1930. Immature stages of Indian Coleoptera (6). Indian Forest Records 14 (4)
- 261 Blair, K.G. 1930. On some Indian Coleoptera and Hemiptera. The Indian species of *Palorus Muls.* (Coleoptera: Tenebrionidae and some associated beetles). Indian Forest Records 14 (5)
- 262 Fleutiaux, E. 1930. On some new Indian Coleoptera and Hemiptera. Two new species of Coleoptera from India. Indian Forest Records 14(6)
- 263 Gardner, J.C.M. 1930. On some new Indian Coleoptera and Hemiptera. Some new Indian Cerambycidae. Indian Forest Records 14 (7)
- 264 Laing, F. 1930. On some new Indian Coleoptera and Hemiptera. Some records of Indo-Malayan Psyllidae. Indian Forest Records 14 (8)
- 265 Eggers, H. 1930. On the genus *Xyleborus*. Neue *Xyleborus*-Arten (Col. Scolytidae) Aus Indian. Indian Forest Records 14 (9)
- 266 Beeson, C.F.C. 1930. On the Genus *Xyleborus*. The biology of the Genus *Xyleborus*, with more species. Indian Forest Records 14 (10)
- 267 Fleutiaux, E. 1930. On some Indian Coleoptera. A new Genus and a new species of Elateridae. Indian Forest records 14 (11)
- 268 Fisher, W.S. 1930. On some Indian Coleoptera. A new Genus and two new species of Longhorn Beetles from India (Coleoptera: Cerambycidae: Subfamily Lamiinae). Indian Forest Records 14 (12)
- 269 Gardner, J.C.M. 1930. On some Indian Coleoptera. Immature stages of Indian Coleoptera(7). Indian Forest Records 14 (13)
- 270 Kleine, R. 1930. On some Indian Coleoptera. Three new species of Lycidae. Indian Forest Records 14 (14)
- 271 1930. A glossary of technical terms for use in Indian Forestry. Indian Forest Records 15 (2)
- 272 Champion, H.G; Mahendru, I.D. 1931. Standard, commercial and heartwood volume tables(factory working) for khair (*Acacia catechu*, Willd.) in north India. Indian Forest Records 15 (3)
- 273 Mahendru, I.D. 1932. Volume tables and diameter growth curve for semal (*Bombax malabaricum* DC). Indian Forest Records 15 (4)

- 274 Mahendru, I.D. 1932. Provisional volume tables and diameter growth curve for semal (*Bombax malabaricum* DC) in the Central Provinces. Indian Forest Records 15(5)
- 275 1932. Branch smallwood tables for *Shorea robusta*, *Tectona grandis*, *Cedrus deodars*, *Pinus excelsa* and *P. longifolia*. Indian Forest Records 15 (6)
- 276 Mahendru, I.D. 1933. Provisional volume tables and diameter growth curves for *Holoptelea integrifolia* Planch.(kanju) and *Trewia nudiflora* Linn.(gutel). Indian Forest Records 15 (7)
- 277 Champion, H.G; Mahendru, I.D. 1933. Multiple yield tables for Deodar (*Cedrus deodara* Loudon). Indian Forest Records 15 (8)
- 278 Parker, R.N. 1931. Illustration of Indian forest plants. Part 2 Five species of *Dipterocarpus*. Indian Forest Records 16 (1)
- 279 Krishna, S; Ghose, T.P. 1931. Indian ephedras. Indian Forest Records 16 (2)
- 280 Gardner, J.C.M. 1931.Immature stages of Indian Coleoptera(8) (*Cerambycidae*-contd.). Indian Forest Records 16 (3)
- 281 Gardner, J.C.M. 1931. Immature stages of Indian Coleoptera (9). Indian Forest Records 16 (4)
- 282 Champion, H.G; Pant, B.D. 1931. Investigations on the seed and seedlings of *Shorea robusta*. Indian Forest Records 16 (5)
- 283 Champion, H.G; Pant, B.D. 1932. Notes on *Pinus longifolia* Roxb. The plantations in Dehra Dun and the Central Provinces and miscellaneous seed studies. Indian Forest Records 16 (7)
- 284 Beeson, C.F.C. 1931. The life history and control of *Celosterna scbrator* F. (Col. *Cerambycidae*). Indian Forest Records 16 (9)
- 285 Fisher, W.S. 1932. New species of *Exocentrus mulsant* from India (Coleoptera:*Cerambycidae*: Subfamily *Lamiinae*). Indian Forest Records 16 (10)
- 286 Gardner, J.C.M. 1932. Immature stages of Indian Coleoptera (10) (*Anthribidae*). Indian Forest Records 16 (11)
- 287 Dover, C. 1932. Entomological investigations on the spike disease of sandal (*Santalum album* Linn.). Part I. An introductory survey of the problem. Indian Forest Records 17 (1)
- 288 Lallemand, V. 1933. Entomological investigations on the spike disease of sandal (4) - *Cercopidae* (Homopt.). Indian Forest Records 18 (1)
- 289 Kleine, R. 1933. Entomological investigations on the spike disease of sandal (5) - *Brenthidae* and *Lycidae* (Col.). Indian Forest Records 18 (2)

- 290 Jordan, K. 1933. Entomological investigations on the spike disease of sandal (6)-Anthribidae (Col.). Indian Forest Records 18 (3)
- 291 Andrews, H.E. 1933. Entomological investigations on the spike disease of sandal (8) - Carabidae (Col.). Indian Forest Records 18 (5)
- 292 Banks, N. 1933. Entomological investigations on the spike disease of sandal (9) - Neuroptera. Indian Forest Records 18 (6)
- 293 Fleutiaux, E. 1933. Entomological investigations on the spike disease of sandal (10)- Melasidae and Elateridae (Col.). Indian Forest Records 18 (7)
- 294 Chatterjee, N.C. 1933. Entomological investigations on the spike disease of sandal (11) - The life history and morphology of *Sarima nigroclypeata*, Mel. Fulgoridae (Homopt.). Indian Forest Records 18 (8)
- 295 Gardner, J.C.M. 1933. Immature stages of Indian Coleoptera (13) (Bostrychidae). Indian Forest Records 18 (9)
- 296 Limaye, V.D. 1933. The physical and mechanical properties of woods grown in India: Third Interim Report on Project no.1- (Tests on small clear specimens including results of work done up to the end of 1932). Indian Forest Records 18 (10)
- 297 Bagchee, K. 1933. Investigations on the infestation of *Peridermium himalayens*, Bagchee on *Pinus longifolia*, Part II - *Cronartium himalayense*, n. sp., on *Swertia* spp.- distribution, morphology of the parasite, pathological study of the infection, biological relationship with the pine rust, and control. Indian Forest Records 18 (11)
- 298 Mahendru, I.D. 1933. A stand table for sal (*Shorea robusta*) evenaged high forest. Indian Forest Records 18 (12)
- 299 Chatterjee, N.C. 1933. Entomological investigations on the spike disease of sandal (12)- The life history and morphology of *Eurybrachys tomentosa* Fabr. Fulgoridae (Homopt.). Indian Forest Records 18 (13)
- 300 Moulton, D. 1934. New Thysanoptera from India. Indian Forest Records 19 (1)
- 301 Chatterjee, N.C; Bose, M. 1934. Entomological investigations on the spike disease of sandal - (13) - Membracidae and Cercopidae (Homopt.), supplementary data. Indian Forest Records 19 (2)
- 302 Champion, H.G. 1934. Regeneration and management of sal (*Shorea robusta*). Indian Forest Records 19 (3)
- 303 Pruthi, H.S. 1934. Entomological investigations on the spike disease of sandal (14)- Jassidae (Homopt.). Indian Forest Records 19 (4)

