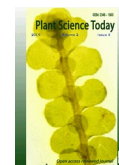




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Research Article

Moss flora of Central India

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Abstract

In recent past considerable work has been done on mosses of Central India region but a all-inclusive literature was lacking. Therefore in present study attempt is made to fill this lacuna. This checklist reports occurrence of 210 valid taxa under 94 genera, and 30 families of mosses from this region. Family Pottiaceae is the most diversified one represented by 34 taxa under 19 genera, while genus *Fissidens* is the largest genus with 26 taxa distributed in the central Indian bryo-geographical zone. The taxa reported without species epithet, have been excluded here. The accepted names are cited in bold. This compilation of central India mosses is first ever effort in context of the Indian mosses and would be helpful to future workers.

Keywords

Bryophyta; Central India; Checklist; Mosses

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Introduction

The unique bio-geographical position of India along with its varied climatic condition in different parts of the country due to various physiographical features support a luxuriant and diversified bryophyte flora in the country, including more than 1500 species of mosses (Dandotiya *et al.*, 2011; Alam, 2014). However, the exact number of bryophytes in India is constantly changing as regular reports are emerging out covering unexplored localities and taxa. To study the enormous bryo-floristic wealth of the country, Pande (1958) proposed division of India into 7 bryo-geographical zones (i) West Himalayan territory, (ii) East Himalayan territory, (iii) Gangetic plains (iv) Punjab and west Rajasthan (v) Central India (vi) Western Ghats and (vii) Eastern Ghats and the Deccan plateau (Fig. 1).

The Central Indian Territory is comparatively less rich in cryptogam elements than Himalayas or Western Ghats. However, with three important Biosphere Reserves namely Pachmarhi, Achanakmar-Amarkantak and Panna, along with 11 national parks and a number of sanctuaries, Bhimbetka world heritage site, etc., central India is an important biodiversity zone, including diversity.

When we started the work, the biggest problem we came across, was the delimitation of Central Indian bryo-geographical zone. A number of studies have been made to assess the bryo-wealth of the Central Indian zone, however, none of them discussed the problem. Like other bryo-geographical zones proposed by Pande (1958), the Central Indian zone is also not clearly defined and thus created lots of confusion while assessing the distribution of various taxa. Pande (1958) made the division by thick lines and broadly included some part of Rajasthan, Madhya Pradesh, Uttar Pradesh, Bihar, Gujarat and Odisha. However, significant problem arose while discussing the distribution of various taxa due to ill-defined boundaries of the various zones. For example, Pande (1958) broadly included a large portion of Odisha under Central Indian zone, however, as a matter of fact, major part of Odisha comes under the Eastern Ghats and east coasts region, which is already being treated as a different bryo-geographical zone. Hence, a dilemma was there, to place the taxa reported from various localities of Odisha, whether under Central Indian zone or in the Eastern Ghats zone. Similarly, some districts of southern Uttar Pradesh plateau region needed specific assessment for placement either under Gangetic plains or Central Indian zone.

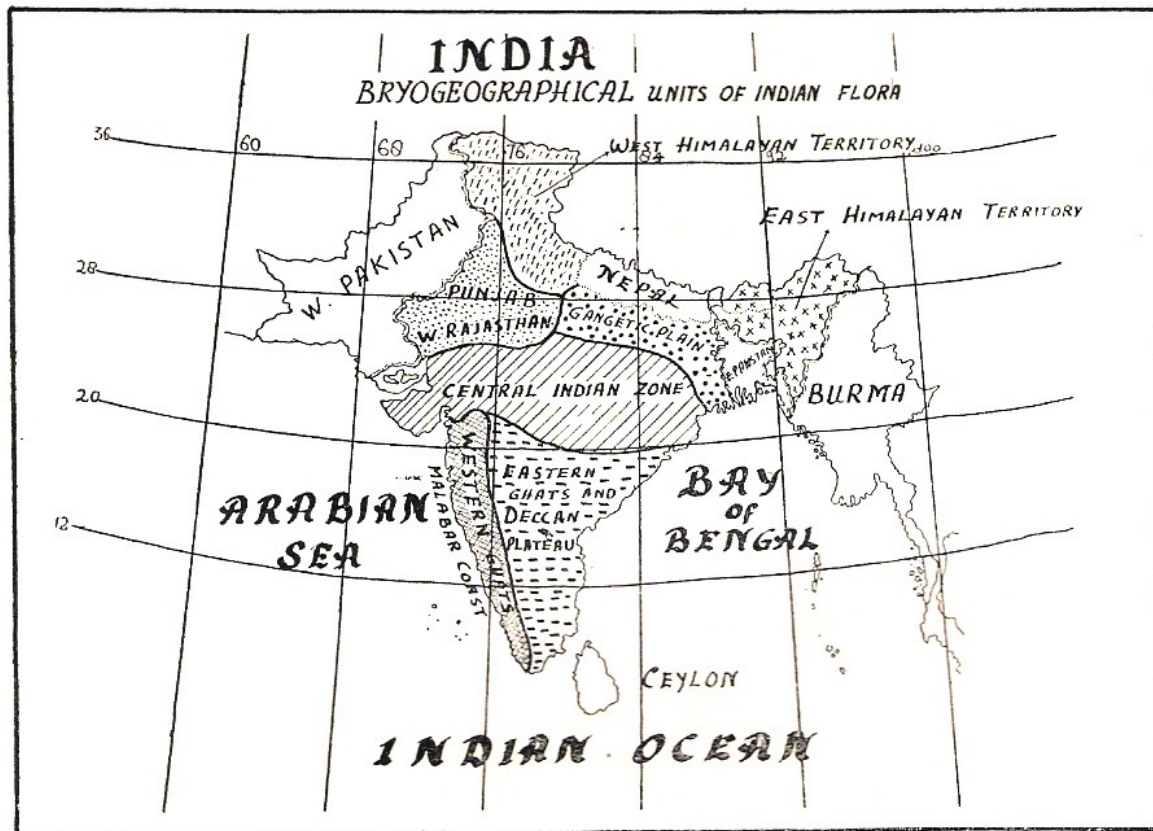


Fig. 1. Bryo-geographical territories of India proposed by Pande (1958) [Figure from "The Journal of the Indian Botanical Society 37(1):10, 1958"]

Further, due to the formation of new states like Chhattisgarh, Jharkhand etc., it felt necessary to reassess the boundaries of Central Indian bryogeographical zone for the convenience of distribution analysis. Therefore, in this work, parts of Odisha, earlier included in the Central Indian zone by Pande (1958), has been excluded and entire Odisha state is proposed to be included in Eastern Ghats and east coast bryogeographical zone. Southern Rajasthan, however, has been included here due to its unique blend of climatic conditions and bryo-diversity, different from rest of Rajasthan. Similarly, Bundelkhand region and Sonbhadra district of Uttar Pradesh and Purulia district of West Bengal are treated here in Central Indian zone. Thus, in the present study, we are providing information based on the reports from the following territories in Central Indian bryogeographic zone (Fig. 2) with a hope that future works may precisely define the area and extent of other bryogeographical zones also.

