

R. K. Saxena **A Catalogue of
Tertiary Fungi from
India**

Diamond Jubilee Special Publication



**Birbal Sahni Institute of Palaeobotany
Lucknow
2006**

A Catalogue of Tertiary Fungi from India

R. K. Saxena

A Catalogue of Tertiary Fungi from India

(1989-2005)

Total number of genera 85; Total number of species 172
(excluding taxa that are nomina nuda or invalid combinations
or where no binomials are given)

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FOREWORD

The task to collate, edit, update and create a systematic inventory of fossil plants known from Indian sedimentary successions was first initiated by scientists of the Birbal Sahni Institute of Palaeobotany after the Silver Jubilee Celebrations in November, 1971. Though it was a daunting task as the information was scattered in various journals and many other publications, this effort materialized with the publication of "A Catalogue of Indian Fossil Plants" by R. N. Lakhanpal *et al.* in 1976. This single volume catalogue included all plant mega- and microfossil records published from 1821 to 1970. As enormous data had subsequently gathered in the next two decades, another Catalogue was released during the Birbal Sahni Birth Centenary Celebrations in 1991. However, due to the wealth of the available data impossible to be incorporated in a single compendium, 11 Fascicules on different fossil groups and/or geologic time span were prepared, each authored by subject experts from the Institute.

In connection with the Diamond Jubilee Celebrations of the Institute this year, the idea to again update the information came up during discussions in our group meetings sometimes in January, 2006. Despite the short notice and a tall order, several of my Institute colleagues readily volunteered to take up the uphill task. It is indeed heartening to see that these Catalogues/Atlases have been completed in record time. I wish to express my most sincere appreciation to all those who contributed their energy and skill in giving shape to these individual compilations.

The present book, "A Catalogue of Tertiary Fungi from India: 1989-2005" by R. K. Saxena is a welcome addition to the list of Institute's publications. The catalogue includes all records of Indian Tertiary fungi published after 1988 up to 2005, with each entry containing name of the species, its author(s), year of publication, page number(s), reference to plate(s), figure(s) and text-figure(s), age and name of the horizon, locality and names of district and state where it is situated. Such information will surely be useful in the study and identification of Tertiary fungi and in deducing their horizontal and vertical distribution. I believe this compendium would prove equally useful for researchers and scholars in Academia and Industry.

October 16, 2006

Dr. N. C. Mehrotra
Director
Birbal Sahni Institute of Palaeobotany

PREFACE

The first catalogue, incorporating all plant fossil records from India (1821 to 1970), was published by Lakhanpal et al. (1976). This was followed by the second catalogue in 1991, which contains all plant fossil records from India published from 1971 to 1988 and was published in the form of 11 fascicules, each authored by different scientists. Of these, “*A Catalogue of Fossil Plants from India-Part 5B. Cenozoic (Tertiary) Fungi*” (Saxena 1991) includes Tertiary fungi. The present catalogue is an extension of the above and is expected to be useful in the studies of Tertiary fossil fungi. Since the earlier catalogues (Lakhanpal et al. 1976; Saxena 1991) incorporated fungal records up to 1988, Tertiary fungi published after 1988 up to 2005 are included in the present catalogue. In order to include all available records, published during the above period, taxa that are nomina nuda or where no binomials are given have also been included. Junior homonyms are also included without proposing replacement names. In case replacement name of a junior homonym is already published, both are given linked with an equal mark (=).

The entries are made under three paragraphs, the first and second beginning from extreme left margin pertain to genus and species respectively, whereas the third, beginning with indented margin, pertains to synonyms and basionyms, if any. The fungal remains are arranged alphabetically according to their generic names. Under each genus, its species are also arranged alphabetically.

The genus entry contains name of the genus in capital letters - validly published in bold face and nomina nuda in italics, its author(s) and family or taxon of higher rank to which it belongs. Genera, which could not be assigned to a family or to a taxon of higher rank, are placed under Incertae sedis. Orthography and authorship of genera have been checked from their original valid publication and have been corrected accordingly, wherever necessary. However, where original publication could not be procured, the same have been given in accordance with Genera File of Fossil Spores (Jansonius & Hills, 1976, 1977, 1978, 1979, 1981, 1982, 1987, 1992) and Index Nominum Genericorum (Farr et al. 1979, 1986). Authorship of the genus is ascribed to the person(s) who first validly published it. Where a genus is not validly published in its first appearance, name of its

author(s) is followed by the author(s) who validated it. When a taxon is published jointly by two authors, names of both are cited, linked by an ampersand (Rec. 46C1, I.C.B.N., Greuter et al. 2000) but in case of more than two authors only first author is cited followed by et al. (Rec. 46C2, I.C.B.N., Greuter et al. 2000). This holds good for species too.

The species entry contains name of the species, its author(s), year of publication, page number(s), reference to plate(s), figure(s) and text-figure(s), age (in capital letters) and name of the horizon in parentheses, locality and names of district and state where it is situated. Where a particular species has again been reported either from the same or from other localities, all such details are mentioned in chronological order. Synonyms and basionyms are given under the species, wherever required, with all such details as given in the species entries.

The entries of synonyms and basionyms are given under the respective species, wherever required. Cross references of synonyms and basionyms are given at their respective alphabetical positions, with older name in italics and present one in bold face. Synonyms, basionyms and taxa that are nomina nuda are given in italics. The junior homonym species are given separately along with their records next to their respective senior homonyms and records thereof. Terminations of the specific epithets, based on personal names, have been corrected, wherever required, in accordance with Article 60.11 and Rec.60C of I.C.B.N., (Greuter et al. 2000). Authorship of the species has been checked from its original valid publication, as far as possible, and corrected accordingly, wherever wrongly given.

The geological ages are given as per record of a particular species. Geographical names have been corrected according to their present application. Orthography of geographical names has been changed according to their present use in order to bring uniformity and avoid confusion, e.g. Ankleswar is changed to Ankleshwar; Bhaunagar to Bhavnagar; Dehradun District, Uttar Pradesh to Dehradun District, Uttaranchal; Nangwalbibra to Nongwal Bibra; Tarkesvar and Tarkeswar to Tarkeshwar; Kundara to

Kundra; and Varkalla and Warkalli to Varkala, Padappakara to Padappakara, etc.

Full bibliographical details are given of all the papers cited in the Catalogue, for easy access to relevant literature for consultation.

The author expresses his gratefulness to the Director, Birbal Sahni Institute of Palaeobotany, Lucknow for providing facilities and also for permitting to publish the Catalogue.

R. K. Saxena

CATALOGUE

ALTERNARIA Nees ex Wallroth, **HYPHOMYCETES.**

Alternaria sp. Malleshram et al. 1989: 16, pl 1, fig 18, MIOCENE, Godavari-Krishna Basin, Andhra Pradesh and Palk Bay area in Cauvery Basin, Tamil Nadu.

Alternaria sp. Mohabey & Samant 2003: 230, pl 3, fig 10, MAESTRICHTIAN (Lameta Formation), Pisdura, Nand-Dongargaon Basin, Maharashtra.

Alternaria type. Hait & Banerjee 1994: 118, pl 4, fig 63, EARLY MIOCENE, near Suangpuilawn village about 20 km northeast of Aizawl, Mizoram.

Alternaria type. Mitra et al. 2000: 126, pl 1, fig 3, NEOGENE (Siwalik Group), Darjeeling Foothills, Eastern Himalaya.

Alternaria type. Gupta et al. 2003: 210, PALAEOCENE-EOCENE, Ganga Basin.

APLANOSPORITES Kar, **INCERTAE-SEDIS.**

Aplanosporites robustus Kar. Kar 1990a: 204, MIOCENE (Surma and Tipam groups), Rokhia Borehole No. 1, Gojalia Borehole No. 1 and Baramura Borehole No. 2, Tripura.

Aplanosporites sp. Dutta et al. 1998: 64, pl 1, fig 1, LATE EOCENE-EARLY OLIGOCENE (Upper Disang and Lower Barail groups), Kohima District, Nagaland.

APPENDICISPORONITES Saxena & Khare, **INCERTAE-SEDIS.**

Appendicisporonites typicus Saxena & Khare 1992: 40, pl 1, fig 1, LATE PALAEOCENE-MIDDLE EOCENE, Jayamkondacholapuram Well 12, Tiruchirapalli District, Tamil Nadu; Rao & Nair 1998: 52, MIOCENE, Kannanellur-Kundra Road area, Quilon District, Kerala.

Appendicisporonites sp. Saxena & Khare 1992: 40, 42, pl 1, fig 12, LATE PALAEOCENE-MIDDLE EOCENE, Jayamkondacholapuram Well 12, Tiruchirapalli District, Tamil Nadu.

ASTEROTHYRITES Cookson, **MICROTHYRIACEAE.**

Asterothyrites keralensis Rao & Ramanujam. Singh & Sarkar 1994: 52, EARLY MIOCENE (Kasauli Formation), Kasauli, Solan District, Himachal Pradesh.

Asterothyrites sp. Gupta 1994: 250-251, fig 3, EARLY TERTIARY (Subathu Formation), Jamtah Road Section, Sirmour District, Himachal Pradesh.

BAHUSANDHIKA Subramanian, **HYPHOMYCETES.**

Bahusandhika Subramanian. Sarkar & Singh 1994: 100, MIOCENE (Kundlu and Nalagarh formations), Kundlu and Ramshahr, Solan District,

Himachal Pradesh (wrongly spelt as *Bahusandhica*).

BASIDIOSPORITES Elsik, **INCERTAE-SEDIS.**

Basidiosporites fournierii Elsik. Saxena & Misra 1990: 265, NEOGENE (Ratnagiri Beds), Amberiwadi Section, Sindhudurg District, Maharashtra.

Basidiosporites sp. 1. Saxena & Misra 1990: 265, pl 3, fig 12, NEOGENE (Ratnagiri Beds), Amberiwadi Section, Sindhudurg District, Maharashtra.

Basidiosporites sp. 2. Saxena & Misra 1990: 265, pl 3, fig 8, NEOGENE (Ratnagiri Beds), Amberiwadi Section, Sindhudurg District, Maharashtra.

BICELLAESPORITES in Kar. *Nomen nudum*.

Bicellaesporites spp. Kar 1990b: 233, 236, EARLY-MIDDLE OLIGOCENE (Laisong and Jenam formations), Silchar-Haflong Road Section, Assam.

BRACHYSPORISPORITES Lange & Smith, **INCERTAE-SEDIS.**

Brachysporisporites magnus Samant 2000: 11-12, pl 1, figs 1-2, EARLY EOCENE (Kharsalia Clay Formation), near Bhavnagar, Cambay Basin, Gujarat.

Brachysporisporites pyriformis Ramanujam & Srisailam. Saxena 2000: 163, MIOCENE (Sindhudurg Formation), Mavli Mine at Redi, Sindhudurg District, Maharashtra.

Brachysporisporites tenuis Kumar 1990: 23-24, pl 1, fig 11, text-fig 16, MIOCENE (Quilon Beds), clay mine section near Kanjantheria House, Padappakkara, Quilon District, Kerala.

Spore Type B. Ramanujam & Rao 1978: 296, 301, pl 1, figs 18-19, MIOCENE, Kerala.

CALLIMOTHALLUS Dilcher, **MICRO-THYRIACEAE.**

Callimothallus assamicus Kar et al. Sarkar et al. 1994: 201, LATE MIOCENE (Middle Siwalik), Bagh Rao, Dehradun District, Uttaranchal; Saxena & Sarkar 2000: 257, MIDDLE EOCENE (Siju Formation), Simsang River Section near Siju, South Garo Hills District, Meghalaya.

Callimothallus pertusus Dilcher. Mallesham et al. 1989: 15, pl 1, fig 1, MIOCENE, Godavari-Krishna Basin, Andhra Pradesh and Palk Bay area in Cauvery Basin, Tamil Nadu; Tripathi 1989: 72, pl 2, fig 3, pl 3, fig 8, PALAEOCENE-EOCENE (Therria and Kopili formations), Jowai-Sonapur Road Section, Jaintia Hills District, Meghalaya; Saxena & Khare 1992: 37, LATE PALAEOCENE-MIDDLE EOCENE, Jayamkondacholapuram Well 12, Tiruchirapalli District, Tamil Nadu (wrongly spelt as *Phragmothyrites pertusus*); Tripathi 1995: 47, PALAEOCENE-EOCENE, sub-surface sediments near Kapurdi, Barmer District, Rajasthan; Samant & Phadtare 1997: 66, pl 14, fig 18, EARLY EOCENE (Tarkeshwar Formation), Rajpardi, Cambay Basin, Gujarat; Samant 2000: 16, EARLY EOCENE (Kharsalia Clay Formation), near Bhavnagar, Cambay Basin, Gujarat; Sarkar & Prasad 2000b: 147, LATE YPRESIAN-MIDDLE LUTETIAN (Subathu Formation), west bank of Ghaggar river near Kharak village, Morni Hills, Haryana; Tripathi et al. 2000: 243, EARLY EOCENE (Tura Formation), Tura-Dalu Road, West Garo Hills District, Meghalaya.

Callimothallus sp. Samant 2000: 12, pl 1, figs 4-5, EARLY EOCENE (Kharsalia Clay Formation), near Bhavnagar, Cambay Basin, Gujarat.

Callimothallus. Ramanujam et al. 1991: 54, EARLY MIOCENE, Pattanakad Borewell, Alleppey District, Kerala.

CAMPTOMERIS Sydow, **HYPHOMYCETES.**

Camptomeris Sydow. Sarkar & Singh 1994: 100, MIOCENE (Kundlu and Nalagarh formations), Kundlu and Ramshahr, Solan District, Himachal Pradesh.

CHAETOMIUM (Kunze) Fries,
PYRENOMYCETES.

Chaetomium sp. Banerjee & Nandi 1992: 84, pl 1, fig 18, MIOCENE (Bhuban, Bokabil and Tipam Sandstone formations), Rengte Anticline near Kolasib, Aizwal District, Mizoram.

CIRCULISPORITES de Jersey, **INCERTAE-
SEDIS.**

Circulisporites sp. Kumar & Takahashi 1991: 608-609, pl 11, fig 1, pl 17, fig 15, EARLY-MIDDLE MIOCENE (Middle Bhuban and Bokabil formations), Silchar-Haflong Road Section, Assam.

Circulisporites sp. Kumar 1994: 66, pl 30, fig 8, EARLY MIOCENE (Middle Bhuban Formation), Silchar-Haflong Road Section, Assam.

COLLIGERITES Jain & Kar, **INCERTAE-
SEDIS.**

Colligerites trochus Samant 2000: 12, pl 1, fig 3, EARLY EOCENE (Kharsalia Clay Formation), near Bhavnagar, Cambay Basin, Gujarat; Samant & Tapaswi 2000: 29, fig 2.1, EARLY EOCENE (Cambay Shale), Cambay Basin, Gujarat.

CUCURBITARIACEITES Kar et al., **INCERTAE-
SEDIS.**

Cucurbitariaceites bellus Kar et al. Tripathi 1989: 73, pl 2, fig 8, PALAEOCENE (Therria Formation), Jowai-Sonapur Road Section, Jaintia Hills District, Meghalaya; Mandaokar 1991: 26, EARLY MIOCENE, north of Maibong Railway Station, North Cachar Hills District, Assam; Mandaokar 1993: 139, LATE OLIGOCENE (Tikak Parbat Formation), Dangri Kumari Colliery, Dibrugarh District, Assam; Mandal et al. 1996: 80, age not mentioned, mud volcano in Baratang Island, Andaman and Nicobar Islands; Saxena et al. 1996: 21, pl 3, fig 13, PALAEOCENE (Tura Formation), Nongwal Bibra area, East Garo Hills District, Meghalaya; Mandaokar 2000a: 320, EARLY MIOCENE (Bhuban Formation), Ramrikawn near Chandmari, Aizawl District, Mizoram; Mandaokar 2000b: 181, pl 1, figs 20, 24, LATE OLIGOCENE (Tikak Parbat Formation),

Jeypore Colliery, Dilli-Jeypore Coalfields, Dibrugarh District, Assam; Mandaokar 2000c: 38, LATE OLIGOCENE (Tikak Parbat Formation), Namchik River Section, Changlang District, Arunachal Pradesh; Mandaokar 2002a: 116, EARLY MIOCENE (Dulte Formation), 2 km from Dulte village on Dulte-Keifang Road, Aizawl District, Mizoram; Mandaokar 2002b: 21, LATE OLIGOCENE (Tikak Parbat Formation), Borjan Coalfield, Nagaland; Mandaokar 2003: 187, EARLY MIOCENE (Middle Bhuban Formation), Lawngtlai, Chhimituipui District, Mizoram; Chakraborty 2004: 116, LATE PALAEOCENE (Lakadong Sandstone), around Bhalukurung, North Cachar Hills, Assam; Mandaokar 2005: 55, LATE OLIGOCENE (Tikak Parbat Formation), Ledo Colliery, Makum Coalfield, Assam.

CURVULARIA Boedijn, **HYPHOMYCETES.**

Curvularia type. Gupta et al. 2003: 210, PALAEOCENE-EOCENE, Ganga Basin.

DENDROMYCELIATES Jain & Kar, **INCERTAE-
SEDIS.**

Dendromyceliates splendidus Jain & Kar. Saxena & Misra 1990: 265, NEOGENE (Ratnagiri Beds), Amberiwadi Section, Sindhudurg District, Maharashtra; Saxena 2000: 163, MIOCENE (Sindhudurg Formation), Mavli Mine at Redi, Sindhudurg District, Maharashtra.

DICELLAESPORITES Elsik, **INCERTAE-
SEDIS.**

Dicellaesporites crassiseptum Ramanujam & Srisailam. Malleshram et al. 1989: 15, MIOCENE, Godavari-Krishna Basin, Andhra Pradesh and Palk Bay area in Cauvery Basin, Tamil Nadu.

Dicellaesporites ellipticus Jain & Kar. Saxena & Bhattacharyya 1990: 113, OLIGOCENE-EARLY MIOCENE (Dharmsala Group), Churan Khad Section near Dharmsala, Kangra District, Himachal Pradesh.

Dicellaesporites elongatus Ramanujam & Rao. Singh & Sarkar 1994: 52, EARLY MIOCENE

(Kasauli Formation), Kasauli, Solan District, Himachal Pradesh.

Dicellaesporites elongatus Kumar 1990: 20, pl 1, fig 9, text-fig 8, MIOCENE (Quilon Beds), clay mine section near Kanjantheria House, Padappakkara, Quilon District, Kerala; Tripathi et al. 2000: 243, EARLY EOCENE (Tura Formation), Tura-Dalu Road, West Garo Hills District, Meghalaya; Mandaokar 2004: 146, LATE MIOCENE (Upper Bhuban Formation), Champhai area, Eastern Mizo Hills, Mizoram. (Junior homonym of *Dicellaesporites elongatus* Ramanujam & Rao 1978).

Dicellaesporites elsikii Samant 2000: 12, pl 1, fig 7, EARLY EOCENE (Kharsalia Clay Formation), near Bhavnagar, Cambay Basin, Gujarat.

Dicellaesporites fusiformis Sheffy & Dilcher. Saxena & Misra 1990: 265, NEOGENE (Ratnagiri Beds), Amberiwadi Section, Sindhudurg District, Maharashtra; Mandaokar 2000b: 181, LATE OLIGOCENE (Tikak Parbat Formation), Jeypore Colliery, Dilli-Jeypore Coalfields, Dibrugarh District, Assam.

