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Research Article



Checklist of Mosses from the Western Ghats of Maharashtra, India

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Abstract

In recent few years various states of India like Gujarat, Madhya Pradesh, Chattisgarh, Jharkhand, Karnataka, Kerala, Tamilnadu, Andhra Pradesh have published their moss checklist. However, Maharashtra is probably the largest area of land in Southern India without a checklist on mosses. Therefore, to fill this lacuna an attempt has been made to compile the checklist of mosses of Western Ghats of Maharashtra (India). This compilation includes 129 species of mosses, belonging to 11 orders; 26 families and 59 genera. Some of the genera like *Fissidens*, *Bryum*, *Sterophyllum*, *Philonotis*, *Campylopus* and *Entodon* are found to be species rich genera.

INTRODUCTION

In terms of species richness, bryophytes form the largest group of land plants after angiosperms nearly 23, 000 species (Thieret, 1956). Amongst these mosses are a highly evolved group of bryophytes with *ca.* 17,000 species falling in 3 subclass, 4 order, 89 families, and *ca.* 898 genera across the world (Richardson, 1981). They have ability to colonize in a variety of most apparently inhospitable habitats where other groups of plants cannot grow. On the basis of habitats they were grouped into different categories viz., corticolous, folicolous, rupicolous, saxicolous, lignicolous and terricolous (Daniels and Kariyappa, 2007).

The studies on mosses from different localities have frequently been persuaded in various parts of the world as well as in India. Linnaeus (1753) in his *Species Plantarum*, which is considered as the early study on the Bryophytes especially for *Sphagnum* included some Indian mosses also. The first noteworthy contribution to Indian mosses in its early days can be found in monumental work 'Hortus Indicus Malbaricus' by Rheede (1678-1703) who first reported moss from

WGs. He described one moss as 'puem-peda' was later presumed by Robinson as *Bryum coronatum* Schwagr., which is one of the commonest species of Southern India. Thereafter Dillenius (1741) reported some mosses along with algae, lichens, lycopods *etc.* in his 'Historia Muscorum'. Mitten (1860) described over 700 species in his 'Musci Indiae Orientalis' from the Western Ghats. Brotherus (1899) reported 86 species from the WGs. Foreau (1961, 1964) listed 368 species from the Palni Hills which included 95 new species and 15 varieties. Chopra (1975) dealt with nearly 2000 mosses in his taxonomy of Indian mosses from the Western Himalayas and adjacent plains. In recent years floristic studies and taxonomic revisions of selected groups of Indian mosses have received considerable attention (Lal, 2005; Nair *et al.*, 2005a; Chaudhary *et al.*, 2006 and 2008; Daniels and Daniel, 2013; Sandhya Rani *et al.*, 2014).

In Maharashtra also the Bryo-floristic studies particularly mosses are very fragmentary. The earlier work on mosses by Birdwood 1886, 1887 and 1897, Sedgwick (1910, 1911, 1913), Blatter (1909), Dixon (1909), and Dabhade (1988)

etc. was neglected. Bryologists like Dabhade (1998) described 87 species of mosses of Khandala and Mahabaleshwar; Hile (2001) described 17 species of mosses from Kasara Ghat. Chaudhary *et al.*, (2008) described 100 mosses from North Konkan of Maharashtra especially from Western Ghats. However, recent few years various states of India like Gujarat, Madhya Pradesh, Chattisgarh, Jharkhand, Karnataka, Kerala, Tamilnadu, Andhra Pradesh have published their moss checklist. To fill this lacuna an attempt has been made to compile the checklist of mosses of Western Ghats of Maharashtra (India). The study deals with the preparation of checklist, distribution and current status of liverworts, hornworts and mosses from Western Ghats of Maharashtra

MATERIALS AND METHODS

The present checklist is fundamentally based on all previous and recent reports regarding

moss flora of Maharashtra Birdwood 1897, Sedgwick (1910, 1911, 1913), Blatter (1909), Dixon (1909), Brauhl (1931), Dabhade (1988, 1998) Chaudhary *et al.*, (2008) and Hile, 2011. The orders, the families within orders, the genera within families, the species within genera are arranged alphabetically for feasibility. All moss species included in the checklist were checked against the TROPICOS database (at the Missouri Botanical Garden). A modified classified scheme of Buck and Goffinet (2000) and Goffinet (2009) has been used.