- 304 Chatterjee, N.C. 1934. Entomological investigations on the spike disease of sandal (15)- Cicindelidae (Col.) and supplementary data on Neuroptera and Elateridae (Col.). Indian Forest Records 19 (5)
- 305 Korschefsky, R. 1934. Entomological investigations on the spike disease of sandal (16) - Coccinellidae (Col.). Indian Forest Records 19(6)
- 306 Chatterjee, N.C; Bose, M. 1934. Entomological investigations on the spike disease of sandal (18) - Fulgoridae (Homopt.). Indian Forest Records 19 (8)
- 307 Chatterjee, N.C. 1934. Entomological investigations on the spike disease of sandal (19)- On the life history and morphology of *Petaloccephala nigrilinea* Walk. (Jassidae, Homopt.). Indian Forest Records 19 (9)
- 308 Dover, C; Appanna, M. 1934. Entomological investigations on the spike disease of sandal (20) - Studies on insect transmission. Indian Forest Records 20 (1)
- 309 Gardner, J.C.M. 1934. Immature stages of Indian Coleoptera (14) (Curculionidae). Indian Forest Records 20 (2)
- 310 Mathur, R.N. 1934. On the biology of the Mantidae (Orthopt.). Indian Forest Records 20 (3)
- 311 Ramakrishna Ayyar, T.V. 1934. Entomological investigations on the spike disease of sandal (21)- Thysanoptera. Indian Forest Records 20 (4)
- 312 Mukerji, D. 1934. Entomological investigations on the spike disease of sandal (22)- Formicidae (Hymen.). Indian Forest Records 20 (5)
- 313 Heberdey, R.F. 1934. Entomological investigations on the spike disease of sandal (23) - Anthicidae (Col.). Indian Forest Records 20 (6)
- 314 Dover, C; Mathur, R.N. 1934. Methods of testing the susceptibility of timbers to termite attack. Indian Forest Records 20 (7)
- 315 Gardner, J.C.M. 1934. Immature stages of Indian Coleoptera (15) (Scolytidae). Indian Forest Records 20 (8)
- 316 Chatterjee, N.C. 1934. Entomological investigations on the spike disease of sandal (24)- Pentatomidae (Hemiot.). Indian Forest Records 20 (9)
- 317 Plavilstshikov, N.N. 1934. Sur quelques longicornes des Indes (Cerambycidae, Col.). Indian Forest Records 20 (10)
- 318 Snyder, T.E. 1934. New termites from India. Indian Forest Records 20 (11)

- 319 Cushman, R.A. 1934. New Ichneumonidae from India and China. Indian Forest Records 20 (12)
- 320 Kapur, S.N. 1935. Results of experiments on the kiln drying of wood with ozonized air. Indian Forest Records 20 (13)
- 321 Nagle, W. 1934. Interim report on work under Project VIII. (Testing of Indian timbers for veneer and plywood). Indian Forest Records 20 (14)
- 322 Parker, R.N. 1935. Illustrations of Indian forest plants, Part III- Dipterocarpus macrocarpus Vesque. Indian Forest Records 20 (15)
- 323 Parkinson, C.E. 1935. Illustration of Indian forest plants Part III- Anisoptera oblonga Dyer, Scaphula glabra Parker, Hopea wightiana Wall., and Hopea glabra Wight and Arn. Indian Forest Records 20 (15)
- 324 FRI. 1935. A stand table for sal (*Shorea robusta*) evenaged high forest and coppice. Indian Forest Records 20 (16)

Indian Forest Records (New Series)

- 325 Parkinson, C.E. 1937. Indian terminalis of the section pentaptera. Indian Forest Records (New Series) Botany 1 (1)
- 326 Parkinson, C.E. 1937. Illustration of Indian forest plants, part IV *Hopea helferi* (Dyer) Brandis, *Hopea oblogifolia* Dyer, *Shorea floribunda* Wall. *Shorea assamica* Dyer, and *Shorea sericeiflora* Fisher and Hutchinson. Indian Forest Records (New Series) Botany 1(2)
- 327 Bor, N.L. 1938. A list of the grasses of Assam. Indian Forest Records (New Series) Botany 1 (3)
- 328 Bor, N.L. 1938. A sketch of the vegetation of the Aka Hills, Assam. A synecological study. Indian Forest Records (New Series) Botany 1 (4)
- 329 Raizada, M.B. 1939. Recently introduced or otherwise imperfectly known plants from the Upper Gangetic Plain. Indian Forest Records (New Series) Botany 1 (5)
- 330 Stebbins, G.L. 1939. Notes on some Indian species of *Lactuca*. Indian Forest Records (New Series) Botany 1 (6)
- 331 Bor, N.L. 1941. *Thyrsostachys oliveri* Gamble. Indian Forest Records (New Series) Botany 2 (2)
- 332 Bor, N.L. 1941. *Hopea shinkeng* (Dunn) Bor. Indian Forest Records (New Series) Botany 2 (3)
- 333 Bor, N.L. 1941. Some new Indian flowering Plants: *Gleditsia assamica* Bor, *Garnotia puchiparensis* Bor and *Strobilanthes andamanensis* Bor. Indian Forest Records (New Series) Botany 2 (4)
- 334 Biswas, K. 1941. The flora of the Aka Hills. Indian Forest Records (New Series) Botany 3 (1)
- 335 Mooney, H.F. 1941. Some additions to the Botany of Bihar and Orissa. Indian Forest Records (New Series) Botany 3 (2)
- 336 Raizada, M.B. 1941. Five new Indian and Burmese flowering plants: *Ceropegia borii* M.B.Raizada, *Neptunia robertsonii* M.B.Raizada *Capparis bhamoensis* M.B.Raizada and *Phlogacanthus pochinii* M.B.Raizada. Indian Forest Records (New Series) Botany 3 (3)
- 337 Mooney, H.F. 1941. A short account of the geology and flora of the Hill Zamindari in Kalhandi State. Indian Forest Records (New Series) Botany 3 (4)
- 338 Bor, N.L. 1941. New Indian and Burmese species. Indian Forest Records (New Series) Botany 3 (5)

- 339 Bor, N.L. 1942. The relict vegetation of the Shillong Plateau-Assam. Indian Forest Records (New Series) Botany 3 (6)
- 340 Mooney, H.F. 1942. A sketch of the flora of the Bailadila Range in Bastar State. Indian Forest Records (New Series) Botany 3 (7)
- 341 Raizada, M.B; Bharadwaja, R.C; Jain, S.K. 1961. Grasses of the Upper Gangetic Plain: Panicoideae Part I (Maydeae and Andropogoneae). Indian Forest Records (New Series) Botany 4 (7)
- 342 Raizada, M.B. 1959. Name changes in common Indian plants. Indian Forest Records (New Series) Botany 5 (1)
- 343 Krishna, S; Puntambaker, S.V; Raizada, M.B. 1936. Minor forest products of Chakrata, Dehra Dun, Saharanpur, etc. and neighbouring forest divisions. Part I - The oil bearing seeds. Indian Forest Records (New Series) Chemistry 1 (1)
- 344 Tiwari, K.M. 1984. Measures to control floods in the Ganga Basin. Indian Forest Records (New Series) Chemistry 3 (1)
- 345 Gardner, J.C.M.1935. Immature stages of Indian Coleoptera (16) (Scarabaeoidea). Indian Forest Records (New Series) Entomology 1 (1)
- 346 Mathur, R.N. 1935. On the biology of the Psyllidae (Homopt.). Indian Forest Records (New Series) Entomology 1 (2)
- 347 Kleine, R. 1935. Neue Brenthiden and Lyciden aus Indien. Indian Forest Records (New Series) Entomology 1 (3)
- 348 Gardner, J.C.M.1935. Immature stages of Indian Coleoptera (17) Eucnemidae). Indian Forest Records (New Series) Entomology 1 (4)
- 349 Voss, E. 1935. Neue Attelabiden aus Indien (Curculionidae, Col.). Indian Forest Records (New Series) Entomology 1 (5)
- 350 Beeson, C.F.C; Chatterjee, S.N. 1935. Biology of the Branconidae (Hymenopt.). Indian Forest Records (New Series) Entomology 1 (6)
- 351 Gardner, J.C.M. 1935. Immature stages of Indian Coleoptera (18) (Brenthidae). Indian Forest Records (New Series) Entomology 1 (7)
- 352 Beeson, C.F.C; Chatterjee, S.N. 1935. On the biology of the Ichneumonidae (Hymenoptera). Indian Forest Records (New Series) Entomology 1 (8)
- 353 Beeson, C.F.C; Chatterjee, N.C. 1935. On the biology of the Techinidae (Diptera). Indian Forest Records (New Series) Entomology 1 (9)
- 354 Chatterjee, N.C. 1935. Entomological investigations on the spike disease of sandal (25) Lepidoptera. Indian Forest Records (New Series) Entomology 1 (10)