Dicellaesporites himachalensis Saxena & Bhattacharyya 1990: 113, pl 2, fig 9, OLIGOCENE-EARLY MIOCENE (Dharmsala Group), Manjhi Khad Section near Dharmsala, Kangra District, Himachal Pradesh.

Dicellaesporites keralensis Kumar 1990: 20, pl 1, fig 12, text-fig 9, MIOCENE (Quilon Beds), clay mine section near Kanjantheria House, Padappakkara, Quilon District, Kerala; Samant 2000: 16, pl 1, fig 6, EARLY EOCENE (Kharsalia Clay Formation), near Bhavnagar, Cambay Basin, Gujarat.

Dicellaesporites levis Sheffy & Dilcher. Sarkar & Prasad 2000b: 147, LATE YPRESIAN-MIDDLE LUTETIAN (Subathu Formation), west bank of Ghaggar river near Kharak village, Morni Hills, Haryana.

Dicellaesporites minutus Kar & Saxena. Malleshram et al. 1989: 18, pl 1, fig 5, MIOCENE, Godavari-Krishna Basin, Andhra Pradesh and

Palk Bay area in Cauvery Basin, Tamil Nadu; Tripathi 1989: 73, pl 3, fig 12, PALAEOCENE (Therria Formation), Jowai-Sonapur Road Section, Jaintia Hills District, Meghalaya; Ambwani 1993: 153, PALAEOCENE-EARLY EOCENE, Rekmangiri Coalfield, Garo Hills, Meghalaya; Tripathi 1995: 47, PALAEOCENE-EOCENE, sub-surface sediments near Kapurdi, Barmer District, Rajasthan; Saxena & Rao 1996: 46, pl 3, fig 17, EARLY MIOCENE (Boldamgiri Formation), Adugiri-Purakhasia Road near Boldamgiri, West Garo Hills District, Meghalaya; Mandaokar 2000a: 320, EARLY MIOCENE (Bhuban Formation), Ramrikawn near Chandmari, Aizawl District, Mizoram; Mitra et al. 2000: 126, pl 1, fig 5, NEOGENE (Siwalik Group), Darjeeling Foothills, Eastern Himalaya; Mandaokar 2002a: 116, EARLY MIOCENE (Dulte Formation), 2 km from Dulte village on Dulte-Keifang Road, Aizawl District, Mizoram; Mandaokar 2002b: 21, LATE OLIGOCENE (Tikak Parbat Formation), Borjan Coalfield, Nagaland; Mandaokar 2003: 187, EARLY MIOCENE (Middle Bhuban Formation), Lawngtlai, Chhimituipui District, Mizoram; Tripathi et al. 2003: 90, LATE PALAEOCENE (Akli Formation), Barmer Basin, Rajasthan; Mandaokar 2004: 146, LATE MIOCENE (Upper Bhuban Formation), Champhai area, Eastern Mizo Hills, Mizoram.

Dicellaesporites popovii Elsik. Tripathi 1989: 73, pl 1, fig 7, PALAEOCENE (Therria Formation), Jowai-Sonapur Road Section, Jaintia Hills District, Meghalaya; Saxena & Misra 1990: 265, NEOGENE (Ratnagiri Beds), Amberiwadi Section, Sindhudurg District, Maharashtra; Tripathi 1995: 47, PALAEOCENE-EOCENE, subsurface sediments near Kapurdi, Barmer District, Rajasthan; Samant & Phadtare 1997: 66, pl 15, fig 6, EARLY EOCENE (Tarkeshwar Formation), Rajpardi, Cambay Basin, Gujarat; Rao & Nair 1998: 52, MIOCENE, Kannanellur-Kundra Road area, Quilon District, Kerala; Tripathi et al. 2003: 90, LATE PALAEOCENE (Akli Formation), Barmer Basin, Rajasthan.

Dicellaesporites sp. Rajendran et al. 1989: 41, 42, 43, 44, MIOCENE, Thonnakkal, Kundra, Padappakkara, Edavai, Paravur, Cannanore, Kerala.

- Dicellaesporites sp.** Banerjee & Nandi 1992: 84, pl 1, fig 10, MIOCENE (Bhuban, Bokabil and Tipam Sandstone formations), Rengte Anticline near Kolasib, Aizwal District, Mizoram.
- Dicellaesporites sp.** Hait & Banerjee 1994: 119, pl 4, figs 71-74, EARLY MIOCENE, near Suangpuilawn village about 20 km northeast of Aizawl, Mizoram.
- Dicellaesporites sp.** Kar et al. 1994: 187, TERTIARY, subsurface sediments in Upper Assam.
- Dicellaesporites sp.** Singh & Sarkar 1994: 52, pl 1, fig 4, EARLY MIOCENE (Kasauli Formation), Kasauli, Solan District, Himachal Pradesh.
- Dicellaesporites sp.** Misra et al. 1996: 95, EARLY MIOCENE (Baghmara Formation), Tura-Dalu Road Section along Bugi River, Garo Hills, Meghalaya.
- Dicellaesporites sp.** Saxena & Rao 1996: 46, pl 3, fig 8, EARLY MIOCENE (Boldamgiri Formation), Adugiri-Purakhasia Road near Boldamgiri, West Garo Hills District, Meghalaya.
- Dicellaesporites sp.** Mandaokar 2000b: 181, LATE OLIGOCENE (Tikak Parbat Formation), Jeypore Colliery, Dilli-Jeypore Coalfields, Dibrugarh District, Assam.
- Dicellaesporites sp.** Saxena 2000: 163, MIOCENE (Sindhudurg Formation), Mavli Mine at Redi, Sindhudurg District, Maharashtra.
- Dicellaesporites sp.** Trivedi & Saxena 2000: 273, LATE EOCENE (Kopili Formation), Umrongso-Haflong Road near Umrongso, North Cachar Hills District, Assam.
- Dicellaesporites spp.** Mandaokar 2005: 55, LATE OLIGOCENE (Tikak Parbat Formation), Ledo Colliery, Makum Coalfield, Assam.
- DICTYOSPORITES**, Felix, **HYPHOMYCETES**.
- Dictyosporites sp.** Chandra & Kumar 1998: 56, pl 1, fig 14, LATE TERTIARY, Site 218, Deep Sea Drilling Project Leg 22, Bengal Fan, Indian Ocean.
- DICTYOSPORIUM** Corda, **HYPHOMYCETES**.
- Dictyosporium sp.** Mallesham et al. 1989: 15-16, pl 1, fig 13, MIOCENE, Godavari-Krishna Basin, Andhra Pradesh and Palk Bay area in Cauvery Basin, Tamil Nadu.
- DIDYMOPORISPORONITES** Sheffy & Dilcher, **INCERTAE-SEDIS**.
- Didymoporisporonites sp.** Banerjee & Nandi 1992: 84, MIOCENE (Bhuban and Bokabil formations), Rengte Anticline near Kolasib, Aizwal District, Mizoram.
- Didymoporisporonites sp.** Saxena 2000: 163, MIOCENE (Sindhudurg Formation), Mavli Mine at Redi, Sindhudurg District, Maharashtra.
- DIPORICELLAESPORITES** Elsik, **INCERTAE-SEDIS**.
- Diporicellaesporites concavus** Kumar 1990: 24, pl 1, figs 15, 21, text-fig 17, MIOCENE (Quilon Beds), clay mine section near Kanjantheria House, Padappakkara, Quilon District, Kerala.
- Diporicellaesporites elsikii** Samant & Tapaswi 2000: 25-26, fig 2.2, EARLY EOCENE (Cambay Shale), Cambay Basin, Gujarat.
- Diporicellaesporites multicellatus** Saxena & Khare 1992: 39, pl 1, fig 3, LATE PALAEOCENE-MIDDLE EOCENE, Jayamkondacholapuram Well 12, Tiruchirapalli District, Tamil Nadu.
- Diporicellaesporites padappakkarensis** Kumar 1990: 24, pl 1, fig 25, text-fig 18, MIOCENE (Quilon Beds), clay mine section near Kanjantheria House, Padappakkara, Quilon District, Kerala.
- Diporicellaesporites pluricellus** Kar & Saxena. Mallesham et al. 1989: 15, MIOCENE, Godavari-Krishna Basin, Andhra Pradesh and Palk Bay area

- in Cauvery Basin, Tamil Nadu (wrongly spelt as *Diporicellaesporites pluricellatus*); Tripathi 1995: 47, PALAEOCENE-EOCENE, subsurface sediments near Kapurdi, Barmer District, Rajasthan; Samant & Phadtare 1997: 66, pl 15, fig 7, EARLY EOCENE (Tarkeshwar Formation), Rajpardi, Cambay Basin, Gujarat; Samant 2000: 16, pl 1, fig 19, EARLY EOCENE (Kharsalia Clay Formation), near Bhavnagar, Cambay Basin, Gujarat; Samant & Tapaswi 2000: 29, fig 2.4, EARLY EOCENE (Cambay Shale), Cambay Basin, Gujarat; Tripathi et al. 2003: 90, LATE PALAEOCENE (Akli Formation), Barmer Basin, Rajasthan; Chakraborty 2004: 116, LATE PALAEOCENE (Lakadong Sandstone), around Bhalukurung, North Cachar Hills, Assam.
- Diporicellaesporites stacyi** Elsik. Tripathi 1995: 47, PALAEOCENE-EOCENE, subsurface sediments near Kapurdi, Barmer District, Rajasthan.
- Diporicellaesporites wilkinsonii** Saxena & Misra 1990: 272, pl 3, fig 13, NEOGENE (Ratnagiri Beds), Amberiwadi Section, Sindhudurg District, Maharashtra.
- Diporicellaesporites sp.** Rajendran et al. 1989: 43, MIOCENE, Edavai, Kerala.
- Diporicellaesporites sp.** Tripathi 1989: 74, pl 2, fig 4, PALAEOCENE (Therria Formation), Jowai-Sonapur Road Section, Jaintia Hills District, Meghalaya.
- cf. Diporicellaesporites sp.** Kar 1990a: 178, MIOCENE (Surma and Tipam groups), Rokhia Borehole No. 1, Gojalia Borehole No. 1 and Baramura Borehole No. 2, Tripura.
- Diporicellaesporites sp.** Kar 1990b: 233, EARLY OLIGOCENE (Laisong Formation), Silchar-Haflong Road Section, Assam.
- Diporicellaesporites sp. K.** Kumar 1990: 24-25, pl 1, fig 20, MIOCENE (Quilon Beds), clay mine section near Kanjantheria House, Padappakkara, Quilon District, Kerala.
- Diporicellaesporites sp.** Saxena & Misra 1990: 265, pl 3, fig 19, NEOGENE (Ratnagiri Beds), Amberiwadi Section, Sindhudurg District, Maharashtra.
- Diporicellaesporites sp.** Saxena & Khare 1992: 39, pl 1, fig 6, LATE PALAEOCENE-MIDDLE EOCENE, Jayamkondacholapuram Well 12, Tiruchirapalli District, Tamil Nadu.
- Diporicellaesporites sp.** Chandra & Kumar 1998: 62, pl 1, fig 19, LATE TERTIARY, Site 218, Deep Sea Drilling Project Leg 22, Bengal Fan, Indian Ocean.
- Diporicellaesporites sp.** Samant & Tapaswi 2000: 26, fig 2.3, EARLY EOCENE (Cambay Shale), Cambay Basin, Gujarat.
- Diporicellaesporites sp.** Rao 2004: 125, pl 3, fig 10, MIOCENE (Sindhudurg Formation), Kalviwadi, Sindhudurg District, Maharashtra.
- DIPORISPORITES** van der Hammen, **INCERTAE-SEDIS.**
- Diporisporites ankleshvarensis** (Varma & Rawat) Elsik. Kar 1990b: 232, PALAEOCENE-EOCENE (Disang Formation), Silchar-Haflong Road Section, Assam; Saxena & Rao 1996: 46, EARLY MIOCENE (Boldamgiri Formation), Adugiri-Purakhasia Road near Boldamgiri, West Garo Hills District, Meghalaya.
- Diporisporites conspicua** Ramanujam & Rao. Malleshram et al. 1989: 15, pl 1, fig 6, MIOCENE, Godavari-Krishna Basin, Andhra Pradesh and Palk Bay area in Cauvery Basin, Tamil Nadu.
- Diporisporites curvatus* Ramanujam & Rao = **Hypoxylonites curvatus** (Ramanujam & Rao) Elsik.
- Diporisporites elongatus** van der Hammen. Tripathi 1995: 47, PALAEOCENE-EOCENE, subsurface sediments near Kapurdi, Barmer District, Rajasthan; Samant 2000: 16, pl 1, fig 8, EARLY EOCENE (Kharsalia Clay Formation), near Bhavnagar, Cambay Basin, Gujarat; Samant & Tapaswi 2000: 29, EARLY EOCENE (Cambay

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- Shale), Cambay Basin, Gujarat; Tripathi et al. 2003: 90, LATE PALAEOCENE (Akli Formation), Barmer Basin, Rajasthan.
- Diporisorites elsikii** Saxena 2000: 159, pl 2, fig 18, MIOCENE (Sindhudurg Formation), Mavli Mine at Redi, Sindhudurg District, Maharashtra.
- Diporisorites giganticus** Kar 1990a: 196, pl 8, figs 114-115, MIOCENE (Surma and Tipam groups), Rokhia Borehole No. 1, Gojalia Borehole No. 1 and Baramura Borehole No. 2, Tripura.
- Diporisorites granulatus** Samant 2000: 12, 14, pl 1, fig 10, EARLY EOCENE (Kharsalia Clay Formation), near Bhavnagar, Cambay Basin, Gujarat.
- Diporisorites hammenii** Elsik. Samant & Phadtare 1997: 67, pl 15, fig 8, EARLY EOCENE (Tarkeshwar Formation), Rajparadi, Cambay Basin, Gujarat.
- Diporisorites piercei** (Varma & Rawat) Elsik. Samant 2000: 16, pl 1, fig 9, EARLY EOCENE (Kharsalia Clay Formation), near Bhavnagar, Cambay Basin, Gujarat.
- Diporisorites psilatus** Kumar 1990: 17-18, pl 1, fig 18, text-fig 4, MIOCENE (Quilon Beds), clay mine section near Kanjantheria House, Padappakkara, Quilon District, Kerala.
- Diporisorites sp.** Rajendran et al. 1989: 42, MIOCENE, Varkala, Kerala.
- Diporisorites sp.** Tripathi 1989: 74, pl 3, fig 11, PALAEOCENE (Therria Formation), Jowai-Sonapur Road Section, Jaintia Hills District, Meghalaya.
- Diporisorites sp.** Kar & Bhattacharya 1992: 252, EARLY EOCENE, Gujra Dam Section and Akri lignite, Kutch District, Gujarat.
- Diporisorites sp.** Hait & Banerjee 1994: 118, pl 4, figs 61-62, EARLY MIOCENE, near Suangpuilawn village about 20 km northeast of Aizawl, Mizoram.
- Diporisorites sp.** Bera & Banerjee 1995: 150, MIDDLE-LATE EOCENE (Bengal lignite), Panagarh-Domra Sector, Burdwan District, West Bengal.
- Diporisorites sp.** Rao 1995: 233, TERTIARY, Alleppey and Cannanore districts, Kerala.
- Diporisorites sp.** Misra et al. 1996: 95, EARLY MIOCENE (Baghmara Formation), Tura-Dalu Road Section along Bugi River, Garo Hills, Meghalaya.
- Diporisorites sp.** Rao & Nair 1998: 52, MIOCENE, Kannanellur-Kundra Road area, Quilon District, Kerala.
- Dyadosporites sp.** Trivedi & Saxena 2000: 273, pl 1, fig 15, LATE EOCENE (Kopili Formation), Umrongso-Haflong Road near Umrongso, North Cachar Hills District, Assam.
- Diporisorites sp.** Gupta et al. 2003: 210, PALAEOCENE-EOCENE, Ganga Basin.
- DYADOSPORITES** van der Hammen ex Clarke, **INCERTAE-SEDIS.**
- Dyadosporites dubius** Kumar 1990: 22, pl 1, fig 19, text-fig 13, MIOCENE (Quilon Beds), clay mine section near Kanjantheria House, Padappakkara, Quilon District, Kerala.
- Dyadosporites novus** Kumar 1990: 21, pl 1, fig 16, text-fig 12, MIOCENE (Quilon Beds), clay mine section near Kanjantheria House, Padappakkara, Quilon District, Kerala.
- Dyadosporites sp.** Hait & Banerjee 1994: 119, pl 4, fig 66, EARLY MIOCENE, near Suangpuilawn village about 20 km northeast of Aizawl, Mizoram.
- DYADOSPORONITES** van der Hammen, **INCERTAE-SEDIS.**
- Dyadosporonites kannanorensis** Ramanujam & Rao. Malleshram et al. 1989: 15, MIOCENE, Godavari-Krishna Basin, Andhra Pradesh and Palk Bay area in Cauvery Basin, Tamil Nadu.

- Dyadosporonites constrictus** Mathur & Mathur. Mallesham et al. 1989: 15, pl 1, fig 8, MIOCENE, Godavari-Krishna Basin, Andhra Pradesh and Palk Bay area in Cauvery Basin, Tamil Nadu; Kar et al. 1994: 187, pl 2, fig 30, TERTIARY, subsurface sediments in Upper Assam; Misra et al. 1996: 95, EARLY MIOCENE (Baghmara Formation), Tura-Dalu Road Section along Bugi River, Garo Hills, Meghalaya; Mandaokar 2000c: 38, LATE OLIGOCENE (Tikak Parbat Formation), Namchik River Section, Changlang District, Arunachal Pradesh.
- Dyadosporonites constrictus* Kar (non Mathur & Mathur 1969) = **Dyadosporonites udarii** Gupta.
- Dyadosporonites inaequalis** Varma & Patil. Saxena 2000: 163, MIOCENE (Sindhudurg Formation), Mavli Mine at Redi, Sindhudurg District, Maharashtra.
- Dyadosporonites reticulatus** Ramanujam & Rao. Misra et al. 1996: 95, EARLY MIOCENE (Baghmara Formation), Tura-Dalu Road Section along Bugi River, Garo Hills, Meghalaya.
- Dyadosporonites schwabii** Elsik. Chandra & Kumar 1998: 62, pl 1, fig 10, LATE TERTIARY, Site 218, Deep Sea Drilling Project Leg 22, Bengal Fan, Indian Ocean.
- Dyadosporonites udarii** Gupta 1984: 248.
- Dyadosporonites constrictus* Kar. Mandaokar 2002a: 116, EARLY MIOCENE (Dulte Formation), 2 km from Dulte village on Dulte-Keifang Road, Aizawl District, Mizoram.
- Dyadosporonites sp.** Mallesham et al. 1989: 18, pl 1, fig 7, MIOCENE, Godavari-Krishna Basin, Andhra Pradesh and Palk Bay area in Cauvery Basin, Tamil Nadu.
- Dyadosporonites sp. 1.** Saxena & Misra 1990: 265, pl 2, fig 11, NEOGENE (Ratnagiri Beds), Amberiwadi Section, Sindhudurg District, Maharashtra.
- Dyadosporonites sp. 2.** Saxena & Misra 1990: 265, pl 2, fig 4, NEOGENE (Ratnagiri Beds), Amberiwadi Section, Sindhudurg District, Maharashtra.
- Dyadosporonites sp.** Kumar & Takahashi 1991: 609, pl 17, fig 10, MIDDLE MIOCENE (Bokabil Formation), Silchar-Haflong Road Section, Assam.
- Dyadosporonites sp.** Banerjee & Nandi 1992: 84, pl 1, fig 11, MIOCENE (Bhuban and Bokabil formations), Rengte Anticline near Kolasib, Aizwal District, Mizoram.
- Dyadosporonites sp.** Kumar 1994: 89, pl 41, fig 10, MIDDLE MIOCENE (Bokabil Formation), Silchar-Haflong Road Section, Assam.
- Dyadosporonites sp.** Kumaran et al. 1995: 1024, fig 3h, MIOCENE (Warkalli Formation), Bharathi and Kundra Clay Mines, Kerala.
- Dyadosporonites sp.** Rao 1995: 234, pl 1, fig 4, TERTIARY, Alleppey and Cannanore districts, Kerala.
- Dyadosporonites sp.** Chandra & Kumar 1998: 62, pl 1, fig 9, LATE TERTIARY, Site 218, Deep Sea Drilling Project Leg 22, Bengal Fan, Indian Ocean.
- Dyadosporonites sp.** Rao 2004: 125, pl 2, fig 1, MIOCENE (Sindhudurg Formation), Kalviwadi, Sindhudurg District, Maharashtra.
- ELSIKISPORONITES** Kumar, **INCERTAE-SEDIS.**
- Elsikisporonites tubulatus** Kumar 1990: 18, pl 1, figs 7-8, text-fig 5, MIOCENE (Quilon Beds), clay mine section near Kanjantheria House, Padappakkara, Quilon District, Kerala.
- EOGLOBELLA** Bradley, **INCERTAE-SEDIS.**
- Eoglobella sp.** Banerjee & Nandi 1992: 84, MIOCENE (Bhuban Formation), Rengte Anticline near Kolasib, Aizwal District, Mizoram.