Checklist of Mosses recorded from Western Ghats (Sahyadri Hills) of Maharashtra so far:

The earlier all records from the Western Ghats (Sahyadri hills) of Maharashtra provided in alphabetical order with their order, family, genus, species, locality, and reported by were given in the table 1. About 129 species of mosses belonging to 11 orders, 26 families and 59 genera were reported from Maharashtra.

Table No. 1: List of Mosses reported from Western Ghats (Sahyadri Hills) of Maharashtra.

| Sr. No. | Name of the moss | Distribution in Maharashtra | Reported By |
|---------|---|--|---|
| I. | ORDER: ARCHIDIALES LIMPR. | | |
| 1] | Family: Archidiaceae Schimp. | | |
| 1) | Genus: <i>Archidium</i> Brid. | | |
| 1. | <i>A. birmannicum</i> Mitt. ex Dix. | Kasara Ghat and Khandala. | Dabhade (1998), Dabhade and Hile (2001) |
| 2. | <i>A. indicum</i> Mull. Hal. | Kasara Ghat and Khandala. | Dabhade (1998) |
| II. | ORDER: BRYALES LIMPR. | | |
| 2] | Family: Bryaceae Schwagr. | | |
| 2) | Genus: <i>Anomobryum</i> Schimp. | | |
| 3. | <i>A. auratum</i> (Mitt.) A. Jaeger | Bhimashankar, Kasara Ghat, Khandala (Pipe Line), Mahabaleshwar (Lingmala), Matheran and Trimbakeshwar on moist rocks | Dabhade (1998) Dabhade and Hile (2001) and Chaudhary <i>et al.</i> (2008) |
| 4. | <i>A. cymbifolium</i> (Lindb.) Broth. | Mahabaleshwar | Sedgwick (1909) |
| 3) | Genus: <i>Brachymenium</i> Schwaegr. | | |
| 5. | <i>B. acuminatum</i> Harv. | Mahabaleshwar (Arthur Seat Point) on moist walls | Dabhade (1998) |
| 6. | <i>B. exile</i> (Dozy <i>et</i> Molk.) Bosch <i>et</i> Sande Lac. | Khandala and Trimbakeshwar on moist soil | Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |
| 7. | <i>B. nepalense</i> Hook. | Khandala and Mahabaleshwar epiphytic | Dabhade (1998) |
| 8. | <i>B. sikkimense</i> Ren. <i>et</i> Card. | Matheran | Chaudhary <i>et al.</i> (2008) |
| 9. | <i>B. turgidum</i> Broth. ex Dix. | Bhimashankar, Khandala, Mahabaleshwar (Lingmala), Lonavala, Malshej Ghats, Matheran and Trimbakeshwar epiphytic | Sedgwick. (1910), Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |
| 10. | <i>B. walkeri</i> Broth. | Panchgani on moist rocks | Sedgwick L.J. (1909) and Dabhade (1998) |
| 4) | Genus: <i>Bryum</i> Hedw. | | |