- 355 Marshall, G.A.K. 1935. New Indian Curculionidae (Col.). Indian Forest Records (New Series) Entomology 1 (11)
- 356 Chatterjee, N.C; Ramakrishna Ayyar, T.V. 1935. Entomological investigations on the spike disease of sandal (26) Coccidae (Homopt.). Indian Forest Records (New Series) Entomology 1 (12)
- 357 Chatterjee, N.C; Bhasin, G.D. 1935. Entomological investigations on the spike disease of sandal (27) Chrysomelidae (Col.). Indian Forest Records (New Series) Entomology 1 (13)
- 358 Atkinson, D.J. 1936. A survey of the damage to teak timber by the Beehole borer (*Xyleutes ceramica* Wlk). Indian Forest Records (New Series) Entomology 2 (1)
- 359 Gardner, J.C.M. 1936. Immature stages of Indian Coleoptera (19) Anthribidae. Indian Forest Records (New Series) Entomology 2 (2)
- 360 Gardner, J.C.M. 1936. New Indian Cerambycidae. Indian Forest Records (New Series) Entomology 2 (4)
- 361 Drake, C.J; Poor, M.E. 1936. New Indian Tingitidae (Hemiptera). Indian Forest Records (New Series) Entomology 2 (5)
- 362 Emden, F.V. 1936. Zwei neue Callirhipis mit ihren Larven (Sandalidae, Col.). Indian Forest Records (New Series) Entomology 2 (6)
- 363 Chatterjee, N.C. 1936. Entomological investigations on the spike disease of sandal (29) Coreidae and Berytidae (Hemipt.). Indian Forest Records (New Series) Entomology 2 (7)
- 364 Andrews, H.E. 1936. Some new Carabidae from India. Indian Forest Records (New Series) Entomology 2 (8)
- 365 Gardner, J.C.M. 1936. Immature stages of Indian Coleoptera (20) (Carabidae). Indian Forest Records (New Series) Entomology 2 (9)
- 366 Kleine, R. 1936. Neue Brenthiden und Lyciden aus Indien. Indian Forest Records (New Series) Entomology 2 (10)
- 367 Chatterjee, N.C. 1936. Entomological investigations on the spike disease of sandal (30) Reduviidae (Hemipt.). Indian Forest Records (New Series) Entomology 2(11)
- 368 Beeson, C.F.C; Bhatia, B.M. 1936. On the biology of the Bostrychidae (Coleopt.). Indian Forest Records (New Series) Entomology 2(12)
- 369 Chopard, L; Chatterjee, N.C. 1937. Entomological investigations on the spike disease of sandal (31) Dermaptera and Orthoptera. Indian Forest Records (New Series) Entomology 3(1)
- 370 Gardner, J.C.M. 1937. Immature stages of Indian Coleoptera (21) Cleridae. Indian Forest Records (New Series) Entomology 3(2)

- 371 Beeson, C.F.C. 1937. New *Crossotarsus* (Platypodidae, Col.). Indian Forest Records (New Series) Entomology 3(3)
- 372 Chatterjee, N.C. 1937. Entomological investigations on the spike disease of sandal (32) *Lygaeidae* (Hemipt.). Indian Forest Records (New Series) Entomology 3(4)
- 373 Pic, M. 1937. *Cis* latr. et anobodies nouveaux des Indes (Coleopteres). Indian Forest Records (New Series) Entomology 3(5)
- 374 Gardner, J.C.M. 1937. Immature stages of Indian Coleoptera (22). Indian Forest Records (New Series) Entomology 3(6)
- 375 Cushman, R.A. 1937. Four new Indian Ichneumonidae. Indian Forest Records (New Series) Entomology 3(7)
- 376 Garthwaite, P.F. 1939. Biology of *Calopelma leayana* latr. (Chrysomelidae, Col.) and the possibilities of control. Indian Forest Records (New Series) Entomology 5(2)
- 377 Beeson, C.F.C. 1939. New species and biology of *Coccotrypes* and *Thamnurgides* (Scolytidae, Col.). Indian Forest Records (New Series) Entomology 5(3)
- 378 Gardner, J.C.M. 1939. New Indian Cerambycidae. Indian Forest Records (New Series) Entomology 6(1)
- 379 Corporaal, J.B. 1939. Some Cleridae from India, Burma and Ceylon with descriptions of new species and notes on others. Indian Forest Records (New Series) Entomology 6(2)
- 380 Beeson, C.F.C; Chatterjee, N.C. 1940. Possibilities of control of lantana (*Lantana aculeata* Linn.) by indigenous insect pests. Indian Forest Records (New Series) Entomology 6(3)
- 381 Fisher, W.S. 1940. New Cerambycidae from India, II (Coleoptera). Indian Forest Records (New Series) Entomology 6(5)
- 382 Gardner, J.C.M. 1940. New Indian Cerambycidae (Coleoptera). Indian Forest Records (New Series) Entomology 6(6)
- 383 Gardner, J.C.M. 1940. The puparia of some Indian Tachinidae (Diptera). Indian Forest Records (New Series) Entomology 6(7)
- 384 Gardner, J.C.M. 1941. Immature stages of Indian Lepidoptera (2) Noctuidae, Hypsidae. Indian Forest Records (New Series) Entomology 6(8)
- 385 Gardner, J.C.M. 1941. Immature stages of some Indian Lepidoptera (3). Indian Forest Records (New Series) Entomology 6(9)
- 386 Gardner, J.C.M. 1942. On some Indian Cerambycidae. Indian Forest Records (New Series) Entomology 7(2)
- 387 Mathur, R.N. 1942. On the biology of the Noctuidae (Lepidoptera). Indian Forest Records (New Series) Entomology 7(3)

- 388 Gardner, J.C.M. 1942. Immature stages of Indian Coleoptera (4) Zygaenidae. Indian Forest Records (New Series) Entomology 7(4)
- 389 Pant, G.D; Chatterjee, N.C. 1951. A list of described immature stages of Indian Lepidoptera Part II - Heterocera. Indian Forest Records (New Series) Entomology 7(9)
- 390 Gressitt, J.L. 1950. Indian Longicorn beetles (Coleoptera: Cerambycidae) Part I. Indian Forest Records (New Series) Entomology 8(2)
- 391 Mathur, R.N. 1954. Immature stages of Indian Coleoptera (25) Curculionidae. Indian Forest Records (New Series) Entomology 8(9)
- 392 Mathur, R.N. 1954. Immature stages of Indian Lepidoptera No.9 - Pyralidae, Subfamily Pyrasutinae. Indian Forest Records (New Series) Entomology 8(11)
- 393 Balwant Singh. 1956. Description and systematic position of larva and Pupa of the teak defoliator, *Hyblea puera* Cramer (Insecta, Lepidoptera, Hyblaeidae). Indian Forest Records (New Series) Entomology 9(1)
- 394 Breuning, S. 1956. Quelques nouvelles especes de lamiaires de l'inde (Coleoptera, Cerambycidae). Indian Forest Records (New Series) Entomology 9(2)
- 395 Mathur, R.N. 1957. Immature stages of Indian Coleoptera (28) Anthribidae. Indian Forest Records (New Series) Entomology 9(5)
- 396 Roonwal, M.L; Chatterjee, N.C. 1960. Experiments on fresh water-seasoning (water-immersion) of three species of Indian timbers to provide anti-insect protection. Indian Forest Records (New Series) Entomology 10(1)
- 397 Mathur, R.N. 1961. Pests of teak and their control. Indian Forest Records (New Series) Entomology 10(3)
- 398 Roonwal, M.L; Chatterjee, P.N. 1961. Control of ten mound-building-termite (*Odontotermes obesus*) in India with chlorinated hydrocarbons. Indian Forest Records (New Series) Entomology 10(4)
- 399 Roonwal, M.L; Thapa, R.S. 1962. Entomological investigations on high girdling of Salai, *Boswellia serrata* Roxb. in Sillari forest (Madhya Pradesh, India). Indian Forest Records (New Series) Entomology 10(7)
- 400 Schedl. K.E. 1962. Indian bark and timber beetles-IV. Indian Forest Records (New Series) Entomology 10(8)
- 401 Chatterjee, P.N; Thakur, M.L. 1963. Revision of the termite genus *Hypotermes* holmg. (Isoptera: Termitidae: Macrotermitinae) from the Indo-Malayan region. Indian Forest Records (New Series) Entomology 10(9)