EXESISPORITES Elsik, **INCERTAE-SEDIS.**

Exesisporites neogenicus Elsik. Bera & Banerjee 1995: 150, MIDDLE-LATE EOCENE (Bengal lignite), Panagarh-Domra Sector, Burdwan District, West Bengal; Mandaokar 2002c: 79, EARLY MIOCENE (Keifang Formation), eastern flank of Aizawl Hills, Mizoram.

Exesisporites psilatus Saxena 2000: 159, pl 1, fig 20, MIOCENE (Sindhudurg Formation), Mavli Mine at Redi, Sindhudurg District, Maharashtra.

Exesisporites verrucatus Kumar 1990: 15, pl 1, fig 4, text-fig 2, MIOCENE (Quilon Beds), clay mine section near Kanjantheria House, Padappakkara, Quilon District, Kerala; Mandaokar 2004: 146, LATE MIOCENE (Upper Bhuban Formation), Champhai area, Eastern Mizo Hills, Mizoram.

Exesisporites sp. Malleshram et al. 1989: 16, pl 1, fig 21, MIOCENE, Godavari-Krishna Basin, Andhra Pradesh and Palk Bay area in Cauvery Basin, Tamil Nadu.

Exesisporites sp. Q. Kumar 1990: 15, pl 1, fig 3, MIOCENE (Quilon Beds), clay mine section near Kanjantheria House, Padappakkara, Quilon District, Kerala.

Exesisporites sp. Banerjee & Nandi 1992: 84, pl 1, fig 3, MIOCENE (Bhuban, Bokabil and Tipam Sandstone formations), Rengte Anticline near Kolasib, Aizawl District, Mizoram.

Exesisporites sp. Banerjee & Nandi 1994: 216, pl 1, fig 34, EARLY-MIDDLE MIOCENE (Middle Bhuban Formation), near Kolasib, Aizawl District, Mizoram.

Exesisporites sp. Hait & Banerjee 1994: 119, pl 4, fig 75, EARLY MIOCENE, near Suangpuilawn village about 20 km northeast of Aizawl, Mizoram.

Exesisporites sp. Rao et al. 1995: 374, EARLY MIOCENE, Borewell at Kulasekharamangalam, Kottayam District, Kerala.

FOVEOLETISPORONITES Ramanujam & Rao, **INCERTAE-SEDIS.**

Foveoletisporonites indicus Ramanujam & Srisailam. Rao 1995: 233, pl 1, fig 5, TERTIARY, Alleppey and Cannanore districts, Kerala; Saxena 2000: 163, MIOCENE (Sindhudurg Formation), Mavli Mine at Redi, Sindhudurg District, Maharashtra.

Foveoletisporonites miocenicus Ramanujam & Rao. Rao 1995: 233, pl 1, fig 11, TERTIARY, Alleppey and Cannanore districts, Kerala; Saxena 2000: 163, MIOCENE (Sindhudurg Formation), Mavli Mine at Redi, Sindhudurg District, Maharashtra.

FRASNACRITETRUS Taugourdeau, **DEMATIACEAE.**

Frasnacritetras conatus Saxena & Sarkar. Sarkar 1997: 102, 104, 108, EOCENE (Subathu Formation), 20 km southeast of Bilaspur on Shimla-Bilaspur Highway, Bilaspur District, Himachal Pradesh; Saxena 2000: 163, MIOCENE (Sindhudurg Formation), Mavli Mine at Redi, Sindhudurg District, Maharashtra.

Frasnacritetras indicus Saxena & Khare 1992: 42, pl 1, fig 17, LATE PALAEOCENE-MIDDLE EOCENE, Jayamkondacholapuram Well 12, Tiruchirapalli District, Tamil Nadu.

Frasnacritetras siwalikus Saxena et al. Kumar & Takahashi 1991: 609, pl 7, fig 6, pl 16, fig 11, EARLY-MIDDLE MIOCENE (Lower Bhuban and Bokabil formations), Silchar-Haflong Road Section, Assam; Kumar 1994: 55, pl 27, fig 6, EARLY MIOCENE (Lower Bhuban Formation), Silchar-Haflong Road Section, Assam; Singh & Sarkar 1994: 52, EARLY MIOCENE (Kasauli Formation), Kasauli, Solan District, Himachal Pradesh.

Frasnacritetras sp. Saxena & Khare 1992: 42, pl 1, fig 11, LATE PALAEOCENE-MIDDLE EOCENE, Jayamkondacholapuram Well 12, Tiruchirapalli District, Tamil Nadu.

- Frasnacritetrus sp.** Singh & Sarkar 1992: 185, ?LATE PALAEOCENE-EOCENE (Subathu Formation), Garkhal, Solan District, Himachal Pradesh.
- Frasnacritetrus spp.** Kumar 1994: 42, 48, 88, 97, pl 21, fig 8, pl 41, fig 6, MIDDLE-LATE OLIGOCENE, MIDDLE MIOCENE and PLIO-PLAISTOCENE (Jenam, Renji, Bokabil and Dupitila formations), Silchar-Haflong Road Section, Assam.
- Frasnacritetrus sp. 2 of Saxena & Sarkar 1986.** Kumar 1994: 48, LATE MIOCENE (Renji Formation), Silchar-Haflong Road Section, Assam.
- Frasnacritetrus sp.** Rao 1995: 234, pl 1, fig 10, TERTIARY, Alleppey and Cannanore districts, Kerala.
- Frasnacritetrus sp.** Rao 1996: 156, EARLY MIOCENE, Turavur Borehole near Panchayat L.P. School, west of N.H. 47 between 380 and 381 km, Alleppey District, Kerala.
- Frasnacritetrus sp.** Chandra & Kumar 1998: 60, pl 1, fig 13, pl 3, fig 10, LATE TERTIARY, Site 218, Deep Sea Drilling Project Leg 22, Bengal Fan, Indian Ocean.
- Frasnacritetrus sp.** Trivedi & Saxena 2000: 273, pl 1, fig 13, LATE EOCENE (Kopili Formation), Umrongso-Haflong Road near Umrongso, North Cachar Hills District, Assam.
- Frasnacritetrus sp. A.** Rao & Patnaik 2001: 272, pl 3, fig 7, LATE PLIOCENE (Pinjor Formation), Nadah, Panchkula, Haryana.
- Frasnacritetrus sp. B.** Rao & Patnaik 2001: 272, pl 3, fig 8, LATE PLIOCENE (Pinjor Formation), Nadah, Panchkula, Haryana.
- Frasnacritetrus sp.** Rao 2004: 128, pl 3, fig 11, MIOCENE (Sindhudurg Formation), Kalviwadi, Sindhudurg District, Maharashtra.
- Fungal Body Type-1.** Tripathi 1995: 48, pl 1, fig 20, PALAEOCENE-EOCENE, subsurface sediments near Kapurdi, Barmer District, Rajasthan.
- Fungal Body Type-I.** Rao & Nair 1998: 52, pl 1, fig 25, MIOCENE, Kannanellur-Kundra Road area, Quilon District, Kerala.
- Fungal Forma A.** Kumar 1994: 48, pl 22, fig 12, LATE OLIGOCENE (Renji Formation), Silchar-Haflong Road Section, Assam.
- Fungal Fruiting Body-Type I.** Rao 2004: 125, pl 2, fig 9, MIOCENE (Sindhudurg Formation), Kalviwadi, Sindhudurg District, Maharashtra.
- Fungal Hypha.** Kumar 1994: 89, pl 41, fig 9, MIDDLE MIOCENE (Bokabil Formation), Silchar-Haflong Road Section, Assam.
- Fungal Hypha.** Samant & Tapaswi 2000: 27, fig 2.17, EARLY EOCENE (Cambay Shale), Cambay Basin, Gujarat.
- Fungal Hyphae I.** Rao 2004: 125, pl 2, fig 13, MIOCENE (Sindhudurg Formation), Kalviwadi, Sindhudurg District, Maharashtra.
- Fungal Hyphae II.** Rao 2004: 125, pl 2, fig 14, MIOCENE (Sindhudurg Formation), Kalviwadi, Sindhudurg District, Maharashtra.
- Fungal Polyad.** Hait & Banerjee 1994: 119, pl 4, fig 77, EARLY MIOCENE, near Suangpuilawn village about 20 km northeast of Aizawl, Mizoram.
- Fungal Remain.** Kumar 1994: 55, pl 27, fig 4, EARLY MIOCENE (Lower Bhuban Formation), Silchar-Haflong Road Section, Assam.
- Fungal Remains.** Mandal 1997: 100, pl 1, fig 32, LATE EOCENE (Barail Group), Mariani-Mokokchung Road, Mokokchung District, Nagaland.
- Fungal Sporangium.** Tripathi et al. 1999: 112, pl 1, figs 5-7, EOCENE, Barsingshar, Bikaner District, Rajasthan.

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- Fungal Spore Venkatachala & Rawat = Hypoxylonites sp.** Saxena.
- Fungal Spore A.** Kumar & Takahashi 1991: 610, pl 6, fig 5, LATE OLIGOCENE (Renji Formation), Silchar-Haflong Road Section, Assam.
- Fungal Spore B.** Kumar & Takahashi 1991: 610, pl 11, fig 2, EARLY MIOCENE (Middle Bhuban Formation), Silchar-Haflong Road Section, Assam.
- Fungal Spore C.** Kumar & Takahashi 1991: 610, pl 17, fig 4, MIDDLE MIOCENE (Bokabil Formation), Silchar-Haflong Road Section, Assam.
- Fungal Spores.** Salujha et al. 1991: 67, pl 2, fig 71, NEOGENE, Adamtila Well-A, Cachar District, Assam.
- Fungal Spore.** Kumar 1994: 76, pl 36, fig 19, EARLY MIOCENE (Upper Bhuban Formation), Silchar-Haflong Road Section, Assam.
- Fungal Spore A.** Kumar 1994: 55, 65, 88, pl 24, fig 17, pl 26, fig 5, pl 27, fig 9, pl 30, fig 16, pl 43, fig 10, EARLY-MIDDLE MIOCENE (Lower and Middle Bhuban and Bokabil formations), Silchar-Haflong Road Section, Assam.
- Fungal Spore B.** Kumar 1994: 65, pl 27, fig 22, EARLY MIOCENE (Middle Bhuban Formation), Silchar-Haflong Road Section, Assam.
- Fungal Spore C.** Kumar 1994: 65, pl 27, fig 16, EARLY MIOCENE (Middle Bhuban Formation), Silchar-Haflong Road Section, Assam.
- Fungal Spore D.** Kumar 1994: 65, pl 30, fig 13, EARLY MIOCENE (Middle Bhuban Formation), Silchar-Haflong Road Section, Assam.
- Fungal Spore E.** Kumar 1994: 65, pl 27, fig 24, EARLY MIOCENE (Middle Bhuban Formation), Silchar-Haflong Road Section, Assam.
- Fungal Spore F.** Kumar 1994: 65, pl 31, fig 4, EARLY MIOCENE (Middle Bhuban Formation), Silchar-Haflong Road Section, Assam.
- Fungal Spore G.** Kumar 1994: 65, pl 32, fig 7, EARLY MIOCENE (Middle Bhuban Formation), Silchar-Haflong Road Section, Assam.
- ?Fungal Spore.** Kumar 1994: 42, pl 21, fig 6, MIDDLE OLIGOCENE (Jenam Formation), Silchar-Haflong Road Section, Assam.
- Fungal Spores.** Mehrotra et al. 2002: pl 1, fig 10, LATE EOCENE, Narsapur area, Krishna-Godavari Basin, Andhra Pradesh.
- Fungal Spore.** Mohabey & Samant 2003: 230, pl 3, fig 7, MAESTRICHTIAN (Lameta Formation), Pisdura, Nand-Dongargaon Basin, Maharashtra.
- Fungal Spores, Host cuticle with.** Tripathi et al. 1999: 114, pl 1, figs 3-4, EOCENE, Barsingshar, Bikaner District, Rajasthan.
- Fungal Spore, Rod shaped.** Tripathi et al. 1999: 112, pl 2, fig 2, EOCENE, Barsingshar, Bikaner District, Rajasthan.
- Fungal Spore, Spindle shaped.** Tripathi et al. 1999: 112, pl 2, fig 1, EOCENE, Barsingshar, Bikaner District, Rajasthan.
- Fungal Spore Tetrad.** Saxena & Rao 1996: 46, pl 3, fig 21, EARLY MIOCENE (Boldamgiri Formation), Adu giri-Purakhasia Road near Boldamgiri, West Garo Hills District, Meghalaya.
- Fungal Spores Type.** Banerjee & Nandi 1992: 87, pl 1, fig 24, MIOCENE (Bhuban, Bokabil and Tipam Sandstone formations), Rengte Anticline near Kolasib, Aizawl District, Mizoram.
- Fungal Spore Type 1.** Samant & Phadtare 1997: 69, pl 15, fig 10, EARLY EOCENE (Tarkeshwar Formation), Rajpardi, Cambay Basin, Gujarat.
- Fungal Spore Type-A.** Rao & Patnaik 2001: 272, pl 2, fig 18, LATE PLIOCENE (Pinjor Formation), Nadah, Panchkula, Haryana.
- Fungal Spore Type-B.** Rao & Patnaik 2001: 274, pl 2, fig 19, LATE PLIOCENE (Pinjor Formation), Nadah, Panchkula, Haryana.

Fungal Spore Type I. Rao 2004: 128, pl 3, fig 13, MIOCENE (Sindhudurg Formation), Kalviwadi, Sindhudurg District, Maharashtra.

Fungal spore Type II. Rao 2004: 130, pl 1, figs 17-18, MIOCENE (Sindhudurg Formation), Kalviwadi, Sindhudurg District, Maharashtra.

Fungal Tetrad Spore. Kumar & Takahashi 1991: 610, pl 8, fig 10, EARLY MIOCENE (Lower Bhuban Formation), Silchar-Haflong Road Section, Assam.

FUSIFORMISPORITES Rouse, **INCERTAE-SEDIS.**

Fusiformisporites acutus Kumar 1990: 21, pl 1, fig 22, text-fig 11, MIOCENE (Quilon Beds), clay mine section near Kanjantheria House, Padappakkara, Quilon District, Kerala; Mandaokar 2004: 146, LATE MIOCENE (Upper Bhuban Formation), Champhai area, Eastern Mizo Hills, Mizoram.

Fusiformisporites crabbii Rouse. Mallesham et al. 1989: 15, pl 1, figs 15-16, MIOCENE, Godavari-Krishna Basin, Andhra Pradesh and Palk Bay area in Cauvery Basin, Tamil Nadu; Sarkar & Singh 1994: 100, MIOCENE (Kundlu and Nalagarh formations), Kundlu and Ramshahr, Solan District, Himachal Pradesh (wrongly spelt as *Fusiformisporites grabbii*); Rao et al. 1995: 374, EARLY MIOCENE, Borewell at Kulasekharamangalam, Kottayam District, Kerala; Samant & Phadtare 1997: 67, pl 15, fig 9, EARLY EOCENE (Tarkeshwar Formation), Rajpardi, Cambay Basin, Gujarat; Mandaokar 2002a: 116, EARLY MIOCENE (Dulte Formation), 2 km from Dulte village on Dulte-Keifang Road, Aizawl District, Mizoram; Mandaokar 2002c: 79, EARLY MIOCENE (Keifang Formation), eastern flank of Aizawl Hills, Mizoram; Mandaokar 2003: 187, EARLY MIOCENE (Middle Bhuban Formation), Lawngtlai, Chhimtuipui District, Mizoram; Mandaokar 2004: 146, LATE MIOCENE (Upper Bhuban Formation), Champhai area, Eastern Mizo Hills, Mizoram.

Fusiformisporites foedus Salujha et al. Tripathi et al. 2000: 243, EARLY EOCENE (Tura Formation), Tura-Dalu Road, West Garo Hills District, Meghalaya.

Fusiformisporites lineolatus Sheffy & Dilcher. Mallesham et al. 1989: 15, MIOCENE, Godavari-Krishna Basin, Andhra Pradesh and Palk Bay area in Cauvery Basin, Tamil Nadu; Samant 2000: 16, pl 1, fig 11, EARLY EOCENE (Kharsalia Clay Formation), near Bhavnagar, Cambay Basin, Gujarat.

Fusiformisporites pseudocrabbii Elsik. Kar et al. 1994: 187, TERTIARY, subsurface sediments in Upper Assam; Mandaokar 2000c: 38, LATE OLIGOCENE (Tikak Parbat Formation), Namchik River Section, Changlang District, Arunachal Pradesh (wrongly spelt as *Fusiformisporites pseudocrabbii*).

Fusiformisporites sp. Saxena & Misra 1990: 265, pl 2, fig 12, NEOGENE (Ratnagiri Beds), Amberiwadi Section, Sindhudurg District, Maharashtra.

Fusiformisporites sp. Banerjee & Nandi 1992: 84, pl 1, fig 5, MIOCENE (Bhuban, Bokabil and Tipam Sandstone formations), Rengte Anticline near Kolasib, Aizawl District, Mizoram.

Fusiformisporites sp. Saxena & Khare 1992: 38, pl 1, fig 8, LATE PALAEOCENE-MIDDLE EOCENE, Jayamkondacholapuram Well 12, Tiruchirapalli District, Tamil Nadu.

Fusiformisporites sp. Banerjee & Nandi 1994: 216, pl 1, fig 32, EARLY-MIDDLE MIOCENE (Middle Bhuban Formation), near Kolasib, Aizawl District, Mizoram.

Fusiformisporites sp. Hait & Banerjee 1994: 119, pl 4, fig 65, EARLY MIOCENE, near Suangpuilawn village about 20 km northeast of Aizawl, Mizoram.