| | | | |
|------|---|---|---|
| 11. | <i>B. alpinum</i> Huds. and With. | Khandala and Mahabaleshwar (Bombay Point Road) on moist rocks | Dabhade (1998) |
| 12. | <i>B. argenteum</i> Hedw. | Khandala, Mahabaleshwar and Matheran on moist bricks and rocks | Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |
| 13. | <i>B. capillare</i> L. ex Hedw. | Bhimashankar | Chaudhary <i>et al.</i> (2008) |
| 14. | <i>B. cellulare</i> Hook. | Matheran | Chaudhary <i>et al.</i> (2008) |
| 15. | <i>B. coronatum</i> Schwab. | Bhimashankar, Khandala, Mahabaleshwar, Malshej Ghats, Matheran and Trimbakeshwar on calcareous soil | Chaudhary <i>et al.</i> (2008) |
| 16. | <i>B. ghatense</i> Broth. et Dix. | Lonavala and Mahabaleshwar on moist walls | Sedgwick. (1908 and 1909) and Dabhade (1998) |
| 17. | <i>B. paradoxum</i> Schwaegr. | Matheran and Trimbakeshwar | Chaudhary <i>et al.</i> (2008) |
| 18. | <i>B. recurvulum</i> Mitt. | Trimbakeshwar | Chaudhary <i>et al.</i> (2008) |
| 19. | <i>B. uliginosum</i> (Brid.) Bruch and Schimp. | Trimbakeshwar | Chaudhary <i>et al.</i> (2008) |
| 20. | <i>B. wightii</i> Mitt. | Mahabaleshwar and Matheran on moist rocks | Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |
| 5) | Genus: Orthomnium or Orthomnion (Mitt) Broth.??? | | |
| 21. | <i>O. subscripum</i> C. Muell. | Mahabaleshwar | Sedgwick. (1909) |
| 6) | Genus: Pohlia Hedw. | | |
| 22. | <i>P. flexuosa</i> Harv. | Mahabaleshwar on moist walls | Dabhade (1998) |
| 3] | Family: Bartramiaceae Schwagr. | | |
| 7) | Genus: Bartramidula Bruh and Schimp. | | |
| 23. | <i>B. bartramioides</i> (Griff.)Wijk. and Margad | Khandala and Mahabaleshwar on moist rocky soil | Dabhade (1998) |
| 24. | <i>B. roylei</i> (Hook. f.) Bruch and Schimp. | Khandala and Mahabaleshwar (Lingmala) on moist rocky soil | Dabhade (1998) |
| 8) | Genus: Philonotis Brid. | | |
| 25. | <i>P. hastata</i> (Duby) Wijk and Margard | Khandala (Monkey Hill) and Matheran on rocky walls | Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |
| 26. | <i>P. heterophylla</i> Mitt. | Mahabaleshwar (Dhobi Ghat) on rocky soil | Dabhade (1998) |
| 27. | <i>P. mollis</i> (Doz. Et Molk.) Mitt. | Matheran | Chaudhary <i>et al.</i> (2008) |
| 28. | <i>P. revoluta</i> Bosch et Lac. | Lonavala, Mahabaleshwar and Malshej Ghats | Sedgwick (1908 and 1909), Chaudhary <i>et al.</i> (2008) |
| 29. | <i>P. secunda</i> (Doz. and Molk.) Bosch and Lac. | Khandala (Railway Station) and Mahabaleshwar (Lingmala) | Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |
| III. | ORDER: DICRNALES H. PHILIB. and M. FLEISCH. | | |
| 4] | Family: Fissidentaceae | | |
| 9) | Genus: Fissidens Hedw. | | |
| 30. | <i>F. bryoides</i> Hedw. | Bhimashankar, Khandala and Mahabaleshwar on moist soil | Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |
| 31. | <i>F. crenulatus</i> Mitt. | Mahabaleshwar and Trimbakeshwar | Sedgwick. (1909), Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |
| 32. | <i>F. curvatophoides</i> Dix. et Vard. | Bhimashankar, Mahasali and Trimbakeshwar | Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |
| 33. | <i>F. gaminiflorus</i> Dox. et Molk. | Bhimashankar, Mahasali and Trimbakeshwar | Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |
| 34. | <i>F. macrosporoides</i> Dixon and P. de la Varde | Matheran | Chaudhary <i>et al.</i> (2008) |
| 35. | <i>F. minutus</i> Thw. and Mitt. | Ambernath, Khandala, Mumbai, Khandala, Mahabaleshwar Pokhran and Thane, epiphytic | Dabhade (1998) |
| 36. | <i>F. sedgwickii</i> Broth. et Dix. | Mahabaleshwar (Lingmala, Dhobi Water Fall) and Matheran on moist | Sedgwick. (1909), Dabhade (1998) |