- 402 Kuldip Rai; Chatterjee, P.N. 1964. Studies on the morphology and taxonomy of Indian Bostrychidae V- A revision of the Indian species of *Heterobostrychus lesne* (Coleoptera: Bostrychidae). Indian Forest Records (New Series) Entomology 10 (10)
- 403 Chatterjee, P.N; Thakur, M.L. 1964. Revision of termite genus *Microtermes* Wasmann (Isoptera: Termitidae: Macrotermitinae). Indian Forest Records (New Series) Entomology 10 (11)
- 404 Roonwal, M.L; Chatterjee, P.N. 1966. Effect of leaching out water soluble substances in the bamboo, *Bambusa nutans* Wall., as protection against insect borers. Indian Forest Records (New Series) Entomology 10 (12)
- 405 Chatterjee, P.N; Thakur, M.L. 1967. Contribution to the knowledge of systematics of North-Western Himalayan termite fauna (Isoptera : Insecta). Indian Forest Records (New Series) Entomology 11 (1)
- 406 Basu Choudhury, J.C; Misra, M.P. 1977. Immature stages of Indian Coleoptera (31) Descriptions of egg, larva and pupa of cashew stem and root borer, *Plocaederus ferrugineus* (Linnaeus) (Coleoptera: Cerambycidae: Cerambycinae). Indian Forest Records (New Series) Entomology 12 (1)
- 407 Thakur, M.L; Sen-Sarma, P.K. 1979. Revision of Termite genus *Heterotermes* Frogatt (Isoptera; Rhinotermitidae; Heterotermitinae). Indian Forest Records (New Series) Entomology 13 (2)
- 408 Thakur, M.L. 1981. Revision of the Termite genus *Odontotermes holmgren* (Isoptera: Termitidae: Macrotermitinae). Indian Forest Records (New Series) Entomology 14 (2)
- 409 Subba Rao, B.K; Pande, S.K. 1982. Effect of tree and litter covers on climate near the ground including surface soil temperature and soil moisture in three forest plantations of chir (*Pinus roxburghii*), sal (*Shorea robusta*) and teak (*Tectona grandis*) at New Forest (Dehra Dun). Indian Forest Records (New Series) Forest Influences 1 (1)
- 410 Ghosh, R.C; Subba Rao, B.K; Ramola, B.C. 1983. Microclimate of sal coppice forest. Indian Forest Records (New Series) Forestry Influences 2 (1)
- 411 Pande, G.C; Jain, R.C. 1976. Crop volume tables for *Eucalyptus grandis*. Indian Forest Records (New Series) Forest Management and Mensuration 1 (1)
- 412 Sharma, R.P; Jain, R.C. 1977. Weight table for *Anogeissus latifolia* (Roxb) Bedd. (Based on the data from Rajasthan). Indian Forest Records (New Series) Forest Management and Mensuration 1 (2)
- 413 Sharma, R.P; Jain, R.C. 1977. General standard volume tables for Jamun (*Syzygium cumini*). Indian Forest Records (New Series) Forest Management and Mensuration 1 (3)

- 414 Sharma, R.P; Jain, R.C. 1977. General standard volume tables for Babul (*Acacia nilotica* ssp. *indica*). Indian Forest Records (New Series) Forest Management and Mensuration 1 (4)
- 415 Sharma, R.P; Jain, R.C. 1978. Standard Volume tables for *Dalbergia latifolia* Roxb. Indian Forest Records (New Series) Forest Management and Mensuration 1 (5)
- 416 Pande, G.C. 1978. Yield tables for *Eucalyptus grandis*. Indian Forest Records (New Series) Forest Management and Mensuration 2 (1)
- 417 Sharma, R.P; Jain, R.C; Shet, S.N. 1979. Regional volume tables for *Terminalia bellerica* Roxb. Indian Forest Records (New Series) Forest Management and Mensuration 3 (1)
- 418 Sharma, R.P; Jain, R.C; Shet, S.N. 1979. Regional volume tables for *Terminalia paniculata* Roth. Indian Forest Records (New Series) Forest Management and Mensuration 3 (2)
- 419 Sharma, R.P; Jain, R.C; Shet, S.N. 1979. Regional volume tables for *Lagerstroemia lanceolata* Wall.ex W&A. Indian Forest Records (New Series) Forest Management and Mensuration 3 (3)
- 420 Sharma, R.P; Jain, R.C; Shet, S.N. 1979. Regional volume tables for *Xylia xylocarpa* (Roxb.) Taub. Indian Forest Records (New Series) Forest Management and Mensuration 3(4)
- 421 Sharma, R.P; Jain, R.C; Shet, S.N. 1979. Regional volume tables for *Careya arborea* Roxb. Indian Forest Records (New Series) Forest Management and Mensuration 3 (5)
- 422 Manjusri Sen. 1973. Cultural diagnosis of Indian Polyporaceae. 3. Genera *Daedalea*, *Favolus*, *Ganoderma*, *Hexagonia*, *Irpex*, *Lenzites*, *Merulius* and *Poria*. Indian Forest Records (New Series) Forest Pathology 2 (2)
- 423 Bakshi, B.K; Sujan Singh. 1967. Rusts on Indian forest trees. Indian Forest Records (New Series) Forest Pathology 2 (8)
- 424 Bakshi, B.K; Sehgal, H.S; Balwant Singh. 1969. Cultural diagnosis of Indian Polyporaceae I. Genus Polyporaceae. Indian Forest Records (New Series) Forest Pathology 2 (9)
- 425 Bakshi, B.K; Manjusri Sen; Balwant Singh. 1970. Cultural diagnosis of Indian Polyporaceae 2. Genera *Fomes* and *Trametes*. Indian Forest Records (New Series) Forest Pathology 2 (10)
- 426 Niranjana Singh, S; Asthana, M.N; Bhatia, D.N. 1966. Modern logging tools, equipments and techniques as introduced at the logging training centre, Batote. Indian Forest Records (New Series) Logging 1 (1)
- 427 Asthana, M.N. 1966. Logging in India. Indian Forest Records (New Series) Logging 1 (2)

- 428 Asthana, M.N; Bhatia, D.N. 1972. Logging terminology. Indian Forest Records (New Series) Logging 1 (3)
- 429 Seth, S.K. 1974. Surface relief, alluvial morphology and vegetation in North Kheri Forest Division. Indian Forest Records (New Series) Silvics 1 (1)
- 430 Dabral, B.G; Pande, S.K. 1980. Soil moisture regime under forest plantations. Indian Forest Records (New Series) Silvics 3 (1)
- 431 1936. A glossary of technical terms for use in Indian forestry. Indian Forest Records (New Series) Silviculture 1 (1)
- 432 Taylor, E.M; Mahendru, I.D; Mehta, M.L; Hoon, R.C. 1936. A study of the soils in the hill areas of the Kulu Forest Division, Punjab. Part I. An investigation of soil profiles under deodar, spruce, blue pine, and chir. Indian Forest Records (New Series) Silviculture 1 (2)
- 433 Hoon, R.C. 1936. The distribution of sesquioxides, silica and organic matter in forest soil profiles of the Kulu hill area. Indian Forest Records (New Series) Silviculture 1 (3)
- 434 Kakazai, M.A. 1936. Standard and commercial volume tables for *Dalbergia sissoo*. Indian Forest Records (New Series) Silviculture 2 (2)
- 435 FRI. 1936. Chir (*Pinus longifolia*, Roxb.) evenaged high forest. Indian Forest Records (New Series) Silviculture 2 (3)
- 436 Deogun, P.N. 1940. The silviculture and management of the bamboo *Dendrocalamus strictus* Nees. Indian Forest Records (New Series) Silviculture 2 (4)
- 437 Kakazai, M.A. 1937. The formation of heartwood and its amount in Deodar timber. Indian Forest Records (New Series) Silviculture 2 (6)
- 438 Mooney, H.F. 1938. A synecological study of the forests of Western Singhbhum with special reference to their geology. Indian Forest Records (New Series) Silviculture 2 (7)
- 439 Griffith, A.L. 1938. An investigation into the best root length of stump to use when stump planting teak (*Tectona grandis*) in areas having a general west coast type of climate. Indian Forest Records (New Series) Silviculture 3 (1)
- 440 Griffith, A.L. 1938. An investigation into the best date of stump planting teak (*Tectona grandis*) at Begur (Wynaad Division) Dhoni (Palghat Division) and Topslip (South Coimbatore Division). Indian Forest Records (New Series) Silviculture 3 (2)
- 441 Sen Gupta, J.N. 1939. *Dipterocarpus* (Gurjan) forests in India and their regeneration. Indian Forest Records (New Series) Silviculture 3 (4)