Fusiformisporites sp. Misra et al. 1996: 95, EARLY MIOCENE (Baghmara Formation), Tura-Dalu Road Section along Bugi River, Garo Hills, Meghalaya.

Fusiformisporites sp. Chakraborty 2004: 116, pl 1, fig 13, LATE PALAEOCENE (Lakadong Sandstone), around Bhalukurung, North Cachar Hills, Assam.

GELASINOSPORA Dowding, **PYRENO-MYCETES.**

Gelasinospora sp. Banerjee & Nandi 1992: 84, pl 1, fig 17, MIOCENE (Bhuban, Bokabil and Tipam Sandstone formations), Rengte Anticline near Kolasib, Aizawl District, Mizoram.

Gelasinospora sp. Hait & Banerjee 1994: 119, pl 4, figs 68-69, 77-78, EARLY MIOCENE, near Suangpuilawn village about 20 km northeast of Aizawl, Mizoram.

Gelasinospora sp. Gupta et al. 2003: 210, PALAEOCENE-EOCENE, Ganga Basin (wrongly spelt as *Gelasinosphaera* sp.).

Gelasinospora sp. Mandaokar 2004: 146, LATE MIOCENE (Upper Bhuban Formation), Champhai area, Eastern Mizo Hills, Mizoram (wrongly spelt as *Gelasinosphaera* sp.).

GLOMUS Tulasne & Tulasne, **MUCORALES.**

Glomus Tulasne & Tulasne. Sarkar & Singh 1994: 100, MIOCENE (Kundlu and Nalagarh formations), Kundlu and Ramshahr, Solan District, Himachal Pradesh.

HADROTRICHUM Fuckel, **HYPHOMYCETES.**

Hadrotrichum Fuckel. Sarkar & Singh 1994: 100, MIOCENE (Kundlu and Nalagarh formations), Kundlu and Ramshahr, Solan District, Himachal Pradesh.

HELMINTHOSPORIUM Fries, **HYPHOMYCETES.**

Helminthosporium sp. Mohabey & Samant 2003: 230, pl 3, fig 9, MAESTRICHIAN (Lameta Formation), Pisdura, Nand-Dongargaon Basin, Maharashtra.

HETEROSPORIUM Klotzsch ex Cooke, **HYPHOMYCETES.**

Heterosporium Klotzsch ex Cooke. Sarkar & Singh 1994: 100, MIOCENE (Kundlu and Nalagarh formations), Kundlu and Ramshahr, Solan District, Himachal Pradesh.

Hypnopodia. Banerjee & Nandi 1994: 216, EARLY-MIDDLE MIOCENE (Middle Bhuban Formation), near Kolasib, Aizawl District, Mizoram.

Hypomycetous conidia. Sarkar & Singh 1994: 99, pl 1, figs 4-5, MIOCENE (Kundlu and Nalagarh formations), Kundlu and Ramshahr, Solan District, Himachal Pradesh.

Hypopodiata mycelium. Samant & Phadtare 1997: 105, pl 14, fig 20, EARLY EOCENE (Tarkeshwar Formation), Rajpardi, Cambay Basin, Gujarat.

Hypopodium Type. Banerjee & Nandi 1992: 84, pl 1, fig 16, MIOCENE (Bhuban and Bokabil formations), Rengte Anticline near Kolasib, Aizawl District, Mizoram.

HYPOXYLONITES Elsik, **XYLARIACEAE.**

Hypoxylonites ater (Kumar) Saxena = **Hypoxylonites miocenicus** Elsik [non (Kumar) Saxena 1992].

Hypoxylonites bhubanensis Nandi & Banerjee in Nandi et al. 2003: 58, pl 1, figs 1-2, text-fig 3.1, NEOGENE (Bhuban, Bokabil Tipam and Dupitila formations), Northeastern India.

Hypoxylonites chaiffetzii Elsik. Nandi et al. 2003: 58, pl 1, fig 3, TERTIARY (Siju, Kherapara, Bhuban, Bokabil, Tipam and Dupitila formations), Northeastern India.

Hypoxylonites curvatus (Ramanujam & Rao) Elsik. Saxena 1992: 211.

Diporisorites curvatus Ramanujam & Rao 1978: 294, pl 1, fig 6, MIOCENE, Kerala; Mandaokar 2002a: 116, EARLY MIOCENE (Dulte Forma-

- tion), 2 km from Dulte village on Dulte-Keifang Road, Aizawl District, Mizoram; Mandaokar 2002c: 79, EARLY MIOCENE (Keifang Formation), eastern flank of Aizawl Hills, Mizoram.
- Hypoxylonites elsikii** Nandi & Banerjee in Nandi et al. 2003: 58, pl 1, figs 5, 9, 16, 17, text-fig 3.3, TERTIARY (Siju, Kherapara, Bhuban, Bokabil and Dihing formations), Northeastern India.
- Hypoxylonites eocenicus** Elsik. Nandi et al. 2003: 58, pl 1, figs 18, 20, pl 2, fig 19, TERTIARY (Siju, Kherapara, Bhuban and Bokabil formations), Northeastern India.
- Hypoxylonites fusiformis** Elsik. Nandi et al. 2003: 59, pl 1, figs 4, 8, NEOGENE (Bhuban, Bokabil, Tipam and Dupitila formations), Northeastern India.
- Hypoxylonites gulfensis** Elsik. Nandi et al. 2003: 59, pl 1, fig 7, NEOGENE (Bhuban, Bokabil, Tipam and Dupitila formations), Northeastern India.
- Hypoxylonites minimus** Nandi & Banerjee in Nandi et al. 2003: 59, pl 1, figs 12, 21, text-fig 3.5, TERTIARY (Siju, Bhuban, Bokabil, Tipam and Dupitila formations), Northeastern India.
- Hypoxylonites miocenicus** Elsik. Nandi et al. 2003: 59, pl 1, figs 6, 10, LATE CRETACEOUS-TERTIARY (Mahadeo, Langpar, Cherra Sandstone, Kherapara, Bhuban, Bokabil, Tipam, Dupitila and Dihing formations), Northeastern India.
- Hypoxylosporites ater* Kumar 1990: 19, pl 1, fig 13, text-fig 7, MIOCENE (Quilon Beds), clay mine section near Kanjantheria House, Padappakkara, Quilon District, Kerala.
- Hypoxylonites ater* (Kumar) Saxena 1992: 211.
- Hypoxylonites miocenicus** (Kumar) Saxena 1992: 211 (Junior homonym of *Hypoxylonites miocenicus* Elsik 1990).
- Hypoxylosporites miocenicus* Kumar 1990: 19, pl 1, fig 23, text-fig 6, MIOCENE (Quilon Beds), clay mine section near Kanjantheria House, Padappakkara, Quilon District, Kerala.
- Hypoxylonites neogenicus** Nandi & Banerjee in Nandi et al. 2003: 59-60, pl 1, figs 13-14, text-fig 3.2, NEOGENE (Bhuban, Bokabil, Tipam, Dupitila and Dihing formations), Northeastern India.
- Hypoxylonites ovalis** Elsik. Nandi et al. 2003: 60, pl 1, fig 22, TERTIARY (Kherapara, Bhuban, Bokabil, Tipam and Dupitila formations), Northeastern India.
- Hypoxylonites subrotundus** Nandi & Banerjee in Nandi et al. 2003: 60, pl 1, fig 19, text-fig 3.4, TERTIARY (Siju, Bhuban, Bokabil, Tipam and Dupitila formations), Northeastern India.
- Hypoxylonites subuliformis** Elsik. Nandi et al. 2003: 60, pl 2, figs 1-2, TERTIARY (Siju, Bhuban, Bokabil, Tipam and Dupitila formations), Northeastern India.
- Hypoxylonites sulekii** Elsik. Nandi et al. 2003: 60, pl 1, figs 11, 15, MIOCENE (Bhuban and Bokabil formations), Northeastern India.
- Hypoxylonites thindii** Nandi & Sinha in Nandi et al. 2003: 60, pl 2, figs 13-15, text-fig 3.6, TERTIARY (Siju, Kherapara, Bhuban, Bokabil, Tipam, Dupitila and Dihing formations), Northeastern India.
- Hypoxylonites sp.** Saxena 1992: 211.
Fungal spore. Venkatachala & Rawat 1973: 258, pl 1, fig 11, OLIGOCENE-MIOCENE, Cauvery Basin, Tamil Nadu.
- Hypoxylonites sp.** Banerjee & Nandi 1992: 84, pl 1, fig 1, MIOCENE (Bhuban, Bokabil and Tipam Sandstone formations), Rengte Anticline near Kolasib, Aizawl District, Mizoram.
- Hypoxylonites sp.** Saxena & Khare 1992: 38, pl 1, figs 2, 14, LATE PALAEOCENE-MIDDLE EOCENE, Jayamkondacholapuram Well 12, Tiruchirapalli District, Tamil Nadu.

Hypoxylonites sp. Banerjee & Nandi 1994: 216, pl 1, fig 31, EARLY-MIDDLE MIOCENE (Middle Bhuban Formation), near Kolasib, Aizawl District, Mizoram.

HYPOXYLONSPORITES Kumar = **HYPOXYLONITES** Elsik, **XYLARIACEAE**.

Hypoxylonsporites ater Kumar = **Hypoxylonites miocenicus** Elsik [non (Kumar) Saxena 1992].

Hypoxylonsporites miocenicus Kumar = **Hypoxylonites miocenicus** (Kumar) Saxena (non Elsik 1990).

IMPRIMOSPORA Norris, **INCERTAE-SEDIS**.

Imprimospora ramanujamii Kumar 1990: 20-21, pl 1, fig 5, text-fig 10, MIOCENE (Quilon Beds), clay mine section near Kanjantheria House, Padappakkara, Quilon District, Kerala.

3-celled striate spore type. Ramanujam & Srisailam 1980: 131, pl 2, fig 28, MIOCENE (Warkalli Beds), Cannanore District, Kerala.

INAPERTISPORITES van der Hammen, **INCERTAE-SEDIS**.

Inapertisporites circularis Sheffy & Dilcher. Sarkar 1991: 3, EARLY EOCENE (Kakara Series), near Kakara-Chapla group of villages, north of Gambhar River, Shimla District, Himachal Pradesh; Sarkar et al. 1994: 201, LATE MIOCENE (Middle Siwalik), Bagh Rao, Dehradun District, Uttaranchal; Samant & Tapaswi 2000: 29, fig 2.13, EARLY EOCENE (Cambay Shale), Cambay Basin, Gujarat.

Inapertisporites crenulatus Kumar 1990: 14-15, pl 1, figs 1-2, text-fig 1, MIOCENE (Quilon Beds), clay mine section near Kanjantheria House, Padappakkara, Quilon District, Kerala; Samant & Tapaswi 2000: 29, fig 2.9, EARLY EOCENE (Cambay Shale), Cambay Basin, Gujarat.

Inapertisporites dilcheri Chandra et al. Saxena & Khare 1992: 37, LATE PALAEOCENE-MID-

DLE EOCENE, Jayamkondacholapuram Well 12, Tiruchirapalli District, Tamil Nadu.

Inapertisporites ellipticus Chandra et al. Saxena & Bhattacharyya 1990: 112-113, OLIGOCENE-EARLY MIOCENE (Dharmasala Group), Churan Khad Section near Dharmasala, Kangra District, Himachal Pradesh.

Inapertisporites kedvesii Elsik. Rajendran et al. 1989: 41, 42, 43, 44, pl 1, fig 14, MIOCENE, Thonnakkal, Kundra, Padappakkara, Varkala, Edavai, Paravur, Cannanore, Palayangadi, Kerala; Tripathi 1989: 74, pl 2, fig 7, PALAEOCENE (Therria Formation), Jowai-Sonapur Road Section, Jaintia Hills District, Meghalaya; Kar 1990a: 178, MIOCENE (Surma and Tipam groups), Rokhia Borehole No. 1, Gojalia Borehole No. 1 and Baramura Borehole No. 2, Tripura; Kar 1990b: 232, 233, 236, 238, PALAEOCENE-OLIGOCENE (Disang, Laisong, Jenam and Renji formations), Silchar-Haflong Road Section, Assam; Saxena & Bhattacharyya 1990: 112, OLIGOCENE-EARLY MIOCENE (Dharmasala Group), Churan Khad and Manjhi Khad sections near Dharmasala, Kangra District, Himachal Pradesh; Saxena & Misra 1990: 270, NEOGENE (Ratnagiri Beds), Amberiwadi Section, Sindhudurg District, Maharashtra; Singh 1990: 224, PALAEOCENE (Tura Formation), Langrin Coalfield, Khasi Hills, Meghalaya; Kar & Bhattacharya 1992: 251, 252, EARLY EOCENE, Rajpardi lignite, Bharuch District and Gujra Dam Section and Akri lignite, Kutch District, Gujarat; Saxena & Khare 1992: 37, pl 1, fig 15, LATE PALAEOCENE-MIDDLE EOCENE, Jayamkondacholapuram Well 12, Tiruchirapalli District, Tamil Nadu; Kar et al. 1994: 187, TERTIARY, subsurface sediments in Upper Assam; Rao 1995: 233, pl 1, fig 7, TERTIARY, Alleppey and Cannanore districts, Kerala; Kumar 1996: 114, EARLY EOCENE (Tarkeshwar Formation), Rajpardi, Bharuch District, Gujarat; Saxena et al. 1996: 21, pl 3, figs 14-15, PALAEOCENE (Tura Formation), Nongwal Bibra area, East Garo Hills District, Meghalaya; Chandra & Kumar 1998: 62, pl 3, fig 1, LATE TERTIARY, Site 218, Deep Sea Drilling Project Leg 22, Bengal Fan, Indian Ocean;

Mandaokar 1999: 241, LATE EOCENE (Disang Group), Tirap River Section, Tinsukia District, Assam; Mandaokar 2000a: 320, EARLY MIOCENE (Bhuban Formation), Ramrikawn near Chandmari, Aizawl District, Mizoram; Mandaokar 2000b: 181, pl 1, fig 16, LATE OLIGOCENE (Tikak Parbat Formation), Jeypore Colliery, Dilli-Jeypore Coalfields, Dibrugarh District, Assam; Mandaokar 2000c: 38, LATE OLIGOCENE (Tikak Parbat Formation), Namchik River Section, Changlang District, Arunachal Pradesh; Saxena 2000: 163, MIOCENE (Sindhudurg Formation), Mavli Mine at Redi, Sindhudurg District, Maharashtra; Mandaokar 2002a: 116, EARLY MIOCENE (Dulte Formation), 2 km from Dulte village on Dulte-Keifang Road, Aizawl District, Mizoram; Mandaokar 2002b: 21, LATE OLIGOCENE (Tikak Parbat Formation), Borjan Coalfield, Nagaland; Mandaokar 2002c: 79, EARLY MIOCENE (Keifang Formation), eastern flank of Aizawl Hills, Mizoram; Singh & Kar 2002: 214, PALAEOCENE (Deccan Intertrappean Beds), 3 km northeast of Papro village, Latitpur District, Uttar Pradesh; Mandaokar 2003: 187, EARLY MIOCENE (Middle Bhuban Formation), Lawngtlai, Chhimituipui District, Mizoram; Singh & Kar 2003: 219, PALAEOCENE (Deccan Intertrappean Beds), northeast of Papro, Lalitpur District, Uttar Pradesh; Tripathi et al. 2003: 90, LATE PALAEOCENE (Akli Formation), Barmer Basin, Rajasthan; Chakraborty 2004: 116, LATE PALAEOCENE (Lakadong Sandstone), around Bhalukurung, North Cachar Hills, Assam; Mandaokar 2004: 146, LATE MIOCENE (Upper Bhuban Formation), Champhai area, Eastern Mizo Hills, Mizoram; Rao 2004: 124, pl 3, fig 6, MIOCENE (Sindhudurg Formation), Kalviwadi, Sindhudurg District, Maharashtra; Mandaokar 2005: 55, LATE OLIGOCENE (Tikak Parbat Formation), Ledo Colliery, Makum Coalfield, Assam.

Inapertisporites miocenicus Singh et al. Singh & Sarkar 1994: 52, EARLY MIOCENE (Kasauli Formation), Kasauli, Solan District, Himachal Pradesh.

Inapertisporites ovalis Sheffy & Dilcher. Saxena & Bhattacharyya 1990: 112, pl 1, fig 19, OLIGOCENE-EARLY MIOCENE (Dharmasala Group), Churan Khad Section near Dharmasala,

Kangra District, Himachal Pradesh; Sarkar 1991: 3, EARLY EOCENE (Kakara Series), near Kakara-Chapla group of villages, north of Gambhar River, Shimla District, Himachal Pradesh; Sarkar et al. 1994: 201, LATE MIOCENE (Middle Siwalik), Bagh Rao, Dehradun District, Uttaranchal; Singh & Sarkar 1994: 52, EARLY MIOCENE (Kasauli Formation), Kasauli, Solan District, Himachal Pradesh.

Inapertisporites subovoideus Sheffy & Dilcher. Saxena & Misra 1990: 265, NEOGENE (Ratnagiri Beds), Amberiwadi Section, Sindhudurg District, Maharashtra; Saxena & Khare 1992: 37, pl 1, fig 7, LATE PALAEOCENE-MIDDLE EOCENE, Jayamkondacholapuram Well 12, Tiruchirapalli District, Tamil Nadu; Singh & Sarkar 1994: 52, EARLY MIOCENE (Kasauli Formation), Kasauli, Solan District, Himachal Pradesh.

Inapertisporites udarii Gupta. Saxena & Bhattacharyya 1990: 113, OLIGOCENE-EARLY MIOCENE (Dharmasala Group), Churan Khad Section near Dharmasala, Kangra District, Himachal Pradesh; Saxena & Khare 1992: 37, LATE PALAEOCENE-MIDDLE EOCENE, Jayamkondacholapuram Well 12, Tiruchirapalli District, Tamil Nadu.

Inapertisporites variabilis van der Hammen. Chandra & Kumar 1998: 56, LATE TERTIARY, Site 218, Deep Sea Drilling Project Leg 22, Bengal Fan, Indian Ocean; Mandaokar 2004: 146, LATE MIOCENE (Upper Bhuban Formation), Champhai area, Eastern Mizo Hills, Mizoram.

Inapertisporites vulgaris Sheffy & Dilcher. Samant & Tapaswi 2000: 29, EARLY EOCENE (Cambay Shale), Cambay Basin, Gujarat.

Inapertisporites sp. Kar 1990b: 232, PALAEOCENE-EOCENE (Disang Formation), Silchar-Haflong Road Section, Assam.

Inapertisporites sp. P. Kumar 1990: 15, pl 1, fig 17, MIOCENE (Quilon Beds), clay mine section near Kanjantheria House, Padappakkara, Quilon District, Kerala.