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| | | rocks | |
| 37. | <i>F. splacnobryoides</i> Broth. | Bhimashankar, Khandala (Railway Station) on moist soil | Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |
| 38. | <i>F. teniolatus</i> Dix. et P. Vard. | Mahabaleshwar, Mumbai and Western Ghats on moist soil | Dabhade (1998) |
| 39. | <i>F. walkeri</i> Broth. | Mahabaleshwar (Malcom-Peth) and Khandala (Railway Station) on red soil | Dabhade (1998) |
| 40. | <i>F. xiphioides</i> Fleisch. | Alibag and Mahabaleshwar (MTCD's Holiday Camp) on moist soil | Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |
| 41. | <i>F. zollingeri</i> Mont. | Khandala, Mahabaleshwar Matheran and Trimbakeshwar on moist soil | Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |
| 5] | Family: Dicranaceae | | |
| 10) | Genus: <i>Campylopus</i> Brid. | | |
| 42. | <i>C. aureus</i> Bosch. et Lac. | Khandala and Mahabaleshwar on moist soil | Sedgwick. (1909), Dabhade (1998) |
| 43. | <i>C. goughii</i> (Mitt.) A. Jaeger. | Mahabaleshwar (Malcom-Peth) growing as saprophytes | Sedgwick. (1909), Dabhade (1998) |
| 44. | <i>C. gracilis</i> (Mitt.) A. Jaeger. | Mahabaleshwar (Mumbai Point) growing as saprophytes | Dabhade (1998) |
| 45. | <i>C. latinervis</i> (Mitt.) Jaeg. | Mahabaleshwar (Mumbai Point) growing as saprophytes | Dabhade (1998) |
| 46. | <i>C. sedgwickii</i> Dix. | Mahabaleshwar on moist soil | Sedgwick. (1909) and Dabhade (1998) |
| 11) | Genus: <i>Dicranodontium</i> Brid. | | |
| 47. | <i>D. didictyon</i> (Mitt.) A. Jaeger. | Mahabaleshwar (Arthur Seat Point) on moist soil | Dabhade (1998) |
| 6] | Family: Ditrichaceae | | |
| 12) | Genus: <i>Garckea</i> Brid. | | |
| 48. | <i>G. phascoides</i> (Hook.) C. Muel. | Khandala and Mahabaleshwar (Arthur Seat Point, Lingmala and Old Mahabaleshwar) on moist soil | Dabhade (1998) |
| 13) | Genus: <i>Ditrichum</i> Hampe | | |
| 49. | <i>D. laxissimum</i> (Mitt.) O. Kuntze | Mahabaleshwar (Arthur Seat Point and MTCD's Holiday Camp) on moist soil | Dabhade (1998) |
| 14) | Genus: <i>Leucoloma</i> Brid. | | |
| 50. | <i>L. sarchotrichum</i> C. Muell. | Khandala | Blatter (1905) |
| 7] | Family: Leucobryaceae Schimp. | | |
| 15) | Genus: <i>Octoblepharum</i> Hedw. | | |
| 51. | <i>O. albidum</i> Hedw. | Khandala and Mahabaleshwar growing epiphytically in | Dabhade (1998) Dabhade (1998) |
| 8] | Family: Erpodiaceae Broth. | | |
| 16) | Genus: <i>Erpodium</i> (Brid.) Brid. | | |
| 52. | <i>E. biseriatum</i> (Austin) Austin. | Trimbakeshwar | Chaudhary <i>et al.</i> (2008) |
| 53. | <i>E. mangiferae</i> C. Muell. | Khandala, Mahabaleshwar and Matheran | Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |
| IV. | ORDER: FUNARIALES M. FLEISCH. | | |
| 9] | Family: Funariaceae Schwagr. | | |
| 17) | Genus: <i>Entosthodon</i> Schwagr. | | |
| 54. | <i>E. nutans</i> (Mitt.) Broth. | Khandala (Khandala Lake) | Dabhade (1998) |
| 18) | Genus: <i>Funaria</i> Hedw. | | |
| 55. | <i>F. hygrometrica</i> Hedw. | Bhimashankar, Boriwali, Jawahar, Mumbai (Elephanta Caves), Karjat, Khandala (Forbay Tank), Mahabaleshwar (Arthur Seat Point), Mangaon, Matheran, | Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |

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| | | Palghar, Trimbakeshwar and Wada | |
| 19) | Genus: <i>Physcomitrium</i> (Brid.) Brid. | | |
| 56. | <i>P. coorgense</i> Broth. | Mahabaleshwar-Pratapgarh way | Dabhade (1998) |
| 57. | <i>P. cyathicarpum</i> Mitt. | Trimbakeshwar | Chaudhary <i>et al.</i> (2008) |
| 58. | <i>P. eurystomum</i> Sendtn. | Trimbakeshwar | Chaudhary <i>et al.</i> (2008) |
| V. | ORDER: GRIMMIALES M. FLEISCH. | | |
| 10] | Family: Orthotricaceae = Drummondaceae (Vitt) Goffnet, comb. Nov. | | |
| 20) | Genus: <i>Macromitrium</i> Brid. | | |
| 59. | <i>M. ellipticum</i> Hampe. | Khandala | Blatter (1905) |
| 60. | <i>M. sulcatum</i> (Hook.) Brid. | Khandala, Mahabaleshwar (Pratapsing Park) and Matheran | Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |
| 21) | Genus: <i>Orthotrichum</i> Hedw. | | |
| 61. | <i>O. virens</i> Vent. | Mahabaleshwar (Mumbai Point) | Dabhade (1998) |
| VI. | ORDER: HOOKERIALES M. FLEISCH. | | |
| 11] | Family: Daltoniaceae Schimp. | | |
| 22) | Genus: <i>Symhydon</i> Mont. | | |
| 62. | <i>S. angustus</i> (C. Muell.) Jaeg. | Khandala (Near Khandala Lake, Pipe Line) and Mahabaleshwar (Giri-Vihar) | Dabhade (1998) |
| VII. | ORDER: HYPNALES (M. FLEISCH.) W. R. BUCK and VITT | | |
| 12] | Family: Hypnaceae Schimp. | | |
| 23) | Genus: <i>Bryosedgwickia</i> Cardot and Dixon | | |
| 63. | <i>B. aurea</i> (Schwagr.) M. Fleisch. | Bhimashankar and Matheran | Chaudhary <i>et al.</i> (2008) |
| 64. | <i>B. kirtikarii</i> Card and Dix. | Mahabaleshwar (Lingmala, Panchgani) | Sedgwick. (1909) and Dabhade (1998) |
| 24) | Genus: <i>Ectropothecium</i> Mitt. | | |
| 65. | <i>E. cyperoides</i> (Hook. and Harv.) A. Jaeger | Mahabaleshwar-Pratapgarh way | Dabhade (1998) |
| 25) | Genus: <i>Hypnum</i> Hedw. | | |
| 66. | <i>H. bryoides</i> F.E. Tripp. | Mahabaleshwar | Dabhade (1998) |
| 67. | <i>H. reflexum</i> F.E. Tripp. | Mahabaleshwar | Dabhade (1998) |
| 68. | <i>H. squarrosom</i> F.E. Tripp. | Mahabaleshwar | Dabhade (1998) |
| 13] | Family: Pterigyantraceae Schimp. | | |
| 26) | Genus: <i>Vesicularia</i> (Mull. Hal.) Mull. Hal. | | |
| 69. | <i>V. montagnei</i> (Schimp.) Broth. | Bhimashankar and Matheran | Chaudhary <i>et al.</i> (2008) |
| 70. | <i>V. reticulata</i> (Dozy and Molk.) Broth. | Khandala (Monkey Hill), Mahabaleshwar (Arthur Seat Point) | Dabhade (1998) |
| 14] | Family: Pterobryaceae Kindb. | | |
| 27) | Genus: <i>Entodon</i> Mull. Hal. | | |
| 71. | <i>E. curvatus</i> (Griff) Ja eg. | Mahabaleshwar (Way to Mumbai Point) | Dabhade (1998) |
| 72. | <i>E. laetus</i> (Griff.) Jaeg. | Bhimashankar, Khandala (Forbay Tank), Mahabaleshwar (Lingmala), Malshej Ghats, Matheran. | Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |
| 73. | <i>E. ovicarpus</i> Dix. | Malshej Ghats | Dabhade (1998) |
| 74. | <i>E. plicatus</i> Mull. Hal. | Bhimashankar, Khandala (Thakurwadi) and Mahabaleshwar (Lingmala) | Gammie (1903), Sedgwick. (1921), Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |
| 75. | <i>E. prorepens</i> (Mitt.) A. Jaeger. | Mahabaleshwar (Lingmala) and Trimbakeshwar | Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |
| 28) | Genus: <i>Pterobryopsis</i> M. Fleisch. | | |
| 76. | <i>P. acuminata</i> (Hook.) Fleisch. | Bhimashankar and Matheran. | Chaudhary <i>et al.</i> (2008) |
| 77. | <i>P. maxwell</i> Cardot. and Dix. | Mahabaleshwar | Sedgwick. (1907) |
| 78. | <i>P. walkeri</i> (Broth.) Broth. | Khandala (Thakurwadi) Lonavala (Sakar Pathak) and Mahabaleshwar (Lingmala) | Blatter (1909) and Dabhade (1998) |
| 15] | Family: Brachytheciaceae G. Roth. | | |