- 442 Griffith, A.L. 1939. An investigation into the best age and diameter of stump to use when stump planting teak (*Tectona grandis*) in areas having a general west coast type of climate. Indian Forest Records (New Series) Silviculture 3 (5)
- 443 Hoon, R.C. 1939. Study of the soils in the hill areas of Kashmir: An investigation of soil profiles under Deodar, Blue pine, Silver fir and Chir. Indian Forest Records (New Series) Silviculture 3 (6)
- 444 Rangaswami, R.S.S; Griffith, A.L. 1939. A note on the control and eradication of new outbreaks of the spike disease of sandal (*Santalum album*). Indian Forest Records (New Series) Silviculture 3 (7)
- 445 Griffith, A.L. 1940. A note on the artificial regeneration of the dry fuel forests of the Madras Province. Indian Forest Records (New Series) Silviculture 3 (8)
- 446 Laurie, M.V; Sant Ram, B. 1940. Yield and stand tables for teak (*Tectona grandis*, Linn. F) Plantations in India and Burma. Indian Forest Records (New Series) Silviculture 4-A (1)
- 447 Sant Ram, B. 1941. Provisional yield tables for *Dalbergia sissoo*, Linn. f. in the irrigated plantations of the Punjab. Indian Forest Records (New Series) Silviculture 4-A (2)
- 448 Griffith, A.L; Sant Ram, B; Prasad, J. 1947. General standard and commercial volume tables for *Terminalia tomentosa*, W. and A. Indian Forest Records (New Series) Silviculture 4-A (5)
- 449 Braithwaite, J.D. 1940. Canadian aerial forestry for Burma. Indian Forest Records (New Series) Silviculture 4 (1)
- 450 Griffith, A.L. 1939. An investigation into the relative merits and costs of five different weeding methods in the formation of teak (*Tectona grandis*) plantations in areas having a West Coast type of climate. Indian Forest Records (New Series) Silviculture 4 (2)
- 451 Laurie, M.V; Sen Gupta, J.N. 1941. Notes on cultivation of the tung-oil tree (*Aleurites* spp.) in India. Indian Forest Records (New Series) Silviculture 4 (3)
- 452 Griffith, A.L. 1941. Investigation into artificial regeneration details of the dry fuel forests of Madras. Indian Forest Records (New Series) Silviculture 4 (4)
- 453 Griffith, A.L. 1942. Stump production in Madras teak nurseries. Indian Forest Records (New Series) Silviculture 4 (5)
- 454 Laurie, M.V; Griffith, A.L. 1942. The problem of pure teak plantation. Indian Forest Records (New Series) Silviculture 5 (1)
- 455 Griffith, A.L. 1942. Teak plantation technique. Indian Forest Records (New Series) Silviculture 5 (2)

- 456 Griffith, A.L. 1946. The stomates and early growth of some timber trees of the Malabar coast. Indian Forest Records (New Series) Silviculture 6 (2)
- 457 Dent, T.V. 1948. Seed storage with particular reference to the storage of seed of Indian forest plants. Indian Forest Records (New Series) Silviculture 7 (1)
- 458 Edwards, M.V. 1950. Burma forest types (According to Champion's classification). Indian Forest Records (New Series) Silviculture 7 (2)
- 459 Brownlee, J.B. 1954. An introduction to the vegetation of the Assam Valley. Indian Forest Records (New Series) Silviculture 9 (1)
- 460 Krishnaswamy, V.S; Mathauda, G.S. 1960. Phenological behaviour of a few forest species at New Forest, Dehra Dun. Indian Forest Records (New Series) Silviculture 9 (2)
- 461 Mathauda, G.S; Singh, M.M. 1956. General volume and bark out turn tables for Babul (*Acacia arabica*, Willd.). Indian Forest Records (New Series) Silviculture 10 (1)
- 462 FRI. 1965. Indian forest and forest products terminology Part-I Forests (Silviculture, Protection, Mensuration and Management, Ecology, Soil Science and allied subjects). Indian Forest Records (New Series) Silviculture 10 (6)
- 463 Seth, S.K; Dabral, S.N. 1960. General standard volume tables for *Anogeissus pendula* Edgew. Indian Forest Records (New Series) Silviculture 10 (7)
- 464 Seth, S.K; Dabral, S.N. 1960. Standard volume tables for *Dipterocarpus macrocarpus* Vesque. Indian Forest Records (New Series) Silviculture 10 (9)
- 465 Seth, S.K; Bhatnagar, H.P. 1963. Studies in N P K nutrition of Sal (*Shorea robusta*) seedlings. Indian Forest Records (New Series) Silviculture 11 (1)
- 466 Chaturvedi, A.N. 1971. General standard volume tables for *Cedrela toona* Roxb. Indian Forest Records (New Series) Silviculture 12 (2)
- 467 Chaturvedi, A.N. 1973. General standard volume tables for Semal (*Bombax ceiba* L.). Indian Forest Records (New Series) Silviculture 12 (7)
- 468 Chaturvedi, A.N. 1973. General standard volume tables and height-diameter relationship for teak (*Tectona grandis*). Indian Forest Records (New Series) Silviculture 12 (8)
- 469 Chaturvedi, A.N. 1973. General standard volume tables for Shisham (*Dalbergia sossou*, Roxb.). Indian Forest Records (New Series) Silviculture 12 (9)

- 470 Chaturvedi, A.N. 1973. General standard volume tables for *Holoptelia integrifolia* Planch. Indian Forest Records (New Series) Silviculture 12 (10)
- 471 Chaturvedi, A.N. 1973. Standard volume and yield tables for Kail (*Pinus wallichiana*). Indian Forest Records (New Series) Silviculture 12 (11)
- 472 Chaturvedi, A.N. 1973. General standard volume tables for *Gmelina arborea* Linn. Indian Forest Records (New Series) Silviculture 12 (12)
- 473 Chaturvedi, A.N. 1973. General standard volume tables for Sal (*Shorea robusta*). Indian Forest Records (New Series) Silviculture 12 (13)
- 474 Chaturvedi, A.N. 1973. General standard volume tables for *Eucalyptus hybrid*. Indian Forest Records (New Series) Silviculture 12 (14)
- 475 Chaturvedi, A.N. 1973. General standard volume tables for Deodar (*Cedrus deodara*). Indian Forest Records (New Series) Silviculture 12 (15)
- 476 Chaturvedi, A.N. 1973. General standard volume tables for *Cryptomeria japonica*. Indian Forest Records (New Series) Silviculture 12 (16)
- 477 Chaturvedi, A.N; Pande, G.C. 1973. General volume tables for *Eucalyptus grandis*. Indian Forest Records (New Series) Silviculture 12 (17)
- 478 Limaye, V.D. 1939. The comparative strength of some important Indian timbers and their uses. Indian Forest Records (New Series) Utilization 1-A
- 479 Kapur, S.N; Rehman, M.A. 1939. Shrinkage studies on Indian woods. Indian Forest Records (New Series) Utilization 1 (1)
- 480 Kapur, S.N; Rehman, M.A. 1939. Air seasoning of softwood Railway sleepers. Indian Forest Records (New Series) Utilization 1 (2)
- 481 Kapur, S.N. 1939. Results obtained with a timber drying kiln heated directly by furnace gases. Indian Forest Records (New Series) Utilization 1 (3)
- 482 Kamesam, S. 1939. A note on protecting Indian structural timbers against fire, termites, borers and fungi. Indian Forest Records (New Series) Utilization 1 (4)
- 483 Nagle, W. 1939. Second interim report on work under project VIII (Testing of Indian timbers for veneer and plywood). Indian Forest Records (New Series) Utilization 1 (5)

- 484 FRI. 1939. Ascu - a wood preservative. Indian Forest Records (New Series) Utilization 1 (6)
- 485 FRI. 1939. Official list of trade names of Indian timbers (3rd Edition). Indian Forest Records (New Series) Utilization 1 (7)
- 486 Kapur, S.N; Rehman, M.A. 1939. Note on the air seasoning characteristics of some Indian woods (Supplement to the manual on the air seasoning of Indian woods). Indian Forest Records (New Series) Utilization 1 (8)
- 487 Ahamad Chaudhury, K. 1939. The formation of growth rings in Indian trees Part-I (a) Chir (*Pinus longifolia*) (b) Cutch (*Acacia catechu*) (c) Jaman (*Eugenia jambolana*) (d) Laurel (*Terminalia tomentosa*) (e) Sal (*Shorea robusta*) (f) Semal (*Bombax malabricum*) (g) Teak (*Tectona grandis*). Indian Forest Records (New Series) Utilization 2 (1)
- 488 Ahamad Chaudhury, K. 1940. The formation of growth rings in Indian trees Part-II (a) Champ (*Michelia champaca*) (b) Kokko (*Albizzia lebbek*) (c) Sissoo (*Dalbergia sissoo*) (d) Toon (*Cedrela toona*). Indian Forest Records (New Series) Utilization 2 (2)
- 489 Ahamad Chaudhury, K. 1940. The formation growth rings in Indian trees Part-III A study of the effect of locality. Indian Forest Records (New Series) Utilization 2 (3)
- 490 FRI. 1941. Third interim report on work under Proj.VIII (Testing of Indian timbers for veneer and plywood). Indian Forest Records (New Series) Utilization 2 (4)
- 491 Rehman, M.A. 1941. Experiment on the air seasoning of *Pinus longifolia* (Chir) sleepers in the East Almorah Division, U.P. Indian Forest Records (New Series) Utilization 2 (5)
- 492 Narayanamurti, D; Ranganathan, V. 1942. The thermal conductivity of Indian timbers Part - I Variation of conductivity with density in the air-dry conditions at ordinary temperature. Indian Forest Records (New Series) Utilization 2 (6)
- 493 Limaye, V.D. 1941. Note on Indian timbers for aircraft and gliders. Indian Forest Records (New Series) Utilization 2 (7)
- 494 Rehman, M.A. 1942. A survey of the seasonal variation of the moisture content of Indian woods. Indian Forest Records (New Series) Utilization 2 (10)
- 495 Limaye, V.D. 1943. Note on the roof trusses with solid wood disc dowel joints. Indian Forest Records (New Series) Utilization 3 (1)
- 496 Ahamad Chaudhury, K. 1945. The identification of Burma commercial timbers. Indian Forest Records (New Series) Utilization 3 (6)