- Inapertisporites sp.** Saxena & Bhattacharyya 1990: 113, pl 1, fig 20, OLIGOCENE-EARLY MIOCENE (Dharmsala Group), Churan Khad Section near Dharmsala, Kangra District, Himachal Pradesh.
- Inapertisporites sp.** Kumar & Takahashi 1991: 611, pl 18, fig 9, MIDDLE MIOCENE (Bokabil Formation), Silchar-Haflong Road Section, Assam.
- Inapertisporites sp. A.** Kar & Bhattacharya 1992: 251, EARLY EOCENE, Rajpardi lignite, Bharuch District, Gujarat.
- Inapertisporites sp. B.** Kar & Bhattacharya 1992: 251, EARLY EOCENE, Rajpardi lignite, Bharuch District, Gujarat.
- Inapertisporites sp.** Ambwani 1993: 153, PALAEOCENE-EARLY EOCENE, Rekmangiri Coalfield, Garo Hills, Meghalaya.
- Inapertisporites sp.** Kumar 1994: 88, pl 41, fig 11, MIDDLE MIOCENE (Bokabil Formation), Silchar-Haflong Road Section, Assam.
- Inapertisporites sp.** Singh & Sarkar 1994: 52, pl 1, fig 20, EARLY MIOCENE (Kasauli Formation), Kasauli, Solan District, Himachal Pradesh.
- Inapertisporites sp. 1.** Rao 1995: 234, pl 1, fig 6, TERTIARY, Alleppey and Cannanore districts, Kerala.
- Inapertisporites sp. 2.** Rao 1995: 234, pl 1, fig 8, TERTIARY, Alleppey and Cannanore districts, Kerala.
- Inapertisporites sp.** Misra et al. 1996: 95, EARLY MIOCENE (Baghmara Formation), Tura-Dalu Road Section along Bugi River, Garo Hills, Meghalaya.
- Inapertisporites sp.** Saxena & Rao 1996: 46, pl 3, fig 16, EARLY MIOCENE (Boldamgiri Formation), Adu giri-Purakhasia Road near Boldamgiri, West Garo Hills District, Meghalaya.
- Inapertisporites sp.** Rao 2000: 295, OLIGOCENE (Kherapara Formation), Tura-Dalu Road Section near Kherapara, West Garo Hills District, Meghalaya.
- Inapertisporites sp.** Saxena 2000: 163, MIOCENE (Sindhudurg Formation), Mavli Mine at Redi, Sindhudurg District, Maharashtra.
- Inapertisporites sp.** Rao 2004: 125, pl 1, fig 11, MIOCENE (Sindhudurg Formation), Kalviwadi, Sindhudurg District, Maharashtra.
- INVOLUTISPORONITES** Clarke, **INCERTAE-SEDIS.**
- Involutisporonites wilcoxii** Elsik. Saxena & Misra 1990: 265, NEOGENE (Ratnagiri Beds), Amberiwadi Section, Sindhudurg District, Maharashtra.
- Involutisporonites sp.** Rao 1996: 156, EARLY MIOCENE, Turavur Borehole near Panchayat L.P. School, west of N.H. 47 between 380 and 381 km, Alleppey District, Kerala.
- Involutisporonites sp.** Rao 2004: 126, pl 1, fig 14, MIOCENE (Sindhudurg Formation), Kalviwadi, Sindhudurg District, Maharashtra.
- KALVIWADITHYRITES** Rao, **MICROTHYRIACEAE.**
- Kalviwadithyrites saxenae** Rao 2003: 118, pl 1, figs 1-3, text-fig 2, MIOCENE (Sindhudurg Formation), Kalviwadi, Sindhudurg District, Maharashtra; Rao 2004: 124, pl 2, figs 11-12, MIOCENE (Sindhudurg Formation), Kalviwadi, Sindhudurg District, Maharashtra.
- KOSHALIA** Sarkar & Prasad, **INCERTAE-SEDIS.**
- Koshalia enigmata** Sarkar & Prasad 2003: 114-115, pl 1, figs 1-4, LATE YPRESIAN (Subathu Formation), Koshalia Nala near Koti, Shimla Hills, Himachal Pradesh.
- KUTCHIATHYRITES** Kar, **MICROTHYRIACEAE.**

- Kutchiathyrites eccentricus** Kar. Rajendran et al. 1989: 41, 42, 43, pl 1, fig 17, MIOCENE, Thonnakkal, Padappakkara, Edavai, Kerala; Kar 1990a: 179, pl 8, fig 121, MIOCENE (Surma and Tipam groups), Rokhia Borehole No. 1, Gojalia Borehole No. 1 and Baramura Borehole No. 2, Tripura; Kar 1990b: 238, LATE OLIGOCENE (Renji Formation), Silchar-Haflong Road Section, Assam; Saxena & Misra 1990: 265, NEOGENE (Ratnagiri Beds), Amberiwadi Section, Sindhudurg District, Maharashtra; Kar & Bhattacharya 1992: 251, pl 2, fig 37, EARLY EOCENE, Rajpardi lignite, Bharuch District, Gujarat; Saxena & Khare 1992: 37, LATE PALAEOCENE-MIDDLE EOCENE, Jayamkondacholapuram Well 12, Tiruchirapalli District, Tamil Nadu; Kar et al. 1994: 187, TERTIARY, subsurface sediments in Upper Assam; Singh & Sarkar 1994: 52, EARLY MIOCENE (Kasauli Formation), Kasauli, Solan District, Himachal Pradesh; Rao 1995: 233, TERTIARY, Alleppey and Cannanore districts, Kerala; Saxena & Rao 1996: 46, EARLY MIOCENE (Boldamgiri Formation), Adu giri-Purakhasia Road near Boldamgiri, West Garo Hills District, Meghalaya; Rao & Nair 1998: 52, MIOCENE, Kannanellur-Kundra Road area, Quilon District, Kerala; Rao 2000: 295, OLIGOCENE (Kherapara Formation), Tura-Dalu Road Section near Kherapara, West Garo Hills District, Meghalaya; Saxena 2000: 163, MIOCENE (Sindhudurg Formation), Mavli Mine at Redi, Sindhudurg District, Maharashtra; Rao 2004: 124, pl 3, fig 15, MIOCENE (Sindhudurg Formation), Kalviwadi, Sindhudurg District, Maharashtra.
- Kutchiathyrites sp.** Mallesham et al. 1989: 15, pl 1, fig 3, MIOCENE, Godavari-Krishna Basin, Andhra Pradesh and Palk Bay area in Cauvery Basin, Tamil Nadu.
- Kutchiathyrites sp.** Saxena & Khare 1992: 39, pl 1, fig 4, LATE PALAEOCENE-MIDDLE EOCENE, Jayamkondacholapuram Well 12, Tiruchirapalli District, Tamil Nadu.
- Kutchiathyrites sp.** Rao et al. 1995: 374, fig 3, EARLY MIOCENE, Borewell at Kulasekharamangalam, Kottayam District, Kerala.
- LACRIMASPORONITES** Clarke, **INCERTAE-SEDIS.**
- Lacrimasporonites basidii** Elsik. Samant & Tapaswi 2000: 29, fig 2.8, EARLY EOCENE (Cambay Shale), Cambay Basin, Gujarat.
- Lacrimasporonites levis** Clarke. Mandaokar 2000a: 320, EARLY MIOCENE (Bhuban Formation), Ramrikawn near Chandmari, Aizawl District, Mizoram.
- Lacrimasporonites longus** Kar. Ambwani 1993: 153, PALAEOCENE-EARLY EOCENE, Rekmangiri Coalfield, Garo Hills, Meghalaya; Mandaokar 2002a: 116, EARLY MIOCENE (Dulte Formation), 2 km from Dulte village on Dulte-Keifang Road, Aizawl District, Mizoram.
- Lacrimasporonites niger** Kumar 1990: 15, 17, pl 1, fig 6, text-fig 3, MIOCENE (Quilon Beds), clay mine section near Kanjantheria House, Padappakkara, Quilon District, Kerala.
- Lacrimasporonites sp.** Kar 1990b: 236, MIDDLE OLIGOCENE (Jenam Formation), Silchar-Haflong Road Section, Assam.
- Lacrimasporonites sp.** Saxena & Khare 1992: 38-39, pl 1, fig 13, LATE PALAEOCENE-MIDDLE EOCENE, Jayamkondacholapuram Well 12, Tiruchirapalli District, Tamil Nadu.
- Lacrimasporonites sp.** Hait & Banerjee 1994: 118, pl 4, fig 64, EARLY MIOCENE, near Suangpuilawn village about 20 km northeast of Aizawl, Mizoram.
- Lacrimasporonites sp.** Mandaokar 2000b: 181, pl 1, fig 23, LATE OLIGOCENE (Tikak Parbat Formation), Jeypore Colliery, Dilli-Jeypore Coalfields, Dibrugarh District, Assam.
- Lacrimasporonites spp.** Mandaokar 2005: 55, LATE OLIGOCENE (Tikak Parbat Formation), Ledo Colliery, Makum Coalfield, Assam.
- LIRASPORIS** Potonie' & Sah, **INCERTAE-SEDIS.**

- Lirasporis elongatus** Kar 1990a: 196, pl 8, figs 116-117, MIOCENE (Surma and Tipam groups), Rokhia Borehole No. 1, Gojalia Borehole No. 1 and Baramura Borehole No. 2, Tripura; Chandra & Kumar 1998: 58, 60, pl 1, figs 11, 15, LATE TERTIARY, Site 218, Deep Sea Drilling Project Leg 22, Bengal Fan, Indian Ocean.
- Lirasporis intergranifer** Potonie' & Sah. Rajendran et al. 1989: 44, pl 1, figs 5, 12, MIOCENE, Palayangadi, Kerala; Rao 1990: 248, pl 3, fig 14, EOCENE-EARLY MIOCENE, Arthungal Borehole, Alleppey District, Kerala; Saxena & Misra 1990: 265, NEOGENE (Ratnagiri Beds), Amberiwadi Section, Sindhudurg District, Maharashtra; Rao 1995: 233, TERTIARY, Alleppey and Cannanore districts, Kerala; Rao 1996: 156, EARLY MIOCENE, Turavur Borehole near Panchayat L.P. School, west of N.H. 47 between 380 and 381 km, Alleppey District, Kerala; Saxena & Rao 1996: 46, EARLY MIOCENE (Boldamgiri Formation), Adugiri-Purakhasia Road near Boldamgiri, West Garo Hills District, Meghalaya; Rao & Nair 1998: 52, MIOCENE, Kannanellur-Kundra Road area, Quilon District, Kerala; Saxena 2000: 163, MIOCENE (Sindhudurg Formation), Mavli Mine at Redi, Sindhudurg District, Maharashtra; Rao 2004: 124, pl 3, fig 12, MIOCENE (Sindhudurg Formation), Kalviwadi, Sindhudurg District, Maharashtra.
- Lirasporis sp.** Kar 1990a: 179, MIOCENE (Surma and Tipam groups), Rokhia Borehole No. 1, Gojalia Borehole No. 1 and Baramura Borehole No. 2, Tripura.
- Lirasporis sp.** Saxena & Misra 1990: 265, pl 3, fig 18, NEOGENE (Ratnagiri Beds), Amberiwadi Section, Sindhudurg District, Maharashtra.
- Lirasporis sp.** Kumaran et al. 1995: 1024, MIOCENE (Warkalli Formation), Bharathi and Kundra Clay Mines, Kerala.
- Lirasporis sp.** Saxena 2000: 163, MIOCENE (Sindhudurg Formation), Mavli Mine at Redi, Sindhudurg District, Maharashtra.
- MEDIAVERRUNITES** ?Author, **INCERTAE-SEDIS**.
- Mediaverrunites sp.** Banerjee & Nandi 1992: 84, pl 1, fig 20, MIOCENE (Bhuban, Bokabil and Tipam Sandstone formations), Rengte Anticline near Kolasib, Aizawl District, Mizoram.
- MELIOLA** Fries, **MELIOLACEAE**.
- Meliola sp.** Mallesham et al. 1989: 15, pl 1, fig 17, MIOCENE, Godavari-Krishna Basin, Andhra Pradesh and Palk Bay area in Cauvery Basin, Tamil Nadu.
- Meliola sp.** Banerjee & Nandi 1992: 84, pl 1, fig 21, MIOCENE (Bhuban, Bokabil and Tipam Sandstone formations), Rengte Anticline near Kolasib, Aizawl District, Mizoram.
- Meliola sp.** Rao et al. 1995: 374, EARLY MIOCENE, Borewell at Kulasekharamangalam, Kottayam District, Kerala.
- Meliola sp.** Saxena & Rao 1996: 46, EARLY MIOCENE (Boldamgiri Formation), Adugiri-Purakhasia Road near Boldamgiri, West Garo Hills District, Meghalaya.
- Meliola sp.** Mohabey & Samant 2003: 230, pl 3, fig 8, MAESTRICHTIAN (Lameta Formation), Pisdura, Nand-Dongargaon Basin, Maharashtra.
- Meliola sp.** Kumar et al. 2004: 157, pl 1, fig 15, NEOGENE and PLEISTOCENE, Site 218, Deep Sea Drilling Project Leg 22, Bengal Fan, Indian Ocean.
- Meliola sp.** Rao 2004: 125, pl 2, fig 2, MIOCENE (Sindhudurg Formation), Kalviwadi, Sindhudurg District, Maharashtra.
- MELIOLINITES** Selkirk, **MELIOLACEAE**.
- Meliolinites spinksii** (Dilcher) Selkirk. Chandra & Kumar 1998: 60, pl 1, fig 7, LATE TERTIARY, Site 218, Deep Sea Drilling Project Leg 22, Bengal Fan, Indian Ocean.

- Meliolinites sp.** Chandra & Kumar 1998: 56, LATE TERTIARY, Site 218, Deep Sea Drilling Project Leg 22, Bengal Fan, Indian Ocean.
- Meliolinites sp.** Mitra et al. 2000: 126, pl 1, fig 2, NEOGENE (Siwalik Group), Darjeeling Foothills, Eastern Himalaya.
- MICROTHALLITES** Dilcher, **MICROTHYRIACEAE.**
- Microthallites sp.** Tripathi 1989: 73, pl 3, fig 1, LATE EOCENE (Kopili Formation), Jowai-Sonapur Road Section, Jaintia Hills District, Meghalaya.
- Microthyriaceae.** Phadtare et al. 1994: 75, pl 1, fig Q, Upper Siwalik, Haripur Khol, Sirmaur District, Himachal Pradesh.
- Microthyriaceae Germling.** Samant 2000: 12, pl 1, fig 28, EARLY EOCENE (Kharsalia Clay Formation), near Bhavnagar, Cambay Basin, Gujarat.
- Microthyriaceous Ascostromata.** Sarkar & Singh 1994: 99, pl 1, fig 16, MIOCENE (Kundlu and Nalagarh formations), Kundlu and Ramshahr, Solan District, Himachal Pradesh.
- Microthyriaceous Fruit Body.** Hait & Banerjee 1994: 119, pl 4, fig 70, EARLY MIOCENE, near Suangpuilawn village about 20 km northeast of Aizawl, Mizoram.
- Microthyriaceous Fruit Body, Young.** Rao et al. 1995: 373, fig 28, EARLY MIOCENE, Borewell at Kulasekharamangalam, Kottayam District, Kerala.
- Microthyriaceous Germling.** Misra et al. 1996: 95, EARLY MIOCENE (Baghmara Formation), Tura-Dalu Road Section along Bugi River, Garo Hills, Meghalaya.
- Microthyriaceous Germlings.** Samant & Phadtare 1997: 105, pl 14, fig 19, EARLY EOCENE (Tarkeshwar Formation), Rajpardi, Cambay Basin, Gujarat.
- Microthyriaceous Germlings.** Mitra et al. 2000: 126, pl 1, fig 8, NEOGENE (Siwalik Group), Darjeeling Foothills, Eastern Himalaya.
- Microthyriaceous Taxon.** Gupta 1994: 256-257, fig 11, EARLY TERTIARY (Subathu Formation), Jamtah Road Section, Sirmaur District, Himachal Pradesh.
- MICROTHYRIACITES** Cookson, **MICROTHYRIACEAE.**
- Microthyriacites ramanujamii** Saxena & Misra 1990: 268, pl 2, fig 13, NEOGENE (Ratnagiri Beds), Amberiwadi Section, Sindhudurg District, Maharashtra; Rao 2004: 124, MIOCENE (Sindhudurg Formation), Kalviwadi, Sindhudurg District, Maharashtra.
- Microthyriacites sp.** Banerjee & Nandi 1992: 84, pl 1, fig 15, MIOCENE (Bhuban, Bokabil and Tipam sandstone formations), Rengte Anticline near Kolasib, Aizawl District, Mizoram.
- Microthyriacites sp.** Banerjee & Nandi 1994: 216, pl 1, fig 21, EARLY-MIDDLE MIOCENE (Middle Bhuban Formation), near Kolasib, Aizawl District, Mizoram.
- Microthyriacites sp. 1.** Gupta 1994: 255, fig 9, EARLY TERTIARY (Subathu Formation), Jamtah Road Section, Sirmaur District, Himachal Pradesh.
- Microthyriacites sp. 2.** Gupta 1994: 255-256, fig 10, EARLY TERTIARY (Subathu Formation), Jamtah Road Section, Sirmaur District, Himachal Pradesh.
- Microthyriacites sp.** Rao 2004: 124, pl 2, fig 7, MIOCENE (Sindhudurg Formation), Kalviwadi, Sindhudurg District, Maharashtra.
- MONOPORISPORITES** van der Hammen, **INCERTAE-SEDIS.**
- Monoporisporites hammenii** Samant & Tapaswi 2000: 28, fig 2.5, EARLY EOCENE (Cambay Shale), Cambay Basin, Gujarat.