Madhya Pradesh: Geographically Madhya Pradesh is a mixture of different plateaus namely Betul, Bhandar Bina, Chhindwara, Damoh, Kanjarda, Kauntel, Khichiwara, Kukral, Malwa, Morena, Rewa, Sandwara, Shivpuri, Umatwara, and Vidisha plateaus along with various hills namely Asirgarh, Barwani, Bijawar, Kalibhit, Jhabua, Mahadeo, Mathwar and Satpura hills, Vindhyan ranges and Vindhyan scrapland. Various

river systems like Narmada, Tapti, Sone, Chambal, Betwa and Indrawati form some beautiful valleys viz. Narmada valley, Kanchan valley and Kunnu valley. The unique topography with its floristic wealth provided the state its 3 Biosphere reserves, namely Panna, Amarkantak and Pachmarhi as well as 11 national parks. The Pachmarhi biosphere reserve has been the center of attraction of botanists, including bryologist since long and most of the bryological reports of Central India originated from here. Recently, some work has also been carried out in Amarkantak Biosphere reserve and has been included here.

Chhattisgarh: This recently formed state has northern hilly parts comprising of eastern end of Satpura range and western edge of the Chotta Nagpur plateau while some southern parts of state are reaching to Deccan plateau. The central part of state has fertile plains, reaching to gangetic basin in north and Mahanadi basin and in south. Achanakmar reserve has been most studied in terms of bryo-diversity while the rest of area is still neglected.

Gujarat: The state of Gujarat with a wide variation of geo-climatic conditions due to a variety of physiographic features including northern and southern rocky highlands, northern and central alluvial plains, the peninsula of Kachchh and Saurashtra, Rann and Banni of Kachchh and costal zones of Gujarat with altitude ranging from sea level to

India



Fig. 2. Map of India (not to scale) showing proposed extent of Central Indian bryogeographical zone

1000m, provides unique opportunities for bryophytes to flourish. The area has recently been investigated by different workers, particularly Chaudhary *et al.* (2006) who provided an account of 67 species of bryophytes from the state.

Jharkhand: This state which comprises of the major part of the Chhota Nagpur plateau has been the least known in terms of bryo-diversity and no literature was available to us from the state except occasional reports

in the work of Gangulee (1969-72; 1974-78; 1978-80). However, further explorations in the state may yield interesting results and therefore, need to be assessed thoroughly.

Southern Rajasthan

Southern Rajasthan is botanically most important part of Rajasthan. It is a fairly well defined zone, which includes mainly Mount Abu (Sirohi district),

Kumbhgarh (Rajsamand district), Dungarpur, Parasramji (Pali district), Udaipur and Banswara (Deora and Guhil, 2014). The area is dominated by Aravali ranges, with an altitude ranging from 600 to 1200 m above sea level. The area is fairly forested with comparatively humid climate than other parts of Rajasthan hence provide suitable conditions for the growth of bryophytes. However, maximum focus of bryological studies has been centered on Mount Abu (Sirohi district) while the remaining areas are still less explored.

Southern Plateau region of Uttar Pradesh

The area shows clear demarcation from alluvial plains of Uttar Pradesh and includes Bundelkhand region of Uttar Pradesh (including Lalitpur, Jhansi, Hamirpur, Mahoba, Banda, Chitrakoot districts), Meja and Karchhana Tehsil of Allahabad, Chakia Tehsil of Varanasi, entire Mirzapur south of Ganga and Sonbhadra district (Jha, 2007). However, at present we hesitate to include Allahabad, Varanasi and Mirzapur and only Bundelkhand region and Sonbhadra district are treated here as a part of Central Indian bryogeographical zone.

Purulia district of West Bengal

Most of the district comes under Chhota Nagpur plateau, hence treated here as part of Central Indian zone, instead of Gangetic plains.

Materials and Methods

The present compilation is based on the all available literature till date from above mentioned areas. The taxa reported without species epithet, have been excluded. The accepted names are cited in bold. The classification scheme follows Goffinet *et al.* (2008).

Summary of Central Indian mosses:

Family Archidiaceae - *Archidium* (1)

Family Bartramiaceae - *Bartramidula* (1), *Bartramia* (2), *Philonotis* (4)

Family Brachytheciaceae - *Rhynchostegium* (1)

Family Bruchiaceae - *Trematodon* (2)

Family Bryaceae - *Anomobryum* (2), *Brachymenium* (8), *Bryum* (15), *Gemmabryum* (1), *Pohlia* (2), *Ptychostomum* (2)

Family Dicranaceae - *Brothera* (1), *Campylopus* (4), *Cynodontium* (1), *Dicranella* (1), *Leucobryum* (1), *Leucoloma* (2), *Microdus* (1)

Family Ditrichaceae - *Garckea* (2), *Wilsoniella* (1)

Family Entodontaceae - *Entodon* (8), *Erythrodontium* (1)

Family Erpodiaceae - *Aulacopilum* (1), *Erpodium* (1)

Family Fabroniaceae - *Campyodontium* (1), *Fabronia* (1), *Levierella* (1)

Family Fissidentaceae - *Fissidens* (26)

Family Funariaceae - *Entosthodon* (2), *Funaria* (1), *Loiseaubryum* (1), *Physcomitrium* (3)

Family Hookeriaceae - *Distichophyllum* (2)

Family Hypnaceae - *Bryosedgwickia* (1), *Ectropothecium* (3), *Foreauella* (1), *Homomallium* (1), *Hypnum* (1), *Isopterygium* (3), *Platygyriella* (1), *Pylaisia* (1), *Taxiphyllum* (2), *Vesicularia* (6)

Family Meteoriaceae - *Pseudobarbella* (1), *Microcampylopus* (1), *Meteoriopsis* (2)

Family Mniaceae - *Pseudopohlia* (1), *Rhizomnium* (1)

Family Neckeraceae - *Himantocladium* (1), *Pinnatella* (3), *Neckeropsis* (2), *Homaliiodendron* (2)

Family Octoblepharaceae - *Octoblepharum* (1)

Family Orthotrichaceae - *Macromitrium* (1), *Micromitrium* (1), *Orthotrichum* (1)

Family Plagiotheciaceae - *Plagiothecium* (2), *Pseudotaxiphyllum* (1)

Family Polytrichaceae - *Pogonatum* (1)

Family Pottiaceae - *Anoetangium* (2), *Barbula* (3), *Broerthyrophyllum* (1), *Didymodon* (1), *Gymnostomiella* (1), *Gymnostomum* (1), *Hydrogonium* (3), *Hymenostomum* (1), *Hymenostyliella* (1), *Hymenostylium* (1), *Hyophila* (5), *Pleurochaete* (1), *Pseudocrossidium* (1), *Scopelophila* (1), *Semibarbula* (2), *Timmiella* (2), *Tortella* (1), *Tortula* (1), *Trichostomum* (2), *Weissia* (3)

Family Pterigynandraceae - *Trachyphyllum* (2)

Family Pterobryaceae - *Pterobryopsis* (2)

Family Racopilaceae - *Racopilum* (2)

Family Sematophyllaceae - *Aptychella* (1), *Meiothecium* (1), *Taxithelium* (1), *Wijkia* (1)

Family Splachnobryaceae - *Splachnobryum* (2)

Family Stereophyllaceae - *Entodontopsis* (4), *Stereophyllum* (6)

Family Thuidiaceae - *Pelekium* (2), *Herpetineuron* (1), *Thuidium* (3)

Family Trachypodaceae - *Diaphanodon* (2)

Enumeration of mosses of Central India

Anoetangium clarum Mitt., J. Linn. Bot. Soc. Suppl. 1: 31, 1859. MADHYA PRADESH: Amarkantak (Tiwari *et al.*, 1995; Nath *et al.* 2007). RAJASTHAN: Mount Abu (Alam *et al.*, 2014)

Anoetangium stracheyanum Mitt., Musc. Ind. Or. 31, 1859. MADHYA PRADESH: Pachmarhi (Nath *et al.*, 2007; Nath and Gupta, 2009a; Nath and Gupta, 2011a). RAJASTHAN: Mount Abu (Chaudhary and Deora, 1993; Nath and Gupta, 2011a; Alam *et al.*, 2014), Banswara, Udaipur (Chaudhary and Deora, 1993), Kumbhalgarh (Bapna and Choudhary, 1989).