- 497 FRI. 1975. Indian forest and forest products terminology Part-II Utilization (Forest products research, extraction, utilization and trade). Indian Forest Records (New Series) Utilization 5 (1)
- 498 Venkataramany, P. 1970. Glossary of the terms used in nature conservation and wild life management (with notes on important animals and birds). Indian Forest Records (New Series) Wildlife and Recreation 1 (1)
- 499 Purkayastha, S.K; Juneja, K.B.S; Kazmi, S.M.H. 1976. Anatomy of more important Andaman commercial timbers (with notes on their supply, properties and uses). Indian Forest Records (New Series) Wood Anatomy 2 (1)
- 500 Purkayastha, S.K; Agrawal, S.P; Tandon, R.D; Laxmi Chauhan. 1982. Studies on the variation in wood quality of *Eucalyptus teretecornis* Sm. trees grown in different plantations Part I - Wood specific gravity. Indian Forest Records (New Series) Wood Anatomy 3 (1)
- 501 Purkayastha, S.K; Agrawal, S.P; Tandon, R.D; Laxmi Chauhan. 1984. Studies on the variation in wood quality of *Eucalyptus tertecornis* Sm. trees grown in different plantations Part- II Fibre length. Indian Forest Records (New Series) Wood Anatomy 3 (2)

Leaflets – Forest Zoology

- 502 Stebbing, E.P. 1908. The sal bark-borer. Leaflet. Forest Zoology 1
- 503 Stebbing, E.P. 1908. The Teak leaf skelitoniser. Leaflet. Forest Zoology 3
- 504 Stebbing, E.P. 1909. The larger deodar bark borer. Leaflet. Forest Zoology 4
- 505 Stebbing, E.P. 1910. The blue pine "Polygraphus" bark borer. Leaflet. Forest Zoology 5

AUTHOR INDEX

- Ahamad Chaudhury, K, 487, 488, 489, 496
Andrews, H.E, 291, 364
Asthana, M.N, 427, 428
Atkinson, D.J, 063, 358
Badhwar, R.L, 148, 149, 150
Bagchee, K, 297
Bagchee, K.D, 259
Bakshi, B.K, 135, 423, 424, 425
Balwant Singh, 393
Banks, N, 292
Basu Choudhury, J.C, 406
Beeson, C.F.C, 042, 193, 204, 207, 210,
217, 234, 237, 241, 266, 284, 350,
352, 353, 368, 371, 377, 380
Benskin, E, 032, 033, 195
Bhargava, M.P, 085
Biswas, K, 334
Blair, K.G, 261
Blanford, H.R, 232
Bor, N.L, 327, 328, 331, 332, 333, 338, 339
Braithwaite, J.D, 449
Breuning, S, 394
Browntree, J.B, 459
Caccia, A.M.F, 004, 088, 090, 091, 169, 175
Chacko, V.J, 127
Champion, H.G, 055, 071, 074, 076, 077, 078,
079, 254, 255, 256, 272, 277, 282, 283, 302
Chatterjee, N.C, 294, 299, 301, 304, 306, 307,
316, 354, 356, 357, 363, 367, 372
Chatterjee, P.N, 123, 129, 132, 133, 154, 401,
403, 405
Chaturvedi, A.N, 466, 467, 468, 469, 470, 471,
472, 473, 474, 475, 476, 477
Chopard, L, 369
Chowdhury, K.A, 070
Collier, J.V, 219
Corporaal, J.B, 240, 379
Coventry, B.O, 258
Cox, C.E.C, 047, 048, 049
Cushman, R.A, 319, 375
Dabral, B.G, 430
Dakshini, M.N, 142
Dent, T.V, 457
Deogun, P.N, 436
Dey, A.C, 113
Dover, C, 287, 308, 314
Drake, C.J, 177, 251, 361
Eardley-Wilmot, S, 011
Edwards, M.V, 458
Eggers, H, 265
Emden, F.V, 362
Everret, W.H, 006
Fernandez, R.R, 153
Fisher, W.S, 268, 285, 381
Fleutiaux, E, 242, 262, 267, 293
FRI, 194, 197, 324, 435, 462, 484, 485, 490, 497
Gardner, J.C.M, 235, 238, 239, 243,
244, 260, 263, 269, 280, 281, 286,
295, 309, 315, 345, 348, 351, 359,
360, 365, 370, 374, 378, 382, 383,
384, 385, 386, 388
Garthwaite, P.F, 376
Ghosh, R.C, 141, 410
Glasson, A.K, 206
Gopal Rau, M, 214, 222, 236
Gressitt, J.L, 390
Griffith, A.L, 100, 439, 440, 442, 445,
448, 450, 452, 453, 455, 456
Guha, S.R.D, 131
Heberdey, R.F, 313
Hill, M, 038
Hingorani, G.R, 147
Hole, R.S, 014, 028, 030, 183, 184,
185, 186, 187, 202, 203, 205
Hoon, R.C, 433, 443
Howard, S.H, 045, 046, 051, 059, 225
Imms, A.D, 166
Jordan, K, 290
Kakazai, M.A, 434, 437
Kamesam, S, 062, 073, 075, 482
Kapur, S.N, 065, 320, 479, 480, 481, 486
Kleine, R, 233, 248, 270, 289, 347, 366
Korschefsky, R, 305
Krishna, S, 072, 084, 279, 343
Krishnaswamy, V.S, 107, 460
Kuldip Rai, 151, 152, 402
Laing, F, 264
Lallemand, V, 288
Laurie, M.V, 446, 451, 454
Leete, F.A, 002
Limaye, V.D, 082, 098, 296, 478, 493, 495
Lindsay, H.A.F, 200
Mahendru, I.D, 273, 274, 276, 298
Manjusri Sen, 422

Marshall, G.A.K, 355
 Masani, N.J, 156
 Mathauda, G.S, 102, 461
 Mathur, R.N, 105, 106, 108, 114, 117, 118, 119,
 120, 130, 310, 346, 387, 391, 392, 395, 397
 Mooney, H.F, 335, 337, 340, 438
 Moulton, D, 252, 300
 Muir, Wm. Angus, 247
 Mukerji, D, 312
 Nagle, W, 321, 483
 Narayanamurti, D, 086, 087, 099, 492
 Nautiyal, B, 081
 Niranjana Singh, S, 426
 Ollenbach, O.C, 250
 Osmaston, B.B, 170
 Pande, G.C, 411, 416
 Pant, G.D, 389
 Parker, R.N, 061, 066, 221, 278, 322
 Parkinson, C.E, 323, 325, 326
 Pasupati, E, 224
 Pearson, R.S, 003, 018, 019, 020, 034, 040, 041,
 043, 044, 052, 056, 161, 178, 180, 188, 196,
 198, 199, 209, 212
 Pic, M, 373
 Pilgrim, J.A, 058, 228, 229, 230
 Plavilstshikov, N.N, 317
 Popham, F.J, 067, 068
 Prasad, J, 097
 Prashad, B, 124, 125
 Pruthi, H.S, 303
 Puran Singh, 001, 008, 012, 029, 036, 037, 157,
 158, 173, 174, 179, 189, 190, 191, 192
 Purkayastha, S.K, 499, 500, 501
 Raitt, W, 182, 257
 Raizada, M.B, 329, 336, 341, 342
 Rama Rao, M, 176
 Ramakrishna Ayyar, T.V, 311
 Rangaswami, R.S.S, 444
 Rehill, P.S, 121
 Rehman, M.A, 083, 103, 109, 110
 111, 155, 491, 494
 Robertson, W.A, 054
 Rodger, A, 021, 022, 023, 024, 025, 026, 053
 Rogers, C.G, 057
 Roonwal, M.L, 104, 143, 144, 145, 146, 396, 398,
 399, 404
 Sant Ram, B, 447
 Santhakumaran, L.N, 140
 Schedl, K.E, 400
 Sekhar, A.C, 112, 116, 137
 Sen Gupta, J.N, 441
 Sen-Sarma, P.K, 115, 128
 Seth, S.K, 429, 463, 464, 465
 Sharma, R.P, 412, 413, 414, 415, 417,
 418, 419, 420, 421
 Sharma, S.N, 126, 136, 138
 Sharma, V.P, 134
 Simonsen, J.L, 208, 215, 218, 220, 226, 227, 231
 Smythies, E.A, 031, 050, 211, 223
 Snyder, T.E, 318
 Stebbing, E.P, 005, 007, 009, 013, 015, 017, 162,
 163, 164, 165, 168, 171, 502, 503, 504, 505
 Stebbins, G.L, 330
 Subba Rao, B.K, 409
 Subramania Iyer, V, 016
 Suri, P.N, 245, 246
 Sweet, C.V, 216
 Taylor, E.M, 432
 Thakur, M.L, 407, 408
 They, A, 249
 Tiwari, K.M, 344
 Troup, R.S, 010, 027, 035, 089, 092, 093, 094,
 095, 096, 159, 160, 167, 172, 181
 Turner, J.E.C, 253
 Venkataramany, P, 498
 Venkatesh, C.S, 122
 Voss, E, 349
 Waterston, J, 213
 Whitehead, T.A, 039
 Wilson, C. Claude, 060
 Wright, F.A, 201