- Monoporisorites keralensis** Ramanujam & Rao. Samant 2000: 16, EARLY EOCENE (Kharsalia Clay Formation), near Bhavnagar, Cambay Basin, Gujarat.
- Monoporisorites koenigii** Elsik. Samant & Tapaswi 2000: 29, fig 2.6, EARLY EOCENE (Cambay Shale), Cambay Basin, Gujarat.
- Monoporisorites stoveri** Elsik. Chakraborty 2004: 116, LATE PALAEOCENE (Lakadong Sandstone), around Bhalukurung, North Cachar Hills, Assam (wrongly spelt as *Monosporisorites stoverii*).
- Monoporisorites sp.** Rajendran et al. 1989: 42, MIOCENE, Padappakkara, Kerala.
- Monoporisorites sp.** Kar 1990a: 178, MIOCENE (Surma and Tipam groups), Rokhia Borehole No. 1, Gojalia Borehole No. 1 and Baramura Borehole No. 2, Tripura.
- Monoporisorites sp.** Kar 1990b: 233, 236, EARLY-MIDDLE OLIGOCENE (Laisong and Jenam formations), Silchar-Haflong Road Section, Assam.
- Monoporisorites sp.** Kar & Bhattacharya 1992: 258, pl 1, fig 21, EARLY EOCENE, Gujra Dam Section and Akri lignite, Kutch District, Gujarat.
- Monoporisorites sp.** Rao 1995: 233, TERTIARY, Alleppey and Cannanore districts, Kerala.
- Monoporisorites sp.** Misra et al. 1996: 95, EARLY MIOCENE (Baghmara Formation), Tura-Dalu Road Section along Bugi River, Garo Hills, Meghalaya.
- Monoporisorites sp.** Mandaokar 2000b: 181, LATE OLIGOCENE (Tikak Parbat Formation), Jeypore Colliery, Dilli-Jeypore Coalfields, Dibrugarh District, Assam.
- Monoporisorites spp.** Mandaokar 2005: 55, LATE OLIGOCENE (Tikak Parbat Formation), Ledo Colliery, Makum Coalfield, Assam.
- MULTICELLAESPORITES** Elsik, **INCERTAE-SEDIS.**
- Multicellaesporites circularis** Samant & Tapaswi 2000: 28, fig 2.11, EARLY EOCENE (Cambay Shale), Cambay Basin, Gujarat.
- Multicellaesporites dilcheri** Samant 2000: 14-15, pl 1, fig 12, EARLY EOCENE (Kharsalia Clay Formation), near Bhavnagar, Cambay Basin, Gujarat.
- Multicellaesporites ellipticus** Sheffy & Dilcher. Tripathi et al. 2000: 243, EARLY EOCENE (Tura Formation), Tura-Dalu Road, West Garo Hills District, Meghalaya.
- Multicellaesporites elongatus** Samant 2000: 14, pl 1, fig 14, EARLY EOCENE (Kharsalia Clay Formation), near Bhavnagar, Cambay Basin, Gujarat.
- Multicellaesporites elsikii** Kar & Saxena. Saxena & Misra 1990: 265, NEOGENE (Ratnagiri Beds), Amberiwadi Section, Sindhudurg District, Maharashtra; Saxena & Khare 1992: 37, LATE PALAEOCENE-MIDDLE EOCENE, Jayamkondacholapuram Well 12, Tiruchirapalli District, Tamil Nadu; Saxena et al. 1996: 21, PALAEOCENE (Tura Formation), Nongwal Bibra area, East Garo Hills District, Meghalaya; Samant & Phadtare 1997: 67, pl 15, fig 11, EARLY EOCENE (Tarkeshwar Formation), Rajparadi, Cambay Basin, Gujarat; Samant 2000: 16, pl 1, fig 13, EARLY EOCENE (Kharsalia Clay Formation), near Bhavnagar, Cambay Basin, Gujarat; Samant & Tapaswi 2000: 29, EARLY EOCENE (Cambay Shale), Cambay Basin, Gujarat; Saxena 2000: 163, pl 2, fig 12, MIOCENE (Sindhudurg Formation), Mavli Mine at Redi, Sindhudurg District, Maharashtra; Tripathi et al. 2000: 243, EARLY EOCENE (Tura Formation), Tura-Dalu Road, West Garo Hills District, Meghalaya.
- Multicellaesporites elsikii** (Ramanujam & Srisailam) Kumar 1990: 23, MIOCENE (Quilon Beds), clay mine section near Kanjantheria House, Padappakkara, Quilon District, Kerala (Junior

- homonym of *Multicellaesporites elsikii* Kar & Saxena 1976).
- Multicellular phragmospore? Rao 1959: 45, pl 1, fig 14.
- ?*Multicellaesporites* sp. Ramanujam & Rao 1978: 296-297, pl 1, fig 20, MIOCENE, Kerala.
- Staphlosporonites elsikii* Ramanujam & Srisailam 1980: 122, pl 1, figs 6-7, MIOCENE (Warkalli Beds), Cannanore District, Kerala.
- Multicellaesporites indicus** Kumar 1990: 23, pl 1, fig 14, text-fig 15, MIOCENE (Quilon Beds), clay mine section near Kanjantheria House, Padappakkara, Quilon District, Kerala.
- Multicellaesporites nortonii** Elsik. Rajendran et al. 1989: 42, 43, 44, MIOCENE, Varkala, Edavai, Paravur, Cannanore, Kerala; Kar 1990a: 178, MIOCENE (Surma and Tipam groups), Rokhia Borehole No. 1, Gojalia Borehole No. 1 and Baramura Borehole No. 2, Tripura; Mandaokar 2000a: 320, EARLY MIOCENE (Bhuban Formation), Ramrikawn near Chandmari, Aizawl District, Mizoram; Mandaokar 2000b: 181, LATE OLIGOCENE (Tikak Parbat Formation), Jeypore Colliery, Dilli-Jeypore Coalfields, Dibrugarh District, Assam; Mandaokar 2003: 187, EARLY MIOCENE (Middle Bhuban Formation), Lawngtlai, Chhimtuipui District, Mizoram; Mandaokar 2004: 146, LATE MIOCENE (Upper Bhuban Formation), Champhai area, Eastern Mizo Hills, Mizoram.
- Multicellaesporites planus* in Rajendran et al. 1989: 41, MIOCENE, Thonnakkal, Kerala. *Nomen nudum*.
- Multicellaesporites reticulates** Samant & Tapaswi 2000: 28, fig 2.10, EARLY EOCENE (Cambay Shale), Cambay Basin, Gujarat.
- ?*Multicellaesporites* sp. Ramanujam & Rao = **Multicellaesporites elsikii** (Ramanujam & Srisailam) Kumar (non Kar & Saxena 1976).
- Multicellaesporites sp.** Kar 1990a: 178, MIOCENE (Surma and Tipam groups), Rokhia Borehole No. 1, Gojalia Borehole No. 1 and Baramura Borehole No. 2, Tripura.
- Multicellaesporites sp.** Kar 1990b: 236, MIDDLE OLIGOCENE (Jenam Formation), Silchar-Haflong Road Section, Assam.
- Multicellaesporites sp.** Banerjee & Nandi 1992: 84, pl 1, fig 8, MIOCENE (Bhuban, Bokabil and Tipam Sandstone formations), Rengte Anticline near Kolasib, Aizawl District, Mizoram.
- Multicellaesporites sp. 1.** Saxena & Khare 1992: 38, pl 1, fig 9, LATE PALAEOCENE-MIDDLE EOCENE, Jayamkondacholapuram Well 12, Tiruchirapalli District, Tamil Nadu.
- Multicellaesporites sp. 2.** Saxena & Khare 1992: 38, pl 1, fig 10, LATE PALAEOCENE-MIDDLE EOCENE, Jayamkondacholapuram Well 12, Tiruchirapalli District, Tamil Nadu.
- Multicellaesporites sp.** Singh & Sarkar 1992: 185, ?LATE PALAEOCENE-EOCENE (Subathu Formation), Garkhal, Solan District, Himachal Pradesh.
- Multicellaesporites sp.** Hait & Banerjee 1994: 119, pl 4, fig 67, EARLY MIOCENE, near Suangpuilawn village about 20 km northeast of Aizawl, Mizoram.
- Multicellaesporites sp.** Sarkar et al. 1994: 201, LATE MIOCENE (Middle Siwalik), Bagh Rao, Dehradun District, Uttaranchal.
- Multicellaesporites sp.** Singh & Sarkar 1994: 52, pl 1, fig 24, EARLY MIOCENE (Kasauli Formation), Kasauli, Solan District, Himachal Pradesh.
- Multicellaesporites sp.** Saxena & Rao 1996: 46, pl 3, fig 12, EARLY MIOCENE (Boldamgiri Formation), Adugiri-Purakhasia Road near Boldamgiri, West Garo Hills District, Meghalaya.
- Multicellaesporites sp.** Sarkar 1997: 107, pl 2, fig 12, EOCENE (Subathu Formation), 20 km

southeast of Bilaspur on Shimla-Bilaspur Highway, Bilaspur District, Himachal Pradesh.

Multicellaesporites sp. Rao & Nair 1998: 52, MIOCENE, Kannanellur-Kundra Road area, Quilon District, Kerala.

Multicellaesporites sp. Samant 2000: 15, pl 1, fig 15, EARLY EOCENE (Kharsalia Clay Formation), near Bhavnagar, Cambay Basin, Gujarat.

Multicellaesporites sp. Sarkar & Prasad 2000a: 171, LATE YPRESIAN-MIDDLE LUTETIAN (Subathu Formation), Koshalia Nala Section near Koti, Shimla Hills, Solan District, Himachal Pradesh.

Multicellaesporites sp. Sarkar & Prasad 2000b: 147, LATE YPRESIAN-MIDDLE LUTETIAN (Subathu Formation), west bank of Ghaggar river near Kharak village, Morni Hills, Haryana.

Multicellaesporites sp. A. Rao 2004: 126, pl 3, fig 4, MIOCENE (Sindhurg Formation), Kalviwadi, Sindhurg District, Maharashtra.

Multicellaesporites sp. B. Rao 2004: 126, pl 2, fig 5, MIOCENE (Sindhurg Formation), Kalviwadi, Sindhurg District, Maharashtra.

Multicellaesporites type. Banerjee & Nandi 1992: 87, pl 1, fig 23, MIOCENE (Bhuban, Bokabil and Tipam Sandstone formations), Rengte Anticline near Kolasib, Aizawl District, Mizoram.

Multicellular phragmospore Rao = **Multicellaesporites elsikii** (Ramanujam & Srisailam) Kumar (non Kar & Saxena 1976).

NETOTHYRITES Misra et al.,
MICROTHYRIACEAE.

Netothyrites palaeocenicus Misra et al. 1996: 19, pl 1, figs 14-15, text-fig 1B, PALAEOCENE, Boreholes EM-A, SM-79-A, B-66-A, B-163-A in Bombay Offshore, Boreholes Palakollu-Am, Modi-A, Razole-A, Elamanchalli-A, Peddapelam-A in Krishna-Godavari Basin and Boreholes An-42-A in Andaman Basin.

Netothyrites vertistriatus Misra et al. 1996: 18-19, pl 1, figs 1-13, text-fig 1A, PALAEOCENE, Boreholes EM-A, SM-79-A, B-66-A, B-163-A in Bombay Offshore, Boreholes Palakollu-Am, Modi-A, Razole-A, Elamanchalli-A, Peddapelam-A in Krishna-Godavari Basin and Boreholes An-42-A in Andaman Basin.

NOTOTHYRITES Cookson, **MICROTHYRIACEAE.**

Notothyrites amorphus Kar & Saxena = **Trichothyrites amorphus** (Kar & Saxena) Saxena & Misra.

Notothyrites padappakkarensis Jain & Gupta = **Trichothyrites padappakkarensis** (Jain & Gupta) Reddy et al.

Notothyrites setiferus Cookson = **Trichothyrites setiferus** (Cookson) Saxena & Misra.

Notothyrites sp. 1. Gupta 1994: 248, 250, fig 1, EARLY TERTIARY (Subathu Formation), Jamtah Road Section, Sirmaur District, Himachal Pradesh.

Notothyrites sp. 2. Gupta 1994: 250, fig 2, EARLY TERTIARY (Subathu Formation), Jamtah Road Section, Sirmaur District, Himachal Pradesh.

Notothyrites sp. Kumar et al. 2001: 244, OLIGOCENE (Barail Group), Tinali Well-7, Upper Assam.

Notothyrites sp. Mandal et al. 2003: 104, EOCENE (Baratang Formation), Baratang Island, Andaman and Nicobar Islands.

ORNASPORONITES Ramanujam & Rao,
INCERTAE-SEDIS.

Ornasporonites inaequalis Ramanujam & Rao. Saxena 2000: 163, MIOCENE (Sindhurg Formation), Mavli Mine at Redi, Sindhurg District, Maharashtra.

PALAEOAMPHISPHERELLA Ramanujam & Srisailam, **INCERTAE-SEDIS.**

- Palaeoamphisphaerella keralensis** Ramanujam & Srisailam. Malleshram et al. 1989: 15, pl 1, fig 9, MIOCENE, Godavari-Krishna Basin, Andhra Pradesh and Palk Bay area in Cauvery Basin, Tamil Nadu; Rao et al. 1995: 374, EARLY MIOCENE, Borewell at Kulasekharamangalam, Kottayam District, Kerala.
- Palaeoamphisphaerella pirozynskii** Ramanujam & Srisailam. Malleshram et al. 1989: 15, MIOCENE, Godavari-Krishna Basin, Andhra Pradesh and Palk Bay area in Cauvery Basin, Tamil Nadu.
- Palaeoamphisphaerella sp.** Banerjee & Nandi 1992: 84, pl 1, fig 7, MIOCENE (Bhuban and Bokabil formations), Rengte Anticline near Kolasib, Aizawl District, Mizoram.
- Palaeoamphisphaerella sp.** Banerjee & Nandi 1994: 216, pl 1, fig 27, EARLY-MIDDLE MIOCENE (Middle Bhuban Formation), near Kolasib, Aizawl District, Mizoram.
- PALAEOCERCOSPORA** Mitra & Banerjee, **DEMATIACEAE.**
- Palaeocercospora siwalikensis** Mitra & Banerjee 2000: 8, figs 1-5, text-fig 2, MIDDLE MIOCENE (Geabdat Sandstone Formation), NH 31 Road Section, Darjeeling Foothills, Eastern Himalaya.
- PALAEOCOLLETOTRICHUM** Mitra & Banerjee, **MELANCONIACEAE.**
- Palaeocolletotrichum graminoides** Mitra & Banerjee 2000: 10, figs 6-9, text-fig 3, MIDDLE MIOCENE (Geabdat Sandstone Formation), NH 31 Road Section, Darjeeling Foothills, Eastern Himalaya.
- PALAEOCIRRENALIA** Ramanujam & Srisailam, **INCERTAE-SEDIS.**
- Palaeocirrenalia elegans** Ramanujam & Srisailam. Malleshram et al. 1989: 15, pl 1, figs 10-12, MIOCENE, Godavari-Krishna Basin, Andhra Pradesh and Palk Bay area in Cauvery Basin, Tamil Nadu; Rao et al. 1995: 374, fig 4, EARLY MIOCENE, Borewell at Kulasekharamangalam, Kottayam District, Kerala; Rao 1995: 233, TERTIARY, Alleppey and Cannanore districts, Kerala; Samant & Phadtare 1997: 68, pl 15, fig 13, EARLY EOCENE (Tarkeshwar Formation), Rajparadi, Cambay Basin, Gujarat; Samant 2000: 16, pl 1, fig 27, EARLY EOCENE (Kharsalia Clay Formation), near Bhavnagar, Cambay Basin, Gujarat; Samant & Tapaswi 2000: 29, EARLY EOCENE (Cambay Shale), Cambay Basin, Gujarat.
- Palaeocirrenalia miocenica* in Rao & Nair 1998: 52, MIOCENE, Kannanellur-Kundra Road area, Quilon District, Kerala. *Nomen nudum.*
- ?Palaeocirrenalia sp.** Banerjee & Nandi 1992: 84, pl 1, fig 13, MIOCENE (Bhuban and Bokabil formations), Rengte Anticline near Kolasib, Aizawl District, Mizoram.
- Palaeocirrenalia sp.** Rao 2004: 126, pl 1, fig 13, MIOCENE (Sindhudurg Formation), Kalviwadi, Sindhudurg District, Maharashtra.
- Palaeocirrenalia type.** Banerjee & Nandi 1992: 87, pl 1, fig 22, MIOCENE (Bhuban and Bokabil formations), Rengte Anticline near Kolasib, Aizawl District, Mizoram.
- PAPULOSPORONITES** ?Author, **INCERTAE-SEDIS.**
- Papulosporonites sp.** Banerjee & Nandi 1992: 84, MIOCENE (Bhuban Formation), Rengte Anticline near Kolasib, Aizawl District, Mizoram.
- PARAMICROTHALLITES** Jain & Gupta, **MICROTHYRIACEAE.**
- Paramicrothallites konkanensis** Saxena & Misra 1990: 270, pl 2, fig 9, NEOGENE (Ratnagiri Beds), Amberiwadi Section, Sindhudurg District, Maharashtra.
- Paramicrothallites menonii** Jain & Gupta. Rao 1995: 233, pl 1, fig 2, TERTIARY, Alleppey and Cannanore districts, Kerala.
- Paramicrothallites sp.** Tripathi 1989: 73, pl 3, fig 7, LATE EOCENE (Kopili Formation), Jowai-

Sonapur Road Section, Jaintia Hills District, Meghalaya.

Paramicrothallites sp. Chandra & Kumar 1998: 56, pl 1, fig 16, pl 3, fig 7, LATE TERTIARY, Site 218, Deep Sea Drilling Project Leg 22, Bengal Fan, Indian Ocean.

PARMATHYRITES Jain & Gupta, **MICROTHYRIACEAE.**

Parmathyrites indicus Jain & Gupta. Malleshram et al. 1989: 15, pl 1, fig 4, MIOCENE, Godavari-Krishna Basin, Andhra Pradesh and Palk Bay area in Cauvery Basin, Tamil Nadu; Rajendran et al. 1989: 42, pl 1, figs 7, 16, pl 2 fig 22, MIOCENE, Padappakkara, Kerala; Kar 1990b: 232, pl 2, fig 19, PALAEOCENE-EOCENE (Disang Formation), Silchar-Haflong Road Section, Assam; Kumaran et al. 1995: 1024, fig 3m, MIOCENE (Warkalli Formation), Bharathi and Kundra Clay Mines, Kerala; Rao 1995: 233, pl 1, fig 3, TERTIARY, Alleppey and Cannanore districts, Kerala; Rao 1996: 156, EARLY MIOCENE, Turavur Borehole near Panchayat L.P. School, west of N.H. 47 between 380 and 381 km, Alleppey District, Kerala; Chandra & Kumar 1998: 62, pl 1, fig 17, LATE TERTIARY, Site 218, Deep Sea Drilling Project Leg 22, Bengal Fan, Indian Ocean; Rao & Nair 1998: 52, MIOCENE, Kannanellur-Kundra Road area, Quilon District, Kerala; Rao 2000: 295, OLIGOCENE (Kherapara Formation), Tura-Dalu Road Section near Kherapara, West Garo Hills District, Meghalaya; Saxena & Sarkar 2000: 257, pl 1, figs 3, MIDDLE EOCENE (Siju Formation), Simsang River Section near Siju, South Garo Hills District, Meghalaya; Mandaokar 2002b: 21, pl 2, fig 16, LATE OLIGOCENE (Tikak Parbat Formation), Borjan Coalfield, Nagaland; Rao 2004: 124, MIOCENE (Sindhudurg Formation), Kalviwadi, Sindhudurg District, Maharashtra.

Parmathyrites ramanujamii Singh et al. Saxena & Misra 1990: 265, NEOGENE (Ratnagiri Beds), Amberiwadi Section, Sindhudurg District, Maharashtra; Rao 1995: 233-234, pl 1, fig 9, TERTIARY, Alleppey and Cannanore districts, Kerala; Saxena & Rao 1996: 46, EARLY MIOCENE (Boldamgiri Formation), Aduhgiri-

Purakhasia Road near Boldamgiri, West Garo Hills District, Meghalaya; Rao & Nair 1998: 52, MIOCENE, Kannanellur-Kundra Road area, Quilon District, Kerala; Mandaokar 2000a: 320, EARLY MIOCENE (Bhuban Formation), Ramrikawn near Chandmari, Aizawl District, Mizoram; Rao 2000: 295, OLIGOCENE (Kherapara Formation), Tura-Dalu Road Section near Kherapara, West Garo Hills District, Meghalaya; Mandaokar 2002b: 21, LATE OLIGOCENE (Tikak Parbat Formation), Borjan Coalfield, Nagaland; Rao 2004: 124, pl 2, fig 8, MIOCENE (Sindhudurg Formation), Kalviwadi, Sindhudurg District, Maharashtra.

Parmathyrites robustus Jain & Kar. Rajendran et al. 1989: 41, 43, 44, pl 1, fig 1, MIOCENE, Thonnakkal, Kundra, Edavai, Paravur, Cannanore, Palayangadi, Kerala; Kar 1990a: 179, MIOCENE (Surma and Tipam groups), Rokhia Borehole No. 1, Gojalia Borehole No. 1 and Baramura Borehole No. 2, Tripura; Kar & Bhattacharya 1992: 251, EARLY EOCENE, Rajparddi lignite, Bharuch District, Gujarat.