Anomobryum auratum (Mitt.) A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1873-74: 142, 1875. GUJARAT: Saputara, Girnar hill (Chaudhary *et al.*, 2006). MADHYA PRADESH: Pachmarhi (Handoo *et al.*, 2009). RAJASTHAN: Mount Abu (Chaudhary and Deora, 1993; Alam *et al.*, 2014), Kumbhalgarh (Chaudhary and Deora, 1993).

- Anomobryum nitidum** (Mitt.) A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1873-74: 142 (Gen. Sp. Musc. 1: 604) 1875. MADHYA PRADESH: Bhopal (Handoo and Srivastava, 1968)
- Aptychella delicata** (M. Fleisch.) M. Fleisch., Musci Buitenzorg 4: 1671, 1923. MADHYA PRADESH: Pachmarhi (Singh and Kaul, 2002; Handoo *et al.*, 2009)
- Archidium indicum** Müll. Hal. Flora 71:8, 1888. MADHYA PRADESH: Pachmarhi (Handoo *et al.*, 2009)
- Aulacopilum abbreviatum** Mitt., J. Linn. Soc., Bot. 13: 308, 1873. MADHYA PRADESH: Pachmarhi (Singh and Kaul, 2002; Handoo *et al.*, 2009)
- Barbula constricta** Mitt., J. Proc. Linn. Soc. Bot. suppl. 1: 33, 1859. GUJARAT: Girnar, Saputara (Chaudhary *et al.*, 2006; Chaudhary and Sharma, 2007). RAJASTHAN: Mount Abu (Bapna and Choudhary, 1989; Chaudhary and Deora, 1993; Alam *et al.*, 2014), Udaipur (Chaudhary and Deora, 1993).
- Barbula indica** (Hook.) Spreng. Nomencl. Bot. 2: 72, 1824. RAJASTHAN: Udaipur (Stern, 2000).
- Barbula javanica** Doz. & Molk., Ann. Sci. Nat. Bot. ser. 3,2: 300, 1884. MADHYA PRADESH: Pachmarhi (Nath *et al.*, 2007, Nath and Gupta, 2011a). Tamia valley (Gupta *et al.*, 2013).
- Barbula vinealis* Brid., Bryol. Univ. 1: 830, 1827 → **Didymodon vinealis** (Brid.) R.H. Zander
- Bartramidula bartramioides** (Griff.) Wijk. & Margad., Taxon 7: 289, 1958. JHARKHAND- Chhota Nagpur-Ranchi (Gangulee, 1974-78). MADHYA PRADESH: Pachmarhi (Handoo *et al.*, 2009).
- Bartramia roylei** (Hook. f.) Müll. Hal. Syn. Musc. Frond. 1: 478, 1848. JHARKHAND- Chhota Nagpur-Ranchi (Gangulee, 1974-78)
- Bartramia thwaitesii** (Mitt.) Müll. Hal., Gen. Musc. Frond. 338, 1900. MADHYA PRADESH: Raisen-Bhimbetka (Nath and Bansal, 2009)
- Brachymenium acuminatum** Harv., Icon. Pl. 1: 19, 1836. MADHYA PRADESH: Pachmarhi (Handoo *et al.*, 2009). RAJASTHAN: Mount Abu (Chaudhary and Deora, 1993; Alam *et al.*, 2014).
- Brachymenium bryoides** Hook. ex Schwaegr., Sp. Musc. Frond., Suppl. 2: 134, 1824. MADHYA PRADESH: Raisen-Bhimbetka (Nath and Bansal, 2009).
- Brachymenium exile** (Dozy & Molk.) Bosch & Sande Lac., Bryol. Jav. 1: 139, 1860. GUJARAT: Girnar hill, Saputara (Chaudhary and Sharma, 2007; Chaudhary *et al.*, 2006). MADHYA PRADESH: Amarkantak (Tiwari *et al.*, 1995, Nath *et al.*, 2007), Pachmarhi (Handoo *et al.*, 2009). RAJASTHAN: Banswara, Udaipur (Chaudhary and Deora, 1993), Mount Abu (Chaudhary and Deora, 1993; Alam *et al.*, 2014).
- Brachymenium indicum** (Dozy & Molk.) Bosch & Sande Lac. Bryol. Jav. 1: 141 1860. RAJASTHAN: Mount Abu (Alam *et al.*, 2014).
- Brachymenium lanceolatum** Hook. & Wilson, Fl. Tasman. 2: 188, 1860. Central India (Lal, 2005 without any locality)
- Bracnymenium microstomum* Harv., Icon. Pl. 1: Pl. 19, f.4, 1836. → **Pseudopohlia bulbifera** R.S. Williams
- Brachymenium nepalense** Hook., Sp. Musc. Fron., Suppl. 2: 131, 1824. MADHYA PRADESH: Pachmarhi (Singh and Kaul 2002; Handoo *et al.*, 2009)
- Brachymenium sikkimense** Renauld & Cardot, Bull. Soc. Roy. Bot. Belgique 38(1): 12, 1900. GUJARAT: Girnar hill (Chaudhary *et al.*, 2006; Chaudhary and Sharma, 2007).
- Brachymenium turgidum** Broth. ex Dixon, Rev. Bryol. 35:94, 1908. GUJARAT: Saputara, Pavagarh (Chaudhary *et al.*, 2006)
- Brothera leana** (Sull.) Müll. Hal., Gen. Musc. Frond. 259, 1900. MADHYA PRADESH: Pachmarhi (Singh and Kaul, 2002)
- Bryoerthyrophyllum recurvirostrum** (Hedw.) Chen., Hedw. 80: 255, 1941. RAJASTHAN: Udaipur (Chaudhary and Deora, 1993), Mount Abu ((Bapna and Choudhary, 1989; Chaudhary and Deora, 1993; Alam *et al.*, 2014)
- Bryosedgwickia aurea** (Schwägr.) M. Fleisch., Hedwigia 63: 211, 1922. MADHYA PRADESH: Amarkantak (Tiwari *et al.*, 1995; Nath *et al.*, 2007).
- Bryum apiculatum* Schwaegr., Sp. Musc. Frond, suppl. 1(2): 102, f. 72, 1816 → **Bryum mildeanum** Jur.
- Bryum argenteum** Hedw., Sp. Musc. Frond. 181, 1801. Central India (Lal, 2005, without any locality as *B. argenteum* var. *lanatum*) GUJARAT: Girnar hill, Pavagarh, Sabarkantha forest, Saputara (Chaudhary *et al.*, 2006). MADHYA PRADESH: Bhopal (Handoo and Srivastava, 1968), Pachmarhi (Handoo *et al.*, 2009). RAJASTHAN: Mount Abu (Chaudhary and Deora, 1993; Bansal and Nath, 2013; Alam *et al.*, 2014). Kumbhalgarh (Bansal and Nath, 2014), Udaipur (Stern, 2000; Bansal and Nath, 2014).
- Bryum argenteum* var. *lanatum* (P. Beauv.) Hamp., Linnaea 13: 44, 1839 → **Bryum argenteum** Hedw.
- Bryum caespiticium** Hedw., Sp. Musc. Frond. 180, 1801. MADHYA PRADESH: Raisen - Bhimbetka (Nath and Bansal, 2009), Mandla- Kanha National Park (Kapoor *et al.*, 2011).
- Bryum cappilare* Hedw., Sp. Musc. Frond. 182, 1801 → **Ptychostomum cappilare** (Hedw.) D.T. Holyoak & N. Pederson
- Bryum cellulare** Hook., Sp. Musc. Frond. Suppl. 3(1):214, 1827. GUJARAT: Pavgarh, Saputara, Waghai Botanical Garden (Chaudhary *et al.*, 2006). RAJASTHAN: Mount Abu (Chaudhary and Deora, 1993; Bansal and Nath, 2014).
- Bryum coronatum** Schwägr., Sp. Musc. Frond., suppl. 1(2): 103, pl. 71, 1816. GUJARAT: Pavagarh, Saputara, Waghai Botanical Garden (Chaudhary *et al.*, 2006). MADHYA PRADESH: Bhopal (Handoo and Srivastava, 1968), Pachmarhi (Handoo *et al.*, 2009), Mandla: Kanha National Park (Kapoor *et al.*, 2011). RAJASTHAN: Kumbhalgarh (Stern, 2000; Bansal and Nath, 2014).
- Bryum dunense** A.J.E. Sm. & H. Whitehouse, J. Bryol. 10: 41, 1978. RAJASTHAN: Kumbhalgarh (Stern, 2000; Bansal *et al.*, 2012), Mount Abu (Bansal and Nath, 2014).
- Bryum klinggraeffii** Schimp., Höh. Crypt. Preuss. 81, 1858. RAJASTHAN: Udaipur (Stern, 2000; Bansal and Nath, 2014).