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|------------|--|--|---|
| 29) | Genus: <i>Rhynchostegiella</i> (Bruch and Schimp.) Limpr. | | |
| 79. | <i>R. humillima</i> (Mitt.) Broth. | Mahabaleshwar-Pratapgarh way (Fitzgerald Ghats) | Dabhade (1998) |
| 16] | Family: Fabroniaceae Schimp. | | |
| 30) | Genus: <i>Fabronia</i> Raddi. | | |
| 80. | <i>F. minuta</i> Mitt. | Bhimashankar | Chaudhary <i>et al.</i> (2008) |
| 31) | Genus: <i>Levierella</i> Mull. Hal. | | |
| 81. | <i>L. fabroniacea</i> Mull. Hal. | Bhimashankar, Khandala, Mahabaleshwar, Malshej Ghats, Matheran, Palghar and Trimbakeshwar. | Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |
| 17] | Family: Meteoriaceae Kindb. | | |
| 32) | Genus: <i>Diaphanodon</i> Renuald and Cardot | | |
| 82. | <i>D. procumbens</i> (Mull. Hal.) Renuald and Cardot | Bhimashankar, Kasara Ghat, Khandala (near Khandala Hotel) Mahabaleshwar (Dhobi Ghat, Lingmala, Malcolm-Peth) and Matheran. | Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |
| 33) | Genus: <i>Meteoriopsis</i> M. Fleisch. | | |
| 83. | <i>M. reclinata</i> (Mull. Hal.) M. Fleisch. | Khandala, Mahabaleshwar and Trimbakeshwar | Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |
| 84. | <i>M. squarrosa</i> (Hook.) Fleisch. | Mahabaleshwar | Dabhade (1998) |
| 34) | Genus: <i>Metiorium</i> | | |
| 85. | <i>M. scrabiasculum</i> | Mahabaleshwar | Dabhade (1998) |
| 18] | Family: Plagiotheciaceae Kindb. | | |
| 35) | Genus: <i>Plagiothecium</i> Bruch and Schimp. | | |
| 86. | <i>P. denticulatum</i> (Hedw.) Schimp. | Mahabaleshwar (Old Mahabaleshwar) | Chaudhary <i>et al.</i> (2008) |
| 87. | <i>P. neckeroideum</i> Schimp. | Mahabaleshwar (Old Mahabaleshwar) | Chaudhary <i>et al.</i> (2008) |
| 36) | Genus: <i>Stereophyllum</i> Mitt. | | |
| 88. | <i>S. anceps</i> (Bosch et Lac.) Broth. | Khandala (along pipe line) and Mahabaleshwar (along roadside at Pratapgarh), Matheran and Trimbakeshwar | Sedgwick. (1909), Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |
| 89. | <i>S. blatteri</i> Card. | Khandala | Blatter (1904) |
| 90. | <i>S. confusum</i> The'r | Mahabaleshwar (on way to Old Mahabaleshwar) | Dabhade (1998) |
| 91. | <i>S. decorum</i> (Mitt.) Wijk et Marg. | Bhimashankar, Malshej Ghats, Matheran and Trimbakeshwar. | Chaudhary <i>et al.</i> (2008) |
| 92. | <i>S. fulvum</i> (Harv. In Hook) Jaeg. | Mahabaleshwar (near Mumbai Point) | Dabhade (1998) |
| 93. | <i>S. ligulatum</i> Jaeg. Bericht | Khandala and Mahabaleshwar (Lingmala and Mumbai Point) | Sedgwick. (1920), Dabhade (1998) |
| 94. | <i>S. setschwanicum</i> Broth. | Malshej Ghats | Chaudhary <i>et al.</i> (2008) |
| 95. | <i>S. tavoyense</i> (Hook. and Harv.) A. Jaegr. | Bhimashankar, Khandala (Near Thermal Station, Khandala Hotel), Mahabaleshwar (Arthur Seat Point, Lingmala and Mumbai Point) and Matheran | Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |
| 96. | <i>S. wightii</i> (Mitt.) Jaeg. | Bhimashankar, Mahabaleshwar and Matheran | Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |
| 19] | Family: Leucodontaceae Schimp. | | |
| 37) | Genus: <i>Leucodon</i> Schwagr. | | |
| 97. | <i>L. secundus</i> (Harv.) Mitt. | Mahabaleshwar (Fitzgerald Ghat on way to Pratapgarh Road) | Dabhade (1998) |
| 20] | Family: Neckeraceae Schimp. | | |
| 38) | Genus: <i>Pinnatella</i> M. Fleisch. | | |
| 98. | <i>P. alopercuroides</i> (Hook.) Fleisch. | Khandala | Blatter (1905), Dabhade |