Parmathyrites turaensis Kar et al. Mandaokar 2005: 55, LATE OLIGOCENE (Tikak Parbat Formation), Ledo Colliery, Makum Coalfield, Assam. (wrongly spelt as *Phragmothyrites turaensis*)

Parmathyrites sp. Saxena & Misra 1990: 265, pl 3, fig 17, NEOGENE (Ratnagiri Beds), Amberiwadi Section, Sindhudurg District, Maharashtra.

Parmathyrites sp. Gupta 1994: 251-252, fig 4, EARLY TERTIARY (Subathu Formation), Jamtah Road Section, Sirmaur District, Himachal Pradesh.

Parmathyrites Jain & Gupta. Ramanujam et al. 1991: 54, EARLY MIOCENE, Pattanakad Borewell, Alleppey District, Kerala.

PERICONIA Tode ex Fries, **HYPHOMYCETES.**

Periconia Tode ex Fries. Sarkar & Singh 1994: 100, MIOCENE (Kundlu and Nalagarh formations),

Kundlu and Ramshahr, Solan District, Himachal Pradesh (wrongly spelt as *Pereconia*).

PHRAGMOTHYRITES Edwards, **MICROTHYRIACEAE**.

Phragmothyrites assamicus (Kar et al.) Saxena et al. Saxena & Misra 1990: 265, NEOGENE (Ratnagiri Beds), Amberiwadi Section, Sindhudurg District, Maharashtra; Saxena & Khare 1992: 37, LATE PALAEOCENE-MIDDLE EOCENE, Jayamkondacholapuram Well 12, Tiruchirapalli District, Tamil Nadu; Saxena 2000: 163, MIOCENE (Sindhudurg Formation), Mavli Mine at Redi, Sindhudurg District, Maharashtra.

Phragmothyrites edwardsii (Rao) Kar et al. Saxena & Misra 1990: 265, NEOGENE (Ratnagiri Beds), Amberiwadi Section, Sindhudurg District, Maharashtra; Saxena 2000: 163, pl 2, fig 16, MIOCENE (Sindhudurg Formation), Mavli Mine at Redi, Sindhudurg District, Maharashtra.

Phragmothyrites eoacaenica Edwards. Rajendran et al. 1989: 41, 42, 43, 44, pl 1, fig 6, pl 2, fig 39, MIOCENE, Thonnakkal, Kundra, Padappakkara, Varkala, Edavai, Paravur, Cannanore, Palayangadi, Kerala; Tripathi 1989: 72, pl 2, fig 14, pl 3, fig 13, PALAEOCENE-EOCENE (Theria and Kopili formations), Jowai-Sonapur Road Section, Jaintia Hills District, Meghalaya; Kar 1990a: 179, pl 8, fig 119, MIOCENE (Surma and Tipam groups), Rokhia Borehole No. 1, Gojalia Borehole No. 1 and Baramura Borehole No. 2, Tripura; Kar 1990b: 232, 233, 236, 238, 240, pl 1, fig 13, pl 2, figs 7, 11, PALAEOCENE-EARLY MIOCENE (Disang, Laisong, Jenam, Renji and Bhuban formations), Silchar-Haflong Road Section, Assam; Saxena & Misra 1990: 265, NEOGENE (Ratnagiri Beds), Amberiwadi Section, Sindhudurg District, Maharashtra; Mandaokar 1991: 26, EARLY MIOCENE, north of Maibong Railway Station, North Cachar Hills District, Assam; Kar & Bhattacharya 1992: 251, EARLY EOCENE, Rajpardi lignite, Bharuch District, Gujarat; Saxena & Khare 1992: 37, LATE PALAEOCENE-MIDDLE EOCENE, Jayamkondacholapuram Well 12, Tiruchirapalli District, Tamil Nadu; Ambwani 1993: 153, PALAEOCENE-EARLY EOCENE, Rekmangiri Coalfield, Garo Hills, Meghalaya; Kar

et al. 1994: 187, TERTIARY, subsurface sediments in Upper Assam; Sarkar et al. 1994: 201, LATE MIOCENE (Middle Siwalik), Bagh Rao, Dehradun District, Uttaranchal; Singh & Sarkar 1994: 52, pl 1, fig 25, EARLY MIOCENE (Kasauli Formation), Kasauli, Solan District, Himachal Pradesh; Kumaran et al. 1995: 1024, MIOCENE (Warkalli Formation), Bharathi and Kundra Clay Mines, Kerala; Rao 1995: 233, pl 1, fig 1, TERTIARY, Alleppey and Cannanore districts, Kerala; Tripathi 1995: 47, PALAEOCENE-EOCENE, subsurface sediments near Kapurdi, Barmer District, Rajasthan; Kumar 1996: 114, EARLY EOCENE (Tarkeshwar Formation), Rajpardi, Bharuch District, Gujarat; Mandal et al. 1996: 80, age not mentioned, mud volcano in Baratang Island, Andaman and Nicobar Islands; Rao 1996: 156, EARLY MIOCENE, Turavur Borehole near Panchayat L.P. School, west of N.H. 47 between 380 and 381 km, Alleppey District, Kerala; Saxena & Rao 1996: 46, EARLY MIOCENE (Boldamgiri Formation), Adugiri-Purakhasia Road near Boldamgiri, West Garo Hills District, Meghalaya; Samant & Phadtare 1997: 68, pl 14, fig 17, EARLY EOCENE (Tarkeshwar Formation), Rajpardi, Cambay Basin, Gujarat; Sarkar 1997: 102, 104, 108, EOCENE (Subathu Formation), 20 km southeast of Bilaspur on Shimla-Bilaspur Highway, Bilaspur District, Himachal Pradesh; Chandra & Kumar 1998: 56, pl 3, fig 5, LATE TERTIARY, Site 218, Deep Sea Drilling Project Leg 22, Bengal Fan, Indian Ocean; Rao & Nair 1998: 52, pl 1, fig 24, MIOCENE, Kannanellur-Kundra Road area, Quilon District, Kerala; Mandaokar 1999: 241, LATE EOCENE (Disang Group), Tirap River Section, Tinsukia District, Assam; Mandaokar 2000a: 320, EARLY MIOCENE (Bhuban Formation), Ramrikawn near Chandmari, Aizawl District, Mizoram; Mandaokar 2000b: 181, LATE OLIGOCENE (Tikak Parbat Formation), Jeypore Colliery, Dilli-Jeypore Coalfields, Dibrugarh District, Assam; Mandaokar 2000c: 38, pl 1, fig 9, LATE OLIGOCENE (Tikak Parbat Formation), Namchik River Section, Changlang District, Arunachal Pradesh; Rao 2000: 295, OLIGOCENE (Kherapara Formation), Tura-Dalu Road Section near Kherapara, West Garo Hills District, Meghalaya; Samant 2000: 16, pl 1, fig 20, EARLY EOCENE (Kharsalia Clay Forma-

- tion), near Bhavnagar, Cambay Basin, Gujarat; Samant & Tapaswi 2000: 29, fig 2.14, EARLY EOCENE (Cambay Shale), Cambay Basin, Gujarat; Sarkar & Prasad 2000a: 171, LATE YPRESIAN-MIDDLE LUTETIAN (Subathu Formation), Koshalia Nala Section near Koti, Shimla Hills, Solan District, Himachal Pradesh; Sarkar & Prasad 2000b: 147, LATE YPRESIAN-MIDDLE LUTETIAN (Subathu Formation), west bank of Ghaggar river near Kharak village, Morni Hills, Haryana; Saxena 2000: 163, pl 2, fig 13, MIOCENE (Sindhudurg Formation), Mavli Mine at Redi, Sindhudurg District, Maharashtra; Saxena & Sarkar 2000: 257, MIDDLE EOCENE (Siju Formation), Simsang River Section near Siju, South Garo Hills District, Meghalaya; Tripathi et al. 2000: 243, EARLY EOCENE (Tura Formation), Tura-Dalu Road, West Garo Hills District, Meghalaya; Kumar et al. 2001: 244, OLIGOCENE (Barail Group), Tinali Well-7, Upper Assam; Singh & Kar 2002: 214, pl 1, fig 9, PALAEOCENE (Deccan Intertrappean Beds), 3 km northeast of Papro village, Latitpur District, Uttar Pradesh; Mandaokar 2002a: 116, EARLY MIOCENE (Dulte Formation), 2 km from Dulte village on Dulte-Keifang Road, Aizawl District, Mizoram; Mandaokar 2002b: 21, LATE OLIGOCENE (Tikak Parbat Formation), Borjan Coalfield, Nagaland; Mandal et al. 2003: 102, 104, EOCENE (Baratang Formation), Baratang Island, Andaman and Nicobar Islands; Singh & Kar 2003: 219, pl 2, fig 5, PALAEOCENE (Deccan Intertrappean Beds), northeast of Papro, Lalitpur District, Uttar Pradesh; Chakraborty 2004: 116, LATE PALAEOCENE (Lakadong Sandstone), around Bhalukurung, North Cachar Hills, Assam; Rao 2004: 124, pl 3, fig 14, MIOCENE (Sindhudurg Formation), Kalviwadi, Sindhudurg District, Maharashtra; Mandaokar 2005: 55, LATE OLIGOCENE (Tikak Parbat Formation), Ledo Colliery, Makum Coalfield, Assam.
- Phragmothyrites cf. P. eocaenica** Edwards. Handique et al. 1992: 219, MIOCENE (Surma and Tipam groups), Moran Oilfield, Upper Assam.
- Phragmothyrites sp. cf. P. eocaenica** Edwards. Gupta 1994: 254, fig 7, EARLY TERTIARY (Dagshai Formation), Jamtah Road Section, Sirmaur District, Himachal Pradesh.
- Phragmothyrites ramanujamii** Samant 2000: 15, pl 1, fig 21, EARLY EOCENE (Kharsalia Clay Formation), near Bhavnagar, Cambay Basin, Gujarat.
- Phragmothyrites serratus** Saxena & Khare 1992: 39-40, pl 1, fig 5, LATE PALAEOCENE-MIDDLE EOCENE, Jayamkondacholapuram Well 12, Tiruchirapalli District, Tamil Nadu.
- Phragmothyrites suratensis** Samant & Tapaswi 2000: 29, fig 2.15, EARLY EOCENE (Cambay Shale), Cambay Basin, Gujarat.
- Phragmothyrites sp.** Tripathi 1989: 72-73, pl 3, fig 2, LATE EOCENE (Kopili Formation), Jowai-Sonapur Road Section, Jaintia Hills District, Meghalaya.
- Phragmothyrites sp.** Salujha et al. 1991: 67, pl 2, fig 70, NEOGENE, Adamtila Well-A, Cachar District, Assam.
- Phragmothyrites sp. 1.** Gupta 1994: 252, 254, fig 5, EARLY TERTIARY (Subathu Formation), Dadahu Road Section, Sirmaur District, Himachal Pradesh.
- Phragmothyrites sp. 2.** Gupta 1994: 254, fig 6, EARLY TERTIARY (Subathu Formation), Jamtah Road Section, Sirmaur District, Himachal Pradesh.
- ?Phragmothyrites sp.** Gupta 1994: 254-255, fig 8, EARLY TERTIARY (Subathu Formation), Jamtah Road Section, Sirmaur District, Himachal Pradesh.
- Phragmothyrites sp.** Tripathi et al. 1999: 112, pl 2, fig 3, EOCENE, Barsingshar, Bikaner District, Rajasthan.
- Phragmothyrites sp.** Singh & Kar 2003: 221, pl 2, fig 10, PALAEOCENE (Deccan Intertrappean Beds), northeast of Papro, Lalitpur District, Uttar Pradesh.

- Phragmothyrites sp.** Rao 2004: 124, pl 2, fig 6, MIOCENE (Sindhudurg Formation), Kalviwadi, Sindhudurg District, Maharashtra.
- Phragmothyrites** Edwards. Srivastava & Bhattacharyya 2000: 375, EARLY TERTIARY, Kimin-Ziro Road Section, Lower Subansiri District, near Rilu village, West Siang District and Pasighat to Rengging Section, East Siang District, Arunachal Pradesh.
- PLEOSPORA** Rabenhorst ex Cesati & De Notaris, **PYRENOMYCETES.**
- Pleospora sp.** Mallesham et al. 1989: 16, pl 1, fig 14, MIOCENE, Godavari-Krishna Basin, Andhra Pradesh and Palk Bay area in Cauvery Basin, Tamil Nadu.
- Pleospora sp.** Banerjee & Nandi 1992: 84, pl 1, fig 6, MIOCENE (Bhuban and Bokabil formations), Rengte Anticline near Kolasib, Aizawl District, Mizoram.
- Pleospora sp.** Banerjee & Nandi 1994: 216, pl 1, fig 33, EARLY-MIDDLE MIOCENE (Middle Bhuban Formation), near Kolasib, Aizawl District, Mizoram.
- PLEUROPHRAGMIUM** Costantin, **HYPHOMYCETES.**
- Pleurophragmium** Costantin. Sarkar & Singh 1994: 100, MIOCENE (Kundlu and Nalagarh formations), Kundlu and Ramshahr, Solan District, Himachal Pradesh.
- PLOCHMOPELTINITES** Cookson, **MICROPELTACEAE.**
- Plochmopeltinites cooksoniae** Ramanujam & Rao. Singh & Kar 2003: 219, pl 2, fig 7, PALAEOCENE (Deccan Intertrappean Beds), northeast of Papro, Lalitpur District, Uttar Pradesh.
- PLURICELLAESPORITES** van der Hammen, **INCERTAE-SEDIS.**
- Pluricellaesporites alleppeyensis** Ramanujam & Rao. Mallesham et al. 1989: 15, pl 1, fig 19, MIOCENE, Godavari-Krishna Basin, Andhra Pradesh and Palk Bay area in Cauvery Basin, Tamil Nadu.
- Pluricellaesporites catenatus** Ramanujam & Rao. Mandaokar 1993: 139, LATE OLIGOCENE (Tikak Parbat Formation), Dangri Kumari Colliery, Dibrugarh District, Assam.
- Pluricellaesporites ellipticus** Mathur & Mathur. Kar et al. 1994: 187, TERTIARY, subsurface sediments in Upper Assam; Mandaokar 2000c: 38, LATE OLIGOCENE (Tikak Parbat Formation), Namchik River Section, Changlang District, Arunachal Pradesh.
- Pluricellaesporites elsikii** Samant & Tapaswi 2000: 28-29, fig 2.12, EARLY EOCENE (Cambay Shale), Cambay Basin, Gujarat.
- Pluricellaesporites eocenicus** Samant & Tapaswi 2000: 28, fig 2.7, EARLY EOCENE (Cambay Shale), Cambay Basin, Gujarat.
- Pluricellaesporites globatus** Samant 2000: 15, pl 1, figs 22-23, EARLY EOCENE (Kharsalia Clay Formation), near Bhavnagar, Cambay Basin, Gujarat.
- Pluricellaesporites hillsei** Elsik. Chakraborty 2004: 116, LATE PALAEOCENE (Lakadong Sandstone), around Bhalukurung, North Cachar Hills, Assam.
- Pluricellaesporites meghalayensis* in Chakraborty 2004: 116, pl 1, fig 17, LATE PALAEOCENE (Lakadong Sandstone), around Bhalukurung, North Cachar Hills, Assam. *Nomen Nudum.*
- Pluricellaesporites planus** Trivedi & Varma. Rajendran et al. 1989: 42, 43, 44, MIOCENE, Padappakkara, Varkala, Edavai, Paravur, Cannanore, Kerala; Kar 1990a: 178, pl 8, figs 122-123, MIOCENE (Surma and Tipam groups), Rokhia Borehole No. 1, Gojalia Borehole No. 1 and Baramura Borehole No. 2, Tripura; Kar & Bhattacharya 1992: 251, EARLY EOCENE,

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- Rajpardi lignite, Bharuch District, Gujarat; Ambwani 1993: 153, PALAEOCENE-EARLY EOCENE, Rekmangiri Coalfield, Garo Hills, Meghalaya; Saxena et al. 1996: 21, PALAEOCENE (Tura Formation), Nongwal Bibra area, East Garo Hills District, Meghalaya; Mandaokar 2000b: 181, LATE OLIGOCENE (Tikak Parbat Formation), Jeypore Colliery, Dilli-Jeypore Coalfields, Dibrugarh District, Assam; Tripathi et al. 2003: 90, LATE PALAEOCENE (Akli Formation), Barmer Basin, Rajasthan; Chakraborty 2004: 116, LATE PALAEOCENE (Lakadong Sandstone), around Bhalukurung, North Cachar Hills, Assam.
- Pluricellaesporites psilatus** Clarke. Tripathi 1989: 73, pl 3, fig 3, PALAEOCENE (Therria Formation), Jowai-Sonapur Road Section, Jaintia Hills District, Meghalaya; Sarkar & Singh 1994: 100, MIOCENE (Kundlu and Nalagarh formations), Kundlu and Ramshahr, Solan District, Himachal Pradesh; Samant 2000: 16, pl 1, fig 16, EARLY EOCENE (Kharsalia Clay Formation), near Bhavnagar, Cambay Basin, Gujarat; Saxena 2000: 163, pl 2, fig 22, MIOCENE (Sindhudurg Formation), Mavli Mine at Redi, Sindhudurg District, Maharashtra.
- Pluricellaesporites tamilensis** Saxena & Khare 1992: 39, pl 1, fig 16, LATE PALAEOCENE-MIDDLE EOCENE, Jayamkondacholapuram Well 12, Tiruchirappalli District, Tamil Nadu.
- Pluricellaesporites typicus** van der Hammen. Chandra & Kumar 1998: 62, pl 1, fig 8, LATE TERTIARY, Site 218, Deep Sea Drilling Project Leg 22, Bengal Fan, Indian Ocean.
- Pluricellaesporites sp.** Rajendran et al. 1989: 41, MIOCENE, Thonnakkal, Kerala.
- Pluricellaesporites sp.** Kar 1990a: 178, MIOCENE (Surma and Tipam groups), Rokhia Borehole No. 1, Gojalia Borehole No. 1 and Baramura Borehole No. 2, Tripura.
- Pluricellaesporites sp.** Kar 1990b: 236, 238, MIDDLE-LATE OLIGOCENE (Jenam and Renji formations), Silchar-Haflong Road Section, Assam.
- Pluricellaesporites sp.** Banerjee & Nandi 1992: 84, pl 1, fig 4, MIOCENE (Bhuban, Bokabil and Tipam Sandstone formations), Rengte Anticline near Kolasib, Aizawl District, Mizoram.
- Pluricellaesporites sp.** Mandaokar 1993: 139, LATE OLIGOCENE (Tikak Parbat Formation), Dangri Kumari Colliery, Dibrugarh District, Assam.
- Pluricellaesporites sp.** Misra et al. 1996: 95, EARLY MIOCENE (Baghmara Formation), Tura-Dalu Road Section along Bugi River, Garo Hills, Meghalaya.
- Pluricellaesporites sp.** Saxena & Rao 1996: 46, EARLY MIOCENE (Boldamgiri Formation), Adugiri-Purakhasia Road near Boldamgiri, West Garo Hills District, Meghalaya.
- Pluricellaesporites sp.** Chandra & Kumar 1998: 60, pl 3, fig 15, LATE TERTIARY, Site 218, Deep Sea Drilling Project Leg 22, Bengal Fan, Indian Ocean.
- Pluricellaesporites sp. A.** Samant 2000: 15, pl 1, fig 17, EARLY EOCENE (Kharsalia Clay Formation), near Bhavnagar, Cambay Basin, Gujarat.
- Pluricellaesporites sp. B.** Samant 2000: 15, pl 1, fig 18, EARLY EOCENE (Kharsalia Clay Formation), near Bhavnagar, Cambay Basin, Gujarat.
- Pluricellaesporites sp.** Gupta et al. 2003: 210, PALAEOCENE-EOCENE, Ganga Basin.
- Pluricellaesporites sp.** Rao 2004: 126, pl 2, figs 3-4, MIOCENE (Sindhudurg Formation), Kalviwadi, Sindhudurg District, Maharashtra.
- POLYADOSPORITES** van der Hammen, **INCERTAE-SEDIS.**
- Polyadosporites nadahensis** Rao & Patnaik 2001: 270, 272, pl 1, figs 14-16, LATE PLIOCENE (Pinjor Formation), Nadah, Panchkula, Haryana.
- Polyadosporites siwalikus** Rao & Patnaik 2001: 272, pl 3, figs 6, 9, LATE PLIOCENE (Pinjor Formation), Nadah, Panchkula, Haryana.