- Bryum mildeanum** Jur. Verh. Zool.-Bot. Ges. Wien 12: 967 1862. RAJASTHAN: Kumbhalgarh wildlife sanctuary, Mount Abu (Bansal and Nath, 2014 as *Bryum apiculatum*).
- Bryum paradoxum** Schwägr., Sp. Musc. Frond., Suppl. 3(1): 224, 1827. GUJARAT: Saputara (Chaudhary *et al.*, 2006). MADHYA PRADESH: Mandla: Kanha National Park (Kapoor *et al.*, 2011). RAJASTHAN: Mount Abu (Chaudhary and Deora, 1993; Bansal and Nath, 2014; Alam *et al.*, 2014).
- Bryum plumosum* Dozy & Molk., Ann. Sci. Nat. Bot. ser 3(2): 301, 1844 → **Gemmabryum apiculatum** (Schwägr.) J.R. Spence & H.P. Ramsay
- Bryum porphyroneuron** var. **erythrinum** (Mitt.) M. Fleisch. Die Natürlichen Pflanzenfamilien I(3): 590. 1904. MADHYA PRADESH: Raisen: Bhimbetka (Nath and Bansal, 2009), Pachmarhi (Ellis *et al.*, 2015).
- Bryum pseudotriquetrum** var. **subrotundum** (Brid.) Gangulee, Mosses E. India 4: 994, 1974. RAJASTHAN: Mount Abu (Bansal and Nath, 2014)
- Bryum recurvulum** Mitt., J. Proc. Linn. Soc., Bot., Suppl. 1:74, 1859. GUJARAT: border area with Rajasthan without specific locality (Chaudhary *et al.*, 2006). RAJASTHAN: Mount Abu (Chaudhary and Deora, 1993, Bansal and Nath, 2014; Alam *et al.*, 2014).
- Bryum rubens** Mitt., In Hooker's J. Bot. Kew Gard. Misc. 8: 232, 1856. RAJASTHAN: Udaipur (Stern, 2000; Bansal and Nath, 2014)
- Bryum thomsonii** Mitt., J. Proc. Linn. Soc., Bot. suppl. 1: 73, 1859. RAJASTHAN: Mount Abu (Bansal and Nath, 2014)
- Bryum uliginosum** (Brid.) Bruch & Schimp., Bryol. Eur. 4: 88, 1839. RAJASTHAN: Mount Abu (Bansal and Nath, 2014; Alam *et al.*, 2014)
- Bryum wightii** Mitt. J. Proc. Linn. Soc., Bot., Suppl. 1: 74 1859. MADHYA PRADESH: Pachmarhi (Handoo *et al.*, 2009)
- Campyloodontium flavescens** (Hook.) Bosch & Sande Lac. Bryol. Jav. 2: 128, 1865. JHARKHAND: Chhota Nagpur: Netarhat (Gangulee, 1978-80)
- Campylopus ericoides** (Griff.) A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1870-71: 424, 1872. MADHYA PRADESH: Pachmarhi (Singh and Kaul, 2002; Handoo *et al.*, 2009; Nath *et al.*, 2012)
- Campylopus fragilis** ssp. **goughii** (Mitt.) J.-P. Frahm, Trop. Bryol. 4: 61, 1991. MADHYA PRADESH: Pachmarhi (Handoo *et al.*, 2009; Nath *et al.*, 2013)
- Campylopus goughii* (Mitt.) A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1870-71: 424, 1872. → **Campylopus fragilis** ssp. **goughii** (Mitt.) J.-P. Frahm
- Campylopus richardii** Brid., Muscol. Recent. Suppl. 4: 73, 1819. JHARKHAND: Chhota Nagpur: Parasnath (Gangulee, 1969-72)
- Campylopus savannarum** (Müll.Hal.) Mitt., J. Linn. Soc. Bot. 12: 85, 1869. MADHYA PRADESH: Pachmarhi (Nath *et al.*, 2013)
- Cynodontium gracilescens** (F. Weber & D. Mohr) Schimp., Coroll. Bryol. Eur. 12, 1856. MADHYA PRADESH: Pachmarhi (Nath *et al.*, 2013) Patalkot (Gupta *et al.*, 2013).
- Diaphanodon blandus** (Harv.) Renauld & Cardot, Bull. Soc. Roy. Bot. Belgique 38(1): 23, 1900. MADHYA PRADESH: Pachmarhi (Ellis *et al.* 2012)
- Diaphanodon procumbens** (Müll.) Renauld & Cardot, Bull. Soc. Roy. Bot. Belgique 38(1): 24, 1900. GUJARAT: Saputara (Chaudhary *et al.*, 2006). RAJASTHAN: Mount Abu (Chaudhary and Deora, 1993; Alam *et al.*, 2014),
- Dicranella leptoneura** Dixon, J. Bombay Nat. Hist. Soc. 39: 774, 1937. MADHYA PRADESH: Pachmarhi (Nath *et al.*, 2013)
- Didymodon vinealis** (Brid.) R.H. Zander Phytologia 41:25, 1978. RAJASTHAN: Mount Abu (Chaudhary and Deora, 1993 as *Barbula vinealis* Brid.; Alam *et al.*, 2014), Udaipur (Chaudhary and Deora, 1993 as *Barbula vinealis* Brid.)
- Distichophyllum griffithii** (Mitt.) Paris, Index Bryol. 389, 1896. MADHYA PRADESH: Pachmarhi (Singh and Kaul, 2002; Handoo *et al.*, 2009)
- Distichophyllum mittenii** Bosch. & Sande Lac. Bryol. Jav. 2: 25, 1861. Central India (Lal, 2005 without any locality)
- Ectropothecium cygnicollum** (Mitt.) A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1877-78: 259, 1880. MADHYA PRADESH: Amarkantak (Tiwari *et al.*, 1995; Nath *et al.*, 2007).
- Ectropothecium cyperoides** (Hook. ex Harv.) A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1877-78: 259, 1880. MADHYA PRADESH: Tamia valley (Gupta *et al.*, 2013).
- Ectropothecium dealbatum** (Reinw. & Hornsch.) A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1877-78: 259, 1880. MADHYA PRADESH: Tamia valley (Gupta *et al.*, 2013).
- Entodon concinnus** (De Not.) Paris, Index Bryol. (ed. 2) 2: 130, 1904. RAJASTHAN: Mount Abu (Alam *et al.*, 2014).
- Entodon laetus** (Griff.) A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1876-77: 295, 1878. GUJARAT: Girnar hills (Chaudhary *et al.*, 2006; Chaudhary and Sharma, 2007).
- Entodon myurus** (Hook.) Hampe, Linnaea 20: 82, 1847. MADHYA PRADESH: Pachmarhi (Singh and Kaul, 2002; Handoo *et al.*, 2009). RAJASTHAN: Mount Abu (Chaudhary and Deora, 1993; Alam *et al.*, 2014).
- Entodon ovicarpus** Dixon, J. Bombay Nat. Hist. Soc. 39: 789, 1937. GUJARAT: Girnar hills (Chaudhary *et al.*, 2006; Chaudhary and Sharma, 2007)
- Entodon plicatus** Müll. Hal., Linnaea 18: 706, 1845. JHARKHAND: Chhota Nagpur (Sadni) (Gangulee, 1978-80). MADHYA PRADESH: Pachmarhi (Handoo *et al.*, 2009). RAJASTHAN: Mount Abu (Alam *et al.*, 2014).
- Entodon prorepens** (Mitt.) A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1876-77: 294, 1878. GUJARAT: Girnar hills, Saputara (Chaudhary *et al.*, 2006; Chaudhary and Sharma, 2007). MADHYA PRADESH: Pachmarhi (Handoo *et al.*, 2009). RAJASTHAN: Mount Abu (Chaudhary and Deora, 1993; Alam *et al.*, 2014).