SUBJECT INDEX

- Abies pindrow 208
Acaccia nilotica 414
Acacia arabica 017, 461
Acacia catechu 255, 487
Adina cordifolia 047
Afforestation 211
Aka Hills 328, 334
Albizia lebbek 488
Aleurites Montana 221
Aleurites spp. 451
Anatomy 499
Andaman marble-wood 089
Andropogon 227
Animal haulage 057
Anisoptera oblonga 323
Anogeissus latifolia 026, 138, 412
Anogeissus pendula 463
Anoplura 144
Antiseptic treatment 178, 196, 212
Anti-termite charecteristics 123
Artificial regeneration 206, 445, 452
Artocarpus hirssuta 060
Assam sal 015
Atractocerus emarginatus 243
Atropa acuminata 147
Babul 017, 461
Bailadila Range 340
Bamboo 127, 257, 404, 436
Bamboos 117
Bambusa nutans 404
Ban oak 074
Banj 074
Bark borer 505
Bark eating 017
Bark-boring beetle 014, 171
Bastar State 340
Batocera rubus 013
Beehole borer 204, 358
Beetles 390, 400
Belladona 147
Bengal Duars 245
Bengal sal 051
Berrya ammonilla 094
Bija sal 022
Biology 166, 241, 266, 310, 346, 350,
352, 353, 368, 376, 377, 387
Black wood 032
Blue pine 005, 254, 256, 505
Bombax ceiba 467
Bombax malabaricum 049, 097, 273, 274, 467,
487
Bootanomyia 114
Borers 482
Bostrychidae 151, 152, 402
Bostrychidae Coleoptera 368
Boswellia serrata 198, 218, 399
Botany 335
Branconidae Hymenoptera 350
Brenthidae Coleoptera 233, 234, 235
Broad gauge sleepers 219
Burma 172
Burma hill pine 058
Burma myrabolans 037
Burma padauk 096
Burmese leza wood 092
Calcareous opercula 042
Calopelpa leayana 376
Calorific values 072
Calorimetric tests 001
Canes 149
Capparis bhamoensis 336
Carabidae 364
Carabidae Coleoptera 291
Carallia wood 093
Caralliantegerrima 093
Careya arborea 421
Casuarina insect pests 016
Caterpillar tractors 057
Cedrela toona 020, 126, 466, 488
Cedrus deodara 275, 277, 475
Celosterna scbrator 284
Cerambycidae 042, 207, 238, 239, 244, 285, 317,
360, 378, 381, 382, 386, 394, 406
Cerobate sexsulcatus 235
Cerobates tristriatus 235
Ceropegia borii 336
Ceylonitermellus 125
Chalcidoidea 213
Champ 488
Chemical seasoning 138
Chilgoza forests 007
Chir 435, 487
Cicadidae 250
Cleridae 240, 241, 379

Clump-curing 117
 Coal tar creosote 086
 Coccotrypes 377
 Cold weather planting 076
 Coleoptera 151, 152, 207, 242, 243, 248, 249,
 260, 261, 262, 263, 264, 267, 268, 269,
 270, 280, 281, 286, 295, 309, 315, 345,
 348, 351, 359, 365, 370, 373, 374, 382,
 388, 391, 394, 395, 406
 Coleosterna scabrata 017
 Collection 168
 Commercial timbers 496, 499
 Coniferous forests 014
 Corticium 121
 Cotton wood 049
 Cronartium himalayense 297
 Cryptomeria japonica 476
 Culms 030, 127
 Cultivation 149, 451
 Cupressus torulosa 220
 Curculionidae Coleoptera 349, 355
 Cutch 172, 487
 Cymbopogon martini 188
 Cyohagogus corporaali 235
 Dalbergia latifolia 032, 415
 Dalbergia sissoo 434, 447, 488, 469
 Dendrocalamus strictus 436
 Deodar 475, 504, 437
 Dermaptera 143
 Diameter growth 273, 274, 276
 Diapus furivus 193
 Diospyroskurzi 089
 Diptera 383
 Dipterocarps 228
 Dipterocarpus
 Dipterocarpus 278
 Dipterocarpus macrocarpus 099, 322, 464
 Dipterocarpus pilosus 043
 Dipterocarpus tuberculatus 095
 Distillation 191
 Duabanga sonneratioides 040
 Duomitus ceramicus 204
 Ecology 462
 Elateridae 267
 Electrical resistance 087
 Embelis robusta 084
 Entomological collection 143, 144
 Environmental effects 141
 Ephedras 279
 Epheroptera 144
 Essential oils 215, 218, 220, 226, 227, 231, 236
 Eucalyptus globulus 181
 Eucalyptus grandis 411, 416, 477
 Eucalyptus hybrid 474
 Eucalyptus oil industry 190
 Eucalyptus teretecornis 500, 501
 Eugenia jambolana 083, 487
 Euhamitermes lighti 129
 Eurybrachys tomentosa 299
 Exocentrus mulsant 285
 Fig-tree borer 013
 Forest Influences 011
 Forest insect pests 133
 Forest insects 146
 Forest plants 106
 Forest Research Institute 066, 143, 144, 145,
 154, 194, 197
 Forest types 458
 Forestry 449
 Fornax 242
 Fornax gardneri 243
 Fresh water-seasoning 396
 Freshly felled timbers 120
 Fruit borer 210
 Fulgoridae 250
 Fungi 482
 Ganga Basin 344
 Garnotia puchiparensis Bor 333
 Geology 438
 Geranium oil 191
 Germination 176
 Germination tests 010
 Girth increments 035
 Gleditsia assamica Bor 333
 Gmelina arborea 021
 Gmelina arborea 472
 Grain alignment 156
 Grasses 030, 327
 Green hollong 099
 Growth rings 487, 488, 489
 Gumhar 021
 Gums 153
 Gurgan 054
 Gurjan 441
 Heartwood 437
 Height growth 078
 Hemiptera 144, 248, 249, 261, 262, 263, 264
 Heritiera fomes 246
 Heritiera minor 034, 246
 Heterobostrychus aequalis 151
 Heterobostrychus lesne 402
 Hill Zamindaries 337
 Holoptelea integrifolia 276