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|--------------|--|---|--|
| | | | (1998) |
| 99. | <i>P. culcutensis</i> (C. Muell.) Fleisch. | Khandala (Duke Nose Valley), Mahabaleshwar (Mumbai Point) | Dabhade (1998) |
| 21] | Family: Sematophyllaceae Broth. | | |
| 39) | Genus: <i>Wijkia</i> Crum | | |
| 100. | <i>W. tanytricha</i> (Mont.) H.A. Crum | Bhimashankar | Dabhade (1998) |
| VIII. | ORDER: ORTHOTRICHALES DIXON | | |
| 22] | Family: Orthotrichaceae Arn. | | |
| 40) | Genus: <i>Macromitrium</i> Brid. | | |
| 101. | <i>M. ellipticum</i> Hampe. | Khandala | Blatter (1905) |
| 102. | <i>M. sulcatum</i> Brid. | Khandala and Mahabaleshwar (Pratapsing Park) | Dabhade (1998) Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |
| 41) | Genus: <i>Orthotrichum</i> Arn. | | |
| 103. | <i>O. virens</i> Venturi | Mahabaleshwar (Mumbai Point) | Dabhade (1998) |
| IX. | ORDER: POLYTRICHALES M. FLEISCH | | |
| 23] | Family: Polytrichaceae Schwagr. | | |
| 42) | Genus: <i>Pogonatum</i> P. Beauv. | | |
| 104. | <i>P. aloides</i> (Hedw.) P. Beauv. | Bhimashankar and Mahabaleshwar | Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |
| X. | ORDER: POTTIALES M. FLEISCH | | |
| 24] | Family: Pottiaceae Schimp. | | |
| 43) | Genus: <i>Anoectangium</i> Schwagr. | | |
| 105. | <i>A. stracheyanum</i> Mitt. | Khandala | Dabhade (1998) |
| 106. | <i>A. walkeri</i> Broth. | Panchgani | Sedgwick (1909) |
| 44) | Genus: <i>Barbula</i> Hedw. | | |
| 107. | <i>B. constricta</i> Mitt. | Trimbakeshwar | Chaudhary <i>et al.</i> (2008) |
| 45) | Genus: <i>Hydrogonium</i> (Mull. Hal.) A. Jaeger. | | |
| 108. | <i>H. arcuatum</i> (Griff.) Wijk and Margad | Khandala and Malshej Ghats | Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |
| 109. | <i>H. consanguineum</i> (Thwaites and Mitt.) Hilp. | Alibag, Karjat, Khandala, Mahabaleshwar (Malcom Peth Bazar), Matheran Mumbai (Elephanta Caves) and Palghar | Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |
| 46) | Genus: <i>Hymenostomum</i> R. Br. | | |
| 110. | <i>H. edentulum</i> (Mitt.) Besch. | Mahabaleshwar (Panchgani) | Sedgwick (1909) and Dabhade (1998) |
| 47) | Genus: <i>Hymenostylium</i> Brid. | | |
| 111. | <i>H. recurvirostrum</i> (Hedw.) Dixon | Mahabaleshwar (Arthur Seat Point and Pratapgarh) | Dabhade (1998) |
| 112. | <i>H. xanthocarpum</i> (Hook.) Besch. | Mahabaleshwar | Sedgwick (1909) |
| 48) | Genus: <i>Hyophila</i> Brid. | | |
| 113. | <i>H. comosa</i> Dixon | Bhimashankar | Chaudhary <i>et al.</i> (2008) |
| 114. | <i>H. involuta</i> (Hook.) A. Jaegr. | Alibag, Boriwali, Karjat, Khandala (Near Pipe line), Mahabaleshwar (Malcom Peth Bazar), Malshej Ghats, Matheran, Mumbai (Elephanta Caves) and Palghar | Blatter and Sedgwick (1909), Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |
| 115. | <i>H. rosea</i> R. S. Williams | Bhimashankar and Malshej Ghats | Chaudhary <i>et al.</i> (2008) |
| 116. | <i>H. walkeri</i> Broth. | Matheran | Chaudhary <i>et al.</i> (2008) |
| 49) | Genus: <i>Hyophilopsis</i> Card et. Dix. | | |
| 117. | <i>H. entosthodontacea</i> Card. Et Dix. | Panchgani and Purandar Fort | Blatter (1928) and Dabhade (2008) |
| 50) | Genus: <i>Merceya</i> Schimp. | | |
| 118. | <i>M. gedaena</i> (Lac.) Nog. | Malshej Ghats, Matheran and Panchgani | Sedgwick (1909), Dabhade (1998) and Chaudhary <i>et al.</i> (2008). |
| 51) | Genus: <i>Pleurochaete</i> Lindb. | | |