- Entodon rubicundus** (Mitt.) A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1867-77: 285, 1878. MADHYA PRADESH: Amarkantak (Tiwari *et al.*, 1995; Nath *et al.*, 2007), Pachmarhi (Singh and Kaul, 2002; Handoo *et al.*, 2009; Nath *et al.*, 2007).
- Entodon scariosus** Renauld & Cardot, Bull. Soc. Roy. Bot. Belgique 34(2): 75, 1896. MADHYA PRADESH: Amarkantak (Tiwari *et al.*, 1995; Nath *et al.*, 2007)
- Entodontopsis anceps** (Bosch & Sande Lac.) W.R. Buck & R.R. Ireland, Nova Hedw. 41: 103, 1985. MADHYA PRADESH: Amarkantak (Tiwari *et al.*, 1995; Nath *et al.*, 2007).
- Entodontopsis leucostega** (Brid.) W.R. Buck & R.R. Ireland, Nova Hedwigia 41: 103, 1985. - CHHATISGARH: Achanakmar (Nath *et al.*, 2012). MADHYA PRADESH: Amarkantak (Tiwari *et al.*, 1995; Nath *et al.*, 2007, 2012), Mandla- Kanha National Park (Kapoor *et al.*, 2011), Pachmarhi (Nath *et al.*, 2012), Raisen- Bhimbetka (Nath and Bansal, 2009), Tamia valley (Gupta *et al.*, 2013).
- Entodontopsis nitens** (Mitt.) W.R. Buck & R.R. Ireland, Nova Hedw. 41: 104, 1985. CHHATISGARH: Achanakmar (Nath *et al.*, 2012). GUJARAT: Gurnar hills, Saputara (Chaudhary *et al.*, 2006 as *Stereophyllum ligulatum*). JHARKHAND: Chhota Nagpur (Gangulee 1978-80 as *Stereophyllum ligulatum*). MADHYA PRADESH: Amarkantak (Tiwari *et al.*, 1995; Nath *et al.*, 2007, 2012), Pachmarhi (Singh and Kaul 2002 and Handoo *et al.*, 2009 as *Stereophyllum ligulatum*; Nath *et al.*, 2012), Tamia valley, Patalkot (Gupta *et al.*, 2013).
- Entodontopsis setschwanica** (Broth.) W.R. Buck & R.R. Ireland, Nova Hedwigia 41: 105, 1985. CHHATISGARH: Achanakmar. MADHYA PRADESH: Amarkantak, Pachmarhi (Nath *et al.*, 2012)
- Entosthodon nutans** Mitt., J. Proc. Linn. Soc., Bot., suppl. 1: 55, 1859. JHARKHAND: Chhota Nagpur-Parasnath, Topchachi (Gangulee, 1974-78)
- Entosthodon wallichii** Mitt., J. Proc. Linn. Soc., Bot., suppl. 1: 55, 1859. RAJASTHAN: Mount Abu (Nath *et al.*, 2009).
- Erpodium mangiferae** Müll. Hal., Linnaea 37: 178, 1872. GUJARAT: Waghai botanical garden (Chaudhary *et al.*, 2006; Chaudhary and Sharma, 2007) JHARKHAND: Chhota Nagpur – Ranchi (Gangulee, 1974-78). MADHYA PRADESH: Pachmarhi (Singh and Kaul, 2002; Handoo *et al.*, 2009)
- Erythrodontium julaceum** (Hook. & Schwägr.) Paris, Index Bryol. 436, 1896. MADHYA PRADESH: Amarkantak (Tiwari *et al.*, 1995; Nath *et al.*, 2007), Pachmarhi (Singh and Kaul, 2002; Handoo *et al.*, 2009; Nath *et al.*, 2007).
- Fabronia minuta** Mitt., J. Proc. Linn. Soc., Bot., suppl. 1: 76, 1859. GUJARAT: Girnar hill (Chaudhary *et al.*, 2006; Chaudhary and Sharma, 2007). RAJASTHAN: Mount Abu (Chaudhary and Deora, 1993; Alam *et al.*, 2014).
- Fissidens arunii** Srivastava & Norkett, Proc. Bot. Soc. Kanpur (India) 1: 55, 1988. Central India (Lal, 2005, without any locality)
- Fissidens asperisetus** var. *andamanensis* Gangulee, Mosses of Eastern India and Adjacent regions 1: 507, 1972. MADHYA PRADESH: Pachmarhi (Nath *et al.*, 2011b)
- Fissidens bilaspurensis** Gangulee, Bull. Bot. Soc. Beng. 11: 66, 1957. MADHYA PRADESH: Bilaspur (Gangulee, 1969-72)
- Fissidens bryoides** Hedw. in Sp. Musc., 153, 1801. GUJARAT: Girnar hill, Sabarkantha forest (Chaudhary *et al.*, 2006; Chaudhary and Sharma, 2007). MADHYA PRADESH: Pachmarhi (Handoo *et al.*, 2009). RAJASTHAN: Mount Abu, Udaipur (Chaudhary and Deora, 1993).
- Fissidens bryoides** var. *schmidii* (Mull. Hal.) R.S. Chopra and S.S. Kumar, Ann. Cryptog. Phytopathol. 5: 43 GUJARAT: Saputara; Waghai Botanical Garden (Chaudhary *et al.*, 2006, As *Fissidens bryoides* ssp. *schmidii*). JHARKHAND: Ranchi (Gangulee, 1969-72)
- Fissidens ceylonensis** Dozy et Molk., Ann. Sci. Nat. Bot. ser. 3,2: 304, 1844. Central India (Lal, 2005, without any locality as *Fissidens intromarginatulus* E.B. Bartram). MADHYA PRADESH: Pachmarhi (Nath *et al.*, 2011b).
- Fissidens crenulatus** Mitt., J. Proc. Linn. Soc., Bot., suppl. 1: 140, 1859. Central India (Lal, 2005, without any locality as *Fissidens crenulatus* var. *crenulatus*).
- Fissidens crenulatus* var. *crenulatus* → **Fissidens crenulatus** Mitt.
- Fissidens crispulus** var. *crispulus* Brid., Musc. Rec. suppl. 4: 187, 1819. JHARKHAND: Ranchi (Gangulee, 1969-72 as *Fissidens sylvaticus*). MADHYA PRADESH: Pachmarhi (Singh and Kaul, 2002 and Handoo *et al.*, 2009 as *F. sylvaticus* var. *zippelianus*; Nath *et al.*, 2011b) Patalkot (Gupta *et al.*, 2013). RAJASTHAN: Mount Abu (Chaudhary and Deora, 1993; 2001 as *F. sylvaticus* Griff.).
- Fissidens curvato-involutus* Dixon, Not. R. Bot. Gard. Edinburgh 19: 279, 1938 → **F. involutus** ssp. *curvato-involutus* (Dixon) Gangulee.
- Fissidens diversifolius** Mitt., J. Linn. In Musc. Ind. Or. 140, 1859. CHHATTISGARH: Achanakmar sanctuary (Nath *et al.*, 2005). RAJASTHAN: Mount Abu (Chaudhary and Deora, 1993; Chaudhary and Deora, 2001; Alam, 2014), Banswara, Kumbhalgarh (Chaudhary and Deora, 1993).
- Fissidens flaccidus** Mitt. Trans. Linn. Soc. London 23:56, 1860. GUJARAT: Saputara, Vansda National Park, Waghai Botanical Garden, Pavagarh (Chaudhary *et al.*, 2006, as *Fissidens splachobryoides*). MADHYA PRADESH: Pachmarhi (Handoo *et al.*, 2009 as *Fissidens splachobryoides*).
- Fissidens geminiflorus** Dozy & Molk. J. Hattori Bot. Lab. 32: 272, 1969. RAJASTHAN: Mount Abu (Chaudhary and Deora, 1993, 2001 as *Fissidens geminiflorus* var. *nagasakinus*; Alam *et al.*, 2014), Banswara; Kumbhalgarh; Sirohi; Udaipur, (Bapna, 1980). MADHYA PRADESH: Pachmarhi (Chaudhary and Deora, 1993 as *Fissidens geminiflorus* var. *nagasakinus*) and GUJARAT: Pavagarh, Sabarkantha forest (Chaudhary *et al.*, 2006 as *Fissidens geminiflorus* var. *nagasakinus*).
- Fissidens geminiflorus* var. *nagasakinus* Iwats., Jour. Hattori Bot. Lab. 32: 272, 1969. → **Fissidens geminiflorus** Dozy & Molk.
- Fissidens intromarginatulus* E.B. Bartram, Rev. Bryol. Lichenol. 23: 242, 1954. → **Fissidens ceylonensis** Dozy & Molk.