- cf. Polyadosporites sp.** Kumar 1994: 22, pl 3, fig 8, EARLY OLIGOCENE (Laisong Formation), Silchar-Haflong Road Section, Assam. Beds, Mohgaonkalan, Chhindwara District, Madhya Pradesh.
- Polyadosporites sp.** Mitra et al. 2000: 126, pl 1, fig 4, NEOGENE (Siwalik Group), Darjeeling Foothills, Eastern Himalaya.
- POLYCELLAESPORONITES** Chandra et al., **INCERTAE-SEDIS.**
- Polycellaesporonites bellus** Chandra et al. Saxena & Bhattacharyya 1990: 113, OLIGOCENE-EARLY MIOCENE (Dharmsala Group), Churan Khad Section near Dharmsala, Kangra District, Himachal Pradesh.
- PSIDIMOBIOSPORA** Locqvin & Salard-Cheboldaef in Salard-Cheboldaef & Locqvin, **INCERTAE-SEDIS.**
- Psidimobiospora scabratus** Kumar 1990: 22, pl 1, fig 10, text-fig 14, MIOCENE (Quilon Beds), clay mine section near Kanjantheria House, Padappakkara, Quilon District, Kerala.
- RATNAGIRIATHYRITES** Saxena & Misra, **MICROTHYRIACEAE.**
- Ratnagiriathyrites hexagonalis** Saxena & Misra 1990: 270, pl 2, fig 14, pl 3, fig 11, NEOGENE (Ratnagiri Beds), Amberiwadi Section, Sindhudurg District, Maharashtra; Saxena 2000: 163, MIOCENE (Sindhudurg Formation), Mavli Mine at Redi, Sindhudurg District, Maharashtra; Rao 2004: 124, MIOCENE (Sindhudurg Formation), Kalviwadi, Sindhudurg District, Maharashtra.
- Ratnagiriathyrites sp.** Saxena 2000: 163, MIOCENE (Sindhudurg Formation), Mavli Mine at Redi, Sindhudurg District, Maharashtra.
- SCLEROTITES** Massalongo in Massalongo & Scarabelli, **HYPHOMYCETES.**
- Sclerotites chitaleyii** Khubalkar 2003: 293-294, pl 1, figs 1-3, text-fig 1-9, Deccan Intertrappean
- SIWALIKIATHYRITES** Saxena & Singh, **MICROTHYRIACEAE.**
- Siwalikiathyrites ramanujamii** Saxena & Singh. Saxena & Bhattacharyya 1990: 112, pl 2, fig 4, OLIGOCENE-EARLY MIOCENE (Dharmsala Group), Manjhi Khad Section near Dharmsala, Kangra District, Himachal Pradesh.
- Siwalikiathyrites sp.** Rao 2004: 125, pl 1, fig 19, MIOCENE (Sindhudurg Formation), Kalviwadi, Sindhudurg District, Maharashtra.
- SPEGAZZINITES** Felix, **INCERTAE-SEDIS.**
- Spegazzinites indicus** Ramanujam & Srisailam. Mallesham et al. 1989: 16, pl 1, fig 22, MIOCENE, Godavari-Krishna Basin, Andhra Pradesh and Palk Bay area in Cauvery Basin, Tamil Nadu.
- SPINOSPORONITES** Saxena & Khare, **INCERTAE-SEDIS.**
- Spinosporonites indicus** Saxena & Khare 1992: 40, pl 1, figs 18-19, LATE PALAEOCENE-MIDDLE EOCENE, Jayamkondacholapuram Well 12, Tiruchirapalli District, Tamil Nadu.
- SPIROTREMESPORITES** Duenas, **XYLARIACEAE.**
- Spirotremesporites clinatus** Elsik. Nandi et al. 2003: 60, pl 1, figs 7, 12, TERTIARY (Kherapara, Bhuban, Bokabil, Tipam and Dupitila formations), Northeastern India.
- Spirotremesporites ellipticus** Nandi & Banerjee in Nandi et al. 2003: 60, pl 2, fig 9, text-fig 3.8, CRETACEOUS-TERTIARY (Mahadeo, Langpar, Cherra Sandstone, Siju, Bhuban, Bokabil, Tipam and Dupitila formations), Northeastern India.
- Spirotremesporites longiletus** Nandi & Banerjee in Nandi et al. 2003: 60-61, pl 2, figs 10, 17, text-fig 3.7, TERTIARY (Kherapara, Bhuban, Bokabil, Tipam and Dupitila formations), Northeastern India.

- Spirotremesporites miocenicus** Nandi & Banerjee in Nandi et al. 2003: 61, pl 2, figs 8, 13, TERTIARY (Kherapara, Bhuban, Bokabil, Tipam, Dupitila and Dihing formations), Northeastern India. 2000: 257, MIDDLE EOCENE (Siju Formation), Simsang River Section near Siju, South Garo Hills District, Meghalaya.
- Spirotremesporites reniformis** Nandi & Banerjee in Nandi et al. 2003: 61-62, pl 2, figs 4, 6, text-fig 3.9, TERTIARY (Kherapara, Bhuban, Bokabil, Tipam and Dihing formations), Northeastern India.
- Spirotremesporites tertiarus** Nandi et al. in Nandi et al. 2003: 62, pl 2, figs 5, 18, text-fig 3.10, TERTIARY (Kherapara, Bhuban, Bokabil, Tipam and Dihing formations), Northeastern India.
- Spirotremesporites sp.** Banerjee & Nandi 1992: 84, pl 1, fig 2, MIOCENE (Bhuban, Bokabil and Tipam Sandstone formations), Rengte Anticline near Kolasib, Aizawl District, Mizoram.
- Spirotremesporites sp.** Banerjee & Nandi 1994: 216, pl 1, fig 30, EARLY-MIDDLE MIOCENE (Middle Bhuban Formation), near Kolasib, Aizawl District, Mizoram.
- Spore Type B Ramanujam & Rao = **Brachysporisporites tenuis** Kumar.
- STAPHLOSPORONITES** Sheffy & Dilcher, **INCERTAE-SEDIS.**
- Staphlosporonites conoideus** Sheffy & Dilcher. Sarkar & Singh 1994: 100, MIOCENE (Kundlu and Nalagarh formations), Kundlu and Ramshahr, Solan District, Himachal Pradesh; Singh & Sarkar 1994: 52, pl 1, fig 28, EARLY MIOCENE (Kasauli Formation), Kasauli, Solan District, Himachal Pradesh.
- Staphlosporonites elsikii* Ramanujam & Srisailam = **Multicellaesporites elsikii** (Ramanujam & Srisailam) Kumar (non Kar & Saxena 1976).
- Staphlosporonites multicellatus** Saxena & Singh. Singh & Sarkar 1994: 52, EARLY MIOCENE (Kasauli Formation), Kasauli, Solan District, Himachal Pradesh; Saxena & Sarkar 2000: 257, MIDDLE EOCENE (Siju Formation), Simsang River Section near Siju, South Garo Hills District, Meghalaya.
- Staphlosporonites tristriatus** Sheffy & Dilcher. Saxena & Sarkar 2000: 257, MIDDLE EOCENE (Siju Formation), Simsang River Section near Siju, South Garo Hills District, Meghalaya.
- Staphlosporonites sp. 1.** Saxena & Misra 1990: 265, pl 3, fig 14, NEOGENE (Ratnagiri Beds), Amberiwadi Section, Sindhudurg District, Maharashtra.
- Staphlosporonites sp. 2.** Saxena & Misra 1990: 265, pl 3, fig 16, NEOGENE (Ratnagiri Beds), Amberiwadi Section, Sindhudurg District, Maharashtra.
- Staphlosporonites sp.** Srivastava & Bhattacharyya 2000: 375, pl 2, fig 10, EARLY TERTIARY, Kimin-Ziro Road Section, Lower Subansiri District, near Riluvillage, West Siang District and Pasighat to Rengging Section, East Siang District, Arunachal Pradesh.
- STRIADIPORITES** Varma & Rawat, **INCERTAE-SEDIS.**
- Striadiporites sp.** Banerjee & Nandi 1992: 84, pl 1, fig 14, MIOCENE (Bhuban, Formation), Rengte Anticline near Kolasib, Aizawl District, Mizoram.
- TETRACOCOCCOSPORIUM** Szabo, **DEMATIACEAE.**
- Tetracoccosporium sp.** Banerjee & Nandi 1992: 84, pl 1, fig 19, MIOCENE (Bhuban and Bokabil formations), Rengte Anticline near Kolasib, Aizawl District, Mizoram.
- TETRAPLOA** Berkeley & Broome, **DEMATIACEAE.**
- Tetraploa sp.** Malleshram et al. 1989: 16, pl 1, fig 23, MIOCENE, Godavari-Krishna Basin, Andhra Pradesh and Palk Bay area in Cauvery Basin, Tamil Nadu.

Tetraploa sp. A. Kumar 1990: 25, pl 1, fig 24, MIOCENE (Quilon Beds), clay mine section near Kanjantheria House, Padappakkara, Quilon District, Kerala.

Tetraploa sp. B. Kumar 1990: 25, pl 1, fig 26, MIOCENE (Quilon Beds), clay mine section near Kanjantheria House, Padappakkara, Quilon District, Kerala.

Tetraploa Berkeley & Broome. Sarkar & Singh 1994: 99, pl 1, figs 4-5, MIOCENE (Kundlu and Nalagarh formations), Kundlu and Ramshahr, Solan District, Himachal Pradesh.

3-celled striate spore type Ramanujam & Srisailam = **Imprimospora ramanujamii** Kumar.

3-celled striated sporomorph. Mallesham et al. 1989: 16, pl 1, fig 20, MIOCENE, Godavari-Krishna Basin, Andhra Pradesh and Palk Bay area in Cauvery Basin, Tamil Nadu.

TRIANGULOSPORONITES ?Author, **INCERTAE-SEDIS.**

Triangulosporonites sp. Banerjee & Nandi 1992: 84, pl 1, fig 12, MIOCENE (Bhuban and Bokabil formations), Rengte Anticline near Kolasib, Aizawl District, Mizoram.

TRICHOPELTINITES Cookson, **TRICHOPELTACEAE.**

Trichopeltinites kiandrensis Selkirk. Chandra & Kumar 1998: 60, pl 1, fig 18, LATE TERTIARY, Site 218, Deep Sea Drilling Project Leg 22, Bengal Fan, Indian Ocean.

Trichopeltinites sp. Kar 1990a: 179, pl 8, fig 120, MIOCENE (Surma and Tipam groups), Rokhia Borehole No. 1, Gojalia Borehole No. 1 and Baramura Borehole No. 2, Tripura.

TRICHOthyrites Rosendahl, **MICROthyriaceae.**

Trichothyrites amorphus (Kar & Saxena) Saxena & Misra 1990: 270, NEOGENE (Ratnagiri Beds),

Amberiwadi Section, Sindhudurg District, Maharashtra; Saxena 2000: 163, MIOCENE (Sindhudurg Formation), Mavli Mine at Redi, Sindhudurg District, Maharashtra; Saxena & Sarkar 2000: 257, MIDDLE EOCENE (Siju Formation), Simsang River Section near Siju, South Garo Hills District, Meghalaya.

Notothyrites amorphus Kar & Saxena. Rajendran et al. 1989: 43, pl 1, fig 15, MIOCENE, Edavai, Kerala; Sarkar et al. 1994: 201, LATE MIOCENE (Middle Siwalik), Bagh Rao, Dehradun District, Uttaranchal.

Trichothyrites padappakkarensis (Jain & Gupta) Reddy et al. Mallesham et al. 1989: 15, pl 1, fig 2, MIOCENE, Godavari-Krishna Basin, Andhra Pradesh and Palk Bay area in Cauvery Basin, Tamil Nadu; Samant 2000: 16, pl 1, figs 25-26, EARLY EOCENE (Kharsalia Clay Formation), near Bhavnagar, Cambay Basin, Gujarat.

Trichothyrites sastryii Patil & Ramanujam. Samant & Tapaswi 2000: 29, fig 2.16, EARLY EOCENE (Cambay Shale), Cambay Basin, Gujarat.

Trichothyrites setiferus (Cookson) Saxena & Misra 1990: 270, NEOGENE (Ratnagiri Beds), Amberiwadi Section, Sindhudurg District, Maharashtra; Saxena & Khare 1992: 37, LATE PALAEOCENE-MIDDLE EOCENE, Jayamkondacholapuram Well 12, Tiruchirapalli District, Tamil Nadu; Kar et al. 1994: 187, TERTIARY, subsurface sediments in Upper Assam; Saxena & Rao 1996: 46, EARLY MIOCENE (Boldamgiri Formation), Adu giri-Purakhasia Road near Boldamgiri, West Garo Hills District, Meghalaya; Samant & Phadtare 1997: 68, pl 14, fig 16, EARLY EOCENE (Tarkeshwar Formation), Rajparadi, Cambay Basin, Gujarat; Rao 2000: 295, OLIGOCENE (Kherapara Formation), Tura-Dalu Road Section near Kherapara, West Garo Hills District, Meghalaya; Saxena 2000: 163, MIOCENE (Sindhudurg Formation), Mavli Mine at Redi, Sindhudurg District, Maharashtra; Tripathi et al. 2000: 243, EARLY EOCENE (Tura Formation), Tura-Dalu Road, West Garo Hills District, Meghalaya; Chakraborty 2004: 116, LATE PALAEOCENE (Lakadong Sandstone), around

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- Bhalukurung, North Cachar Hills, Assam; Rao 2004: 124, pl 3, fig 16, MIOCENE (Sindhudurg Formation), Kalviwadi, Sindhudurg District, Maharashtra.
- Notothyrites setiferus* Cookson. Rajendran et al. 1989: 41, 42, 44, MIOCENE, Thonnakkal, Padappakkara, Cannanore, Palayangadi, Kerala; Kar 1990a: 179, pl 8, fig 118, MIOCENE (Surma and Tipam groups), Rokhia Borehole No. 1, Gojalia Borehole No. 1 and Baramura Borehole No. 2, Tripura; Kar 1990b: 232, 236, 240, pl 2, fig 6, PALAEOCENE-EOCENE, MIDDLE OLIGOCENE and EARLY MIOCENE (Disang, Jenam and Bhuban formations), Silchar-Haflong Road Section, Assam; Kar & Bhattacharya 1992: 251, EARLY EOCENE, Rajpardi lignite, Bharuch District, Gujarat; Ambwani 1993: 153, PALAEOCENE-EARLY EOCENE, Rekmangiri Coalfield, Garo Hills, Meghalaya; Rao 1995: 233, TERTIARY, Alleppey and Cannanore districts, Kerala; Kumar 1996: 114, EARLY EOCENE (Tarkeshwar Formation), Rajpardi, Bharuch District, Gujarat; Rao 1996: 156, EARLY MIOCENE, Turavur Borehole near Panchayat L.P. School, west of N.H. 47 between 380 and 381 km, Alleppey District, Kerala; Rao & Nair 1998: 52, pl 1, fig 26, MIOCENE, Kannanellur-Kundra Road area, Quilon District, Kerala; Mitra et al. 2000: 126, pl 1, fig 1, NEOGENE (Siwalik Group), Darjeeling Foothills, Eastern Himalaya.
- Trichothyrites sp.** Kumar 1996: 114, EARLY EOCENE (Tarkeshwar Formation), Rajpardi, Bharuch District, Gujarat.
- Trichothyrites sp.** Chandra & Kumar 1998: 60, pl 3, fig 6, LATE TERTIARY, Site 218, Deep Sea Drilling Project Leg 22, Bengal Fan, Indian Ocean.
- Trichothyrites sp.** Mandaokar 2000a: 320, EARLY MIOCENE (Bhuban Formation), Ramrikawn near Chandmari, Aizawl District, Mizoram.
- Trichothyrites sp.** Samant 2000: 16, pl 1, fig 24, EARLY EOCENE (Kharsalia Clay Formation), near Bhavnagar, Cambay Basin, Gujarat.
- Trichothyrites sp.** Saxena 2000: 163, MIOCENE (Sindhudurg Formation), Mavli Mine at Redi, Sindhudurg District, Maharashtra.
- Trichothyrites** Rosendahl. Ramanujam et al. 1991: 54, EARLY MIOCENE, Pattanakad Borewell, Alleppey District, Kerala.
- TRILOBOSPORONITES** ?Author, **INCERTAE-SEDIS.**
- Trilobosporonites sp.** Banerjee & Nandi 1992: 84, MIOCENE (Bhuban, Bokabil and Tipam Sandstone formations), Rengte Anticline near Kolasib, Aizawl District, Mizoram.
- TRIMMATOSTROMA** Corda, **DEMATIACEAE.**
- Trimmatostroma intertrappea** Patil & Datar 2002: 32-34, pl 1, figs 1-4, text-figs 1-8, LATE CRETACEOUS-PALAEOCENE (Deccan Intertrappean Beds), Nawargaon-Maragsur area, Wardha District, Maharashtra.
- TRIPORICELLAESPORITES** Ke & Shi, **INCERTAE-SEDIS.**
- Triporicellaesporites sp.** Banerjee & Nandi 1992: 84, pl 1, fig 9, MIOCENE (Bhuban Formation), Rengte Anticline near Kolasib, Aizawl District, Mizoram.
- UDARIA** Gupta, **INCERTAE-SEDIS.**
- Udaria saxenae** Gupta 1996: 104, figs 9-14, EARLY TERTIARY (Subathu Formation), Jamtah Road Section, Sirmaur District, Himachal Pradesh.
- Udaria singhii** Gupta 1996: 104, figs 1-8, EARLY TERTIARY (Dagshai Formation), Jamtah Road Section, Sirmaur District, Himachal Pradesh.

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Fungal debris, often found associated with spores-pollen, includes spores, fragments of hyphae, sclerotia, conidiophores, setae, germlings and fructifications. Records of these are widely scattered in various scientific journals and therefore need of a catalogue is always felt. This catalogue is a sequel of earlier catalogues published by Lakhanpal et al. (1976) and Saxena (1991) and includes all records of fungi from the Indian Tertiary sediments published after 1988 up to 2005, including taxa that are nomina nuda or invalid combinations or where no binomials are given.

The present catalogue is expected to be useful in : (i) identifying Tertiary fungi and their placement under suitable palynotaxa; (ii) checking unwarranted introduction of new genera and species; (iii) understanding intraspecific morphological variations; (iv) recognizing superfluous taxa names (nomina nuda or invalid combinations); (v) deducing vertical and horizontal distribution of palynotaxa; and (vi) recognizing synonyms, basionyms and homonyms.