Holoptelia integrifolia Planch 470
 Hongal 052
 Hopea canarensis 203
 Hopea glabra 323
 Hopea helferi 326
 Hopea oblogifolia 326
 Hopea odorata 053
 Hopea shinkeng 332
 Hopea wightiana 323
 Hoplocerambyx spinicornis 009, 063, 119, 237, 247
 Humidity behaviour 128
 Hyblea puera Cramer 393
 Hypsipla robusta 210
 Ichneumonidae 319, 352, 375
 Indian forestry 004, 028, 175, 271
 Indian geranium oil 189
 Indian timbers 006, 064, 068, 080, 082, 087, 103, 109, 112, 137, 140, 199, 216, 321, 478, 483, 485, 490, 492, 493
 Indian trees 489
 Insect borers 120, 130, 132, 404
 Insect fauna 118
 Insect pests 015, 104, 105, 106, 164, 165, 380
 Insects 163, 164, 165, 166, 217, 308
 Ixora butterwickii 205
 Jaman 083, 487
 Jamun 413
 Jute cuttings 085
 Kail 471
 Kalhandi State 337
 Kanju 276
 Kanyin 054
 Kaula 083
 Kiln drying 065, 320, 481
 Kindal 052
 Kokko 488
 Kumaon bhabar 050
 Lac insect 008, 168, 200
 Lactidae 108
 Lactuca 330
 Lagerstroemia flos reginae 044
 Lagerstroemia lanceolata 419
 Lampatia timber 040
 Landscaping 142
 Lantana 380
 Lantana aculeata 380
 Lagerstroemia parviflora 033
 Lagerstroemia tomentosa 092
 Lagerstromia lanceolata 024
 Laurel 487
 Lepidoptera 145, 384, 385, 387, 389, 392
 Ligno protector 018
 Logging 426, 427, 428
 Longhorn Beetles 268
 Longicorn larvae 042
 Lycidae 270
 Machilus duthiei 083
 Management 462
 Mangroves 229
 Marine wood-borers 140
 Match industry 160
 Mechanical tests 006
 Mecoptera 145
 Melanorrhoea usitata 174, 195, 201
 Melasidae Coleoptera 242
 Mensration 462
 Michelia champaca 488
 Microbial degradation 135
 Microcerotermes besoni 128
 Minor forest products 343
 Morphology 151, 294, 297, 299, 307, 402, 429
 Myrsine capitellata 084
 Myrsine semiserrata 084
 Nagi camphor 173
 Nana wood 024
 Natural insect enemy 133
 Natural resistance 140
 Nepal 219
 Neptunia robertsonii 336
 Neue Brenthiden 347, 366
 Neue Indische Lycidae 248
 Neuroptera 145
 Niponiidae 239
 Noctuidae 387
 Nurse crops 107
 Odiana wodier 048
 Odonata 144
 Odontotermes holmgren 408
 Odontotermes obesus 398
 Open tank process 068
 Orthoptera 143
 Ougeinia dalbergioides 025
 Paper pulp 085, 182
 Pencil slats 155
 Peniphora 121
 Pentaptera 325
 Peridermium complantum 259
 Peridermium himalayense 259, 297
 Pest management 134
 Pests 397
 Petalocephala nigrilinea 307

Phenological behaviour 460
 Phlogacanthus pochinii 336
 Pinus excelsa 029, 254, 256, 275
 Pinus khasya 029, 058
 Pinus longifolia 041, 055, 059, 167, 253, 259, 275, 283, 297, 435, 487, 491
 Pinus mercurii 226
 Pinus merkusii 029
 Pinus roxburghii 409
 Pinus wallichiana 471
 Planch 276
 Plantation teak 098
 Platypodidae Coleoptera 371
 Plectoptera 143
 Plocaederus ferrugineus 406
 Plywood 483, 490
 Podophyllum emodi 012
 Polygraphus 505
 Polyporaceae 422, 424, 425
 Portable sawmills 057
 Powder-post beetle attack 117
 Preservation plots 139
 Prionine beetles 207
 Propagation 150, 168
 Prophylactic efficacy 120
 Protection 462
 Psiloptera fastuosa 017
 Psocoptera 144
 Psyllidae Homoptera 346
 Pterocarpus dalbergioides 170
 Pterocarpus macrocarpus 096
 Pterocarpus marsupium 022
 Pterocarpus santalinus 039
 Pulpwood 135
 Punjab hills 258
 Pure catechin 157
 Pure shellac 158
 Quercus incana 074
 Railway sleepers 178, 480
 Railway systems 056, 067
 Railways 075
 Rate of growth 098, 102
 Rattans 149
 Rauwolfia serpentina 148, 150
 Red sanders 039
 Regeneration 232, 302, 441
 Resin 012, 031, 153
 Resin-tapping 055
 Rhizophora mucronata 179
 Rhus cotinus 036
 Roof trusses 495
 Root boring beetles 017
 Rosha grass 188
 Rusts 423
 Sal bark-borer 502
 Sal forests 027
 Sal heartwood borer 237, 247
 Sal see Shorea robusta
 Sal seed 010
 Salvia plebeia 222
 Sandal see Santalum album
 Sandalidae Coleoptera 362
 Santalum album 122, 176, 287, 444
 Sarima nigroclypeata 294
 Scaphula glabra 323
 Scolytidae 162
 Seasonal progress 078
 Seasonal variation 494
 Seasoning 018, 020, 041, 065, 199, 216, 486, 491
 Seasoning behaviour 103, 109
 Seedlings 282, 465
 Seeds 045, 046, 214, 221, 222, 282, 283, 343, 457
 Semal see Bombax malabaricum
 Sesquioxides 433
 Shellac 200
 Shillong Plateau-Assam 339
 Shisham 469
 Shorea assamica 326
 Shorea floribunda 326
 Shorea robusta 010, 015, 051, 083, 100, 132, 161, 169, 183, 183, 184, 185, 202, 223, 225, 245, 275, 282, 298, 302, 324, 409, 410, 465, 473, 487
 Shorea sericeiflora 326
 Shrinkage studies 479
 Silica 433
 Simla hills 061
 Singhbhum sal borer 009
 Sinoxylon crassum crassum 152
 Sissoo 488
 Soil moisture 038, 430
 Soil Science 462
 Soils 432, 443
 Sorbitol soak treatments 136
 Spike disease 122, 287, 288, 289, 290, 291, 292, 293, 294, 299, 301, 303, 304, 305, 306, 307, 308, 311, 312, 313, 316, 354, 356, 357, 363, 367, 369, 372, 444
 Spodiopgon lacei 187
 Stand table 324
 Strawboard 131
 Strobilanthes andamanensis Bor 333
 Structural joints 156

Stump planting 439
 Stump production 453
 Subterranean termites 120
 Sundri timber 034
 Swertia 297
 Sylvicultural systems 091
 Systematic catalogue 143, 144, 145
 Syzygium cumini 413
 Tachardia lacca 163, 166, 168
 Tachinidae 383
 Tannin 228, 230
 Tanning properties 224
 Taxonomy 151, 402
 Tea-box industry 180
 Teak 003, 019, 275, 397, 409, 439, 439, 440,
 442, 446, 450, 453, 454, 455, 468, 487
 Teak defoliator 393
 Teak leaf skelitoniser 503
 Teak Plantations 002, 071, 077, 107
 Teak saplings 079
 Techinidae Diptera 353
 Technical terms 004, 088, 431
 Tectona grandis *see* Teak
 Terminalia bellerica 417
 Terminalia paniculata 052, 418
 Terminalia tomentosa 023, 448, 487
 Termites 115, 154, 314, 318, 401, 403, 405, 407,
 408, 482
 Termitidae: Macrotermitinae 408
 Termitidae: Nasutitermitinae 124, 125, 401, 403
 Thamnurgides 377
 Thingan 053
 Thyrsostachys oliveri 331
 Thysanoptera 144, 248, 249, 252, 300
 Timber 001, 072, 110, 111, 113, 115, 159, 217,
 456, 479, 481, 482, 484, 486
 Tingis 251
 Tingitidae 177
 Tingitidae Hemiptera 251, 361
 Tomicus bark-borer 005
 Toon 210, 488
 Torsional properties 112
 Trade names 080
 Trametes pini 186
 Treated sleepers 075
 Tree species 102
 Trewia nudiflora 276
 Trichopter 145
 Trincomali wood 094
 Trinervitermes Holmgren 124
 Tropical evergreen ghat forests 102
 Turpentine 029
 United Provinces 027
 Upper Gangetic Plain 329, 341
 Vegetation 429, 459
 Veneer 483, 490
 Vengai 022
 Volume tables 059, 225, 255, 272, 273,
 274, 276, 411, 413, 414, 415,
 417, 418, 419, 420, 421, 434,
 448, 463, 464, 466, 467, 468,
 469, 470, 471, 472, 473, 474,
 475, 476, 477
 Von Wulfing's 077
 Water supply 011
 West Nepal 069
 Wild life management 498
 Wintergreen oil 192
 Wood poles 116
 Wood preservatives 063, 073, 086, 101
 Wooden disc-dowels 156
 Working plans 091, 175
 Xyleborus 265, 266
 Xyleutes ceramica 358
 Xylia dolabriformis 058
 Xylia xylocarpa 420
 Stand tables 446
 Yield tables 077, 074, 223, 256, 277, 416, 447, 471