- Fissidens involutus*** Wilson ex Mitt. in Musc. Ind. Or. 138, 1859. CHHATISGARH: Bastar (Nath *et al.*, 2011b). JHARKHAND: Chhota Nagpur: Netalhat (Gangulee, 1969-72). MADHYA PRADESH: Amarkantak, (Tiwari *et al.*, 1995, Nath *et al.*, 2011b) Pachmarhi (Nath *et al.*, 2011b).
- Fissidens involutus* ssp. *curvato-involutus*** (Dix.) Gangulee, Mosses E India 2: 548, 1971. CHHATISGARH: Bastar (Gangulee 1969-72; Chaudhary and Deora, 1993; Nath *et al.*, 2007, all as *Fissidens curvato-involutus* Dix.) Achanakmar sanctuary (Nath *et al.*, 2005). GUJARAT: Pavagarh (Chaudhary *et al.*, 2006). MADHYA PRADESH: Amarkantak (Nath *et al.*, 2007). RAJASTHAN: Mount Abu (Chaudhary and Deora, 1993; Chaudhary and Deora, 2001; Alam *et al.*, 2014; all as *Fissidens curvato-involutus* Dix.) Banswara, Udaipur (Chaudhary and Deora, 1993 as *Fissidens curvato-involutus* Dix.). Kumbhalgarh (Chaudhary and Deora, 1993 and Stern, 2000 as *Fissidens curvato-involutus*)
- Fissidens macrosporoides*** Dixon & P. de la Varde, Ann. Cryptog. Exot. 3: 169, 1930. GUJARAT: Girnar hill (Chaudhary *et al.*, 2006; Chaudhary and Sharma, 2007)
- Fissidens obscurus*** Mitt., J. Proc. Linn. Soc., Bot., suppl. 2: 138, 1859. Central India (Lal, 2005, without any locality)
- Fissidens orishae*** Gangulee, Nova Hedwigia 8: 140, 1964. MADHYA PRADESH: Mandla (Kanha national Park) (Kapoor *et al.*, 2011)
- Fissidens pulchellus*** Mitt., J. Linn. Soc. Bot. suppl. 1: 140, 1859. CHHATISGARH: Achanakmar sanctuary (Nath *et al.*, 2005 as *F. subpulchellus*). MADHYA PRADESH: Pachmarhi (Singh and Kaul, 2002 and Handoo *et al.*, 2009 as *F. subpulchellus*; Nath *et al.*, 2011b) Amarkantak (Tiwari *et al.*, 1995; Nath *et al.*, 2007 as *F. subpulchellus* Norkett).
- Fissidens ranchiensis*** Gangulee, Bull. Bot. Soc. Beng. 11: 68, 1957. JHARKHAND: Ranchi (Gangulee, 1969-72)
- Fissidens ranuui*** Gangulee, Nova Hedwigia 8: 141, 1964. Central India (Lal, 2005 without any locality)
- Fissidens sedgwickii*** Broth. & Dixon, J. Bot. 48: 305, 1910. MADHYA PRADESH: Pachmarhi (Handoo *et al.*, 2009).
- Fissidens splachobryoides* Broth. in Schum. & Lauterb., Fl. Deutsch. Suedsee: 81, 1900 → ***Fissidens flaccidus*** Mitt.
- Fissidens subpalmatus*** Müll. Hal., Linnaea 37: 164, 1872. Central India (Lal, 2005 without any locality)
- Fissidens subpulchellus* Norkett in Gangulee, Mosses E. India 1: 521, 1971 → ***Fissidens pulchellus*** Mitt.
- Fissidens sylvaticus* Griff. Calcutta J. Nat. Hist. 2: 507, 1842 → ***Fissidens crispulus*** Brid. var. ***crispulus***
- Fissidens sylvaticus*** Griff. var. ***auriculatus*** (Mull. Hal.) Gangulee, Mosses E. India 2: 539, 1971. CHHATISGARH: Achanakmar sanctuary (Nath *et al.*, 2005). MADHYA PRADESH Raisen- Bhimbetka (Nath and Bansal, 2009). RAJASTHAN: Mount Abu (Alam *et al.*, 2014).
- Fissidens sylvaticus*** var. ***teraiicola*** (Müll. Hal.) Gangulee, Mosses E. India 2: 539, 1971. RAJASTHAN: Mount Abu (Alam *et al.*, 2014)
- Fissidens sylvaticus* var. ***zippelianus*** (Dozy & Molk.) Gangulee, Mosses E. India 1: 537, 1972 → ***Fissidens crispulus*** var. ***crispulus*** Brid.
- Fissidens taxifolius*** Hedw. Sp. Musc. 155, 1801. Figs. 5: 1-8. CHHATISGARH: Achanakmar Sanctuary (Nath *et al.*, 2005). MADHYA PRADESH: Pachmarhi, Amarkantak (Nath *et al.*, 2011b), Patalkot (Gupta *et al.*, 2013).
- Fissidens virens*** Thwaites & Mitt., J. Linn. Soc. Bot. 13: 324, 1873. MADHYA PRADESH: Raisen - Bhimbetka (Nath and Bansal, 2009)
- Fissidens xiphioides* Fleisch. Hedwigia 38: 125, 1899. → ***Fissidens zollingeri*** Mont.
- Fissidens zollingeri*** Mont., Ann. Sci. Nat. ser. 3,4: 114, 1845. GUJARAT: Saputara, Waghai Botanical Garden (Chaudhary *et al.*, 2006 as *Fissidens xiphioides* Fleisch.)
- Foreauella orthothecia*** (Schwägr.) Dixon & P. de la Varde, J. Bot. 75: 129, 1937. Central India (Lal, 2005 without any locality)
- Funaria hygrometrica*** Hedw., Spec. Musc. 172, 1801. GUJARAT: Girnar hill, Saputara (Chaudhary *et al.*, 2006, Chaudhary and Sharma, 2007). JHARKHAND: Chhota Nagpur- Parasnath (Gangulee, 1974-78). MADHYA PRADESH: Pachmarhi (Handoo *et al.*, 2009), Patalkot (Gupta *et al.*, 2013). RAJASTHAN: Mount Abu (Chaudhary and Deora, 1993; Alam *et al.*, 2014), Kumbhalgarh, Udaipur (Chaudhary and Deora, 1993).
- Funaria hygrometrica*** var. ***calvescens*** (Schwägr.) Mont., Ann. Sci. Nat., Bot., ser. 2, 12: 54, 1839. Central India (Lal, 2005 without any locality)
- Funaria nutans* (Mitt.) Broth. Nat. Pflanzenfam. 1(3): 522, 1903 → ***Loiseaubryum nutans*** (Mitt.) Fife
- Garckea flexuosa*** (Griff.) Margad & Nork., J. Bryol. 7: 440, 1973. Central India (Lal, 2005 without any locality)
- Garckea phascoides*** (Hook.) Müll. Hal., Bot. Zeitung (Berlin) 3:865, 1845. MADHYA PRADESH: Pachmarhi (Handoo *et al.*, 2009)
- Gemmabryum apiculatum*** (Schwägr.) J.R. Spence & H.P. Ramsay, Phytologia 87:65, 2005. - *Bryum plumosum* Dozy & Molk., Ann. Sci. Nat., Bot., ser. 3(2): 301, 1844. JHARKHAND: Parasnath, Ranchi (Gangulee, 1974-78 as *Bryum plumosum*). RAJASTHAN: Mount Abu (Chaudhary and Deora, 1993 as *Bryum plumosum*; Alam *et al.*, 2014).
- Gymnostomiella vernicosa*** (Hook. ex Harv.) M. Fleisch., Musci Buitenzorg, 1: 310, 1904. CHHATISGARH: Bastar- Keskāl (Gangulee, 1974-80). GUJARAT: Bhachau, Dakorji, Girnar hill, Muldwarka, Pavagarh, Rajkot, Somnath, Surendernagar (Chaudhary *et al.*, 2006). JHARKHAND: Ranchi (Gangulee, 1974-80). MADHYA PRADESH: Bhopal (Handoo and Srivastava, 1968), Pachmarhi (Handoo *et al.*, 2009). RAJASTHAN: Mount Abu (Chaudhary and Deora, 1993; Alam *et al.*, 2014).
- Gymnostomum aeuroginosum*** Sm., Fl. Brit. 3: 1163, 1804. RAJASTHAN: Kumbhalgarh (Stern, 2000).
- Gymnostomum calcareum*** Nees & Hornsch., Bryo. Germ. 1: 153, 1823. RAJASTHAN: Mount Abu (Bapna and Choudhary, 1989)
- Gymnostomum involutum* Hook. Musc. Exot. 2: 154, 1819 → ***Hyophila involuta*** (Hook.) A. Jaeger