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| 119. | <i>P. squarrosa</i> (Brid.) Lindb. | Mahabaleshwar (on way to Pratapgarh) | Dabhade (1998) |
| 52) | Genus: <i>Semibarbula</i> Herz. and Hilp. | | |
| 120. | <i>S. orientalis</i> (F. Weber) Wijk and Margad. | Karjat, Khandala (Khandala Hotel), Mahabaleshwar (Aram Hotel) | Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |
| 53) | Genus: <i>Tortula</i> Hedw. | | |
| 121. | <i>Tortula bombayensis</i> Mitt. | Mahabaleshwar | Dabhade (1998) |
| 54) | Genus: <i>Trachycarpidium</i> Broth. | | |
| 122. | <i>Trachycarpidium</i> Sps. | Khandala | Norkett (1970) |
| 55) | Genus: <i>Trichostomum</i> Bruch. | | |
| 123. | <i>T. stenophyllum</i> (Mitt.) Br. | Mahabaleshwar | Dabhade (1998) |
| 124. | <i>T. bombayensis</i> | Mumbai | Hampe |
| 25] | Family: <i>Calymperaceae</i> Kindb. | | |
| 56) | Genus: <i>Calymperes</i> Sw. | | |
| 125. | <i>C. thawaitessi</i> Besch. | Kunkeshwar, Mumbai and Uran | Dabhade (1998) |
| 126. | <i>C. tortelloides</i> Broth. | Mahabaleshwar | Sedgwick. (1909) and Dabhade (1998) |
| 57) | Genus: <i>Octoblepharum</i> Hedw. | | |
| 127. | <i>O. albidum</i> Hedw. | Khandala and Mahabaleshwar | Dabhade (1998) Dabhade (1998) |
| XI. | ORDER: <i>SPLACHNALES</i> GREV. and ARN. | | |
| 26] | Family: <i>Splachnaceae</i> Kindb. | | |
| 58) | Genus: <i>Gymnostomiella</i> M. Fleisch. | | |
| 128. | <i>G. vermicosa</i> (Hook. and Harv.) M. Fleisch. | Bhimashankar, Khandala (Railway Station) and Mahabaleshwar (Old Mahabaleshwar) | Dabhade (1998) Dabhade (1998) and Chaudhary <i>et al.</i> (2008) |
| 59) | Genus: <i>Splachnobryum</i> Mull. Hal. | | |
| 129. | <i>S. indicum</i> Hampe and Mull. Hal. | Khandala (Monkey Hills) and Mahabaleshwar (Old Mahabaleshwar) | Dabhade (1998) |

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