- Herpetineuron toccoae*** (Sull. & Lesq.) Cardot, Beih. Bot. Centralbl., Abt. 19(2): 127, 1905. MADHYA PRADESH: Amarkantak (Tiwari *et al.*, 1995; Nath *et al.*, 2007) Pachmarhi (Singh and Kaul, 2002; Handoo *et al.*, 2009).
- Himantocladium plumula*** (Nees) M. Fleisch., Musci Buitenzorg. 3: 889, 1908. Central India (Lal, 2005, without any locality)
- Homaliiodendron exiguum*** (Bosch & Sande Lac.) M. Fleisch. Musci Buitenzorg 3: 897, 1908. MADHYA PRADESH: Pachmarhi (Singh and Kaul, 2002; Handoo *et al.*, 2009)
- Homaliiodendron javanicum*** (Müll. Hal.) M. Fleisch., Hedwigia 45: 74, 1906. Central India (Lal, 2005, without any locality)
- Homomallium incurvatum*** (Schrad. ex Brid.) Loeske, Hedwigia 46: 314, 1907. MADHYA PRADESH: Pachmarhi (Handoo *et al.*, 2009)
- Hydrogonium arcuatum*** (Griff.) Wijk. & Margad, Taxon 7: 289, 1958. CHHATISGARH: Bastar- Keskhal (Aziz and Vohra, 2008). GUJARAT: Vansada National Park, way to Ahwa (Chaudhary *et al.*, 2006). RAJASTHAN: Mount Abu (Chaudhary and Deora, 1993; Alam *et al.*, 2014), Udaipur (Chaudhary and Deora, 1993)
- Hydrogonium consanguineum*** (Thwaites & Mitt.) Hilp. In Beih., Bot. Centralbl. 50(2): 626, 1933. CHHATISGARH: Bastar- Keskhal (Aziz and Vohra, 2008). GUJARAT: Dakorji, Girnar hill, Waghai Botanical Garden, near Galteshwarji, Somnath Geeta mandir, Rajkot (Chaudhary *et al.*, 2006; Chaudhary and Sharma, 2007). MADHYA PRADESH: Pachmarhi (Handoo *et al.*, 2009). RAJASTHAN: Banswara, Udaipur (Chaudhary and Deora, 1993) Mount Abu (Chaudhary and Deora, 1993; Alam *et al.*, 2014).
- Hydrogonium gracilentum*** (Mitt.) P.C. Chen, Hedwigia 80: 237, 1941. JHARKHAND: Chhota Nagpur and adjacent MADHYA PRADESH (now CHHATISGARH) (Gangulee, 1969-72)
- Hymenostomum edentulum*** (Mitt.) Besch., Bull. Soc. Bot. France 34: 95, 1887. Central India (Lal, 2005, without any locality)
- Hymenostyliella llanosii*** (Müll. Hal.) H. Rob., Phytologia 21: 2, 1971. Central India (Lal, 2005, without any locality)
- Hymenostylium recurvirostrum*** (Hedw.) Dixon, Rev. Bryol. Lichenol. 6: 96, 1933. MADHYA PRADESH: Pachmarhi (Handoo *et al.*, 2009).
- Hyophila involuta*** (Hook.) A. Jaeger, Ber. S. Gall. Naturew. Ges. 1871-72: 356, 1873. CHHATISGARH: Achanakmar (Nath and Gupta, 2011a). GUJARAT: Girnar hill, Saputara; Waghai Botanical Garden, Pavagarh, Vansada national park, Rajkot, Sabarkantha forest, Bhachau (Chaudhary *et al.*, 2006; Chaudhary and Sharma, 2007). JHARKHAND: Chhota Nagpur ((Gangulee, 1969-72; Nath and Gupta, 2011a). MADHYA PRADESH: Amarkantak (Tiwari *et al.*, 1995; Nath *et al.*, 2007), Bhopal (Handoo and Srivastava, 1968), Pachmarhi (Nath *et al.*, 2007; Handoo *et al.*, 2009; Aziz and Vohra, 2008) Tamia (Nath and Gupta, 2009b; Gupta *et al.*, 2013). Mandla, Bilaspur (Aziz and Vohra, 2008). Patalkot (Gupta *et al.*, 2013) Raisen- Bhimbetka (Nath and Bansal, 2009) Mandla: Kanha National Park (Kapoor *et al.*, 2011). RAJASTHAN: Alwar, Banswara, Sirohi, Udaipur (Bapna and Choudhary, 1989), Kumbhalgarh (Bapna and Choudhary, 1989; Stern, 2000); Mount Abu (Bapna and Choudhary, 1989; Chaudhary and Deora, 1993; Alam *et al.*, 2014), Udaipur (Chaudhary and Deora, 1993).
- Hyophila nymaniana*** (M. Fleisch.) M. Menzel, 22: 198, 1992. CHHATISGARH: Achanakmar (Nath and Gupta, 2011a). GUJARAT (Aziz and Vohra, 2008). MADHYA PRADESH: Pachmarhi (Nath *et al.*, 2007; Nath and Gupta, 2011a) Amarkantak Biosphere Reserve (Nath and Gupta, 2011a) Patalkot (Gupta *et al.*, 2013)
- Hyophila comosa*** Dixon et P. Verde Arch. Bot. Bull. Mens. 1(8-9): 166, 1927 → ***Hyophila rosea*** R.S. Williams
- Hyophila rosea*** R.S. Williams, Bull. N.Y. Bot. Gard. 8: 341, 1941. GUJARAT: Girnar hill, Saputara (Gangulee, 1969-72; Chaudhary *et al.*, 2006; Chaudhary and Sharma, 2007) MADHYA PRADESH: Mandla- Kanha National Park (Kapoor *et al.*, 2011), Raisen - Bhimbetka (Nath and Bansal, 2009, as *Hyophila comosa* Dixon et P. Verde) Pachmarhi (Singh and Kaul, 2002)
- Hyophila spathulata*** (Harv.) A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1871-72: 353, 1873. MADHYA PRADESH: Pachmarhi (Nath *et al.*, 2007, Nath and Gupta, 2011a). RAJASTHAN: Mount Abu (Alam *et al.*, 2014)
- Hyophila walkeri*** Broth., Rec. Bot. Surv. Ind. 1(12): 317, 1899. GUJARAT: Saputara (Chaudhary *et al.*, 2006) MADHYA PRADESH: Bilaspur (Gangulee 1969-72; Chaudhary *et al.*, 2006; Aziz and Vohra, 2008)
- Hypnum aduncooides*** (Brid.) Müll. Hal., Syn. Musc. Frond. 2: 295, 1851. MADHYA PRADESH: Amarkantak (Tiwari *et al.*, 1995; Nath *et al.*, 2007)
- Hypnum decorum*** Mitt., Musci Ind. Or. 77, 1859 → ***Entodontopsis leucostega*** (Brid.) W.R. Buck & R.R. Ireland
- Isopterygium albescens*** (Hook.) A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1876-77: 433, 1878. MADHYA PRADESH: Pachmarhi (Singh and Kaul 2002; Handoo *et al.*, 2009)
- Isopterygium micans*** (Sw.) Kindb., Enum. Bryin. Exot. 21, 1888. MADHYA PRADESH: Amarkantak (Tiwari *et al.*, 1995; Nath *et al.*, 2007), Patalkot (Gupta *et al.*, 2013).
- Isopterygium pallidulum*** (Mitt.) A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1876-77: 432, 1878. MADHYA PRADESH: Tamia valley (Gupta *et al.*, 2013)
- Leucobryum bowringii*** Mitt. J. Proc. Linn. Soc., Bot., Suppl. 1: 26 1859. MADHYA PRADESH: Pachmarhi (Handoo *et al.*, 2009)
- Leucoloma amoene-virens*** Mitt., J. Proc. Linn. Soc., Bot., suppl. 1: 13, 1859. MADHYA PRADESH: Pachmarhi (Nath *et al.*, 2012; Ellis *et al.*, 2012).
- Leucoloma taylorii*** (Schwägr.) Mitt., Hooker's J. Bot. Kew Gard. Misc. 8: 353, 1856. MADHYA PRADESH: Pachmarhi (Singh and Kaul, 2002; Handoo *et al.*, 2009 as *Leucoloma walkeri* Broth.)
- Leucoloma walkeri*** Broth., Rec. Bot. Surv. India 1(12): 313, 1899 → ***Leucoloma taylorii*** (Schwägr.) Mitt.
- Levierella fabroniacea*** Müll. Hal., Bull. Soc. Bot. Ital. 1897: 73, 1897 → ***Levierella neckeroides*** (Griff.) O'Shea & Matcham

- Levierella neckeroides** (Griff.) O'Shea & Matcham, J. Bryol. 27: 98, 2005. GUJARAT: Girnar hill, Pavagarh, Saputara (Chaudhary *et al.*, 2006 and Chaudhary and Sharma, 2007 as *Levierella fabroniaceae*). MADHYA PRADESH: Bilaspur, Mandla (Gangulee, 1978-80). Amarkantak, (Tiwari *et al.*, 1995; Nath *et al.*, 2007 as *Levierella fabroniaceae*), Pachmarhi (Singh and Kaul, 2002; Handoo *et al.*, 2009; Nath *et al.*, 2012; all as *Levierella fabroniaceae*). RAJASTHAN: Mount Abu (Chaudhary and Deora, 1993 as *Levierella fabroniaceae*; Alam *et al.*, 2014).
- Loiseaubryum nutans** (Mitt.) Fife, J. Hattori Bot. Lab. 58: 192, 1985. RAJASTHAN: Mt. Abu (Chaudhary and Deora, 1993 as *Funaria nutans*; Alam *et al.*, 2014).
- Macromitrium sulcatum** (Hook.) Brid. Bryol. Univ. 1: 319, 1826. MADHYA PRADESH: Pachmarhi (Singh and Kaul 2002; Handoo *et al.*, 2009)
- Meiothecium microcarpum** (Harv.) Mitt., J. Linn. Soc., Bot. 10: 185, 1868. MADHYA PRADESH: Pachmarhi (Nath *et al.*, 2012)
- Merceya gedana* (Lac.) Nog., in Kumam. J. Sci. B-2, 2: 247, 1956 → **Scopelophila cataractae** (Mitt.) Broth.
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Trematodon sabulosus Griff. In Cal. J. Nat. Hist. 2: 493: 1842. RAJASTHAN: Mount Abu (Chaudhary and Deora, 1993; Alam *et al.*, 2014)

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