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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
<b>I.</b>	<b>ORDER: ARCHIDIALES LIMPR.</b>		
1]	<b>Family: Archidiaceae</b> Schimp.		
1)	<b>Genus: <i>Archidium</i></b> 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)
<b>II.</b>	<b>ORDER: BRYALES LIMPR.</b>		
2]	<b>Family: Bryaceae</b> Schwagr.		
2)	<b>Genus: <i>Anomobryum</i></b> 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)	<b>Genus: <i>Brachymenium</i></b> 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)	<b>Genus: <i>Bryum</i></b> 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)	<b>Genus: Orthomnium or Orthomnion</b> (Mitt) Broth.???		
21.	<i>O. subscripum</i> C. Muell.	Mahabaleshwar	Sedgwick. (1909)
6)	<b>Genus: Pohlia</b> Hedw.		
22.	<i>P. flexuosa</i> Harv.	Mahabaleshwar on moist walls	Dabhade (1998)
3]	<b>Family: Bartramiaceae</b> Schwagr.		
7)	<b>Genus: Bartramidula</b> 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)	<b>Genus: Philonotis</b> 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.	<b>ORDER: DICRNALES</b> H. PHILIB. and M. FLEISCH.		
4]	<b>Family: Fissidentaceae</b>		
9)	<b>Genus: Fissidens</b> 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)

		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)
<b>5]</b>	<b>Family: Dicranaceae</b>		
<b>10)</b>	<b>Genus: <i>Campylopus</i> Brid.</b>		
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)
<b>11)</b>	<b>Genus: <i>Dicranodontium</i> Brid.</b>		
47.	<i>D. didictyon</i> (Mitt.) A. Jaeger.	Mahabaleshwar (Arthur Seat Point) on moist soil	Dabhade (1998)
<b>6]</b>	<b>Family: Ditrichaceae</b>		
<b>12)</b>	<b>Genus: <i>Garckea</i> Brid.</b>		
48.	<i>G. phascoides</i> (Hook.) C. Muel.	Khandala and Mahabaleshwar (Arthur Seat Point, Lingmala and Old Mahabaleshwar) on moist soil	Dabhade (1998)
<b>13)</b>	<b>Genus: <i>Ditrichum</i> Hampe</b>		
49.	<i>D. laxissimum</i> (Mitt.) O. Kuntze	Mahabaleshwar (Arthur Seat Point and MTCD's Holiday Camp) on moist soil	Dabhade (1998)
<b>14)</b>	<b>Genus: <i>Leucoloma</i> Brid.</b>		
50.	<i>L. sarchotrichum</i> C. Muell.	Khandala	Blatter (1905)
<b>7]</b>	<b>Family: Leucobryaceae Schimp.</b>		
<b>15)</b>	<b>Genus: <i>Octoblepharum</i> Hedw.</b>		
51.	<i>O. albidum</i> Hedw.	Khandala and Mahabaleshwar growing epiphytically in	Dabhade (1998) Dabhade (1998)
<b>8]</b>	<b>Family: Erpodiaceae Broth.</b>		
<b>16)</b>	<b>Genus: <i>Erpodium</i> (Brid.) Brid.</b>		
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)
<b>IV.</b>	<b>ORDER: FUNARIALES M. FLEISCH.</b>		
<b>9]</b>	<b>Family: Funariaceae Schwagr.</b>		
<b>17)</b>	<b>Genus: <i>Entosthodon</i> Schwagr.</b>		
54.	<i>E. nutans</i> (Mitt.) Broth.	Khandala (Khandala Lake)	Dabhade (1998)
<b>18)</b>	<b>Genus: <i>Funaria</i> Hedw.</b>		
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)

		Palghar, Trimbakeshwar and Wada	
<b>19)</b>	<b>Genus: <i>Physcomitrium</i> (Brid.) Brid.</b>		
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. euryostomum</i> Sendtn.	Trimbakeshwar	Chaudhary <i>et al.</i> (2008)
<b>V.</b>	<b>ORDER: GRIMMIALES M. FLEISCH.</b>		
<b>10]</b>	<b>Family: Orthotricaceae = Drummondaceae (Vitt) Goffnet, comb. Nov.</b>		
<b>20)</b>	<b>Genus: <i>Macromitrium</i> Brid.</b>		
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)
<b>21)</b>	<b>Genus: <i>Orthotrichum</i> Hedw.</b>		
61.	<i>O. virens</i> Vent.	Mahabaleshwar (Mumbai Point)	Dabhade (1998)
<b>VI.</b>	<b>ORDER: HOOKERIALES M. FLEISCH.</b>		
<b>11]</b>	<b>Family: Daltoniaceae Schimp.</b>		
<b>22)</b>	<b>Genus: <i>Symhydon</i> Mont.</b>		
62.	<i>S. angustus</i> (C. Muell.) Jaeg.	Khandala ( Near Khandala Lake, Pipe Line) and Mahabaleshwar (Giri-Vihar)	Dabhade (1998)
<b>VII.</b>	<b>ORDER: HYPNALES (M. FLEISCH.) W. R. BUCK and VITT</b>		
<b>12]</b>	<b>Family: Hypnaceae Schimp.</b>		
<b>23)</b>	<b>Genus: <i>Bryosedgwickia</i> Cardot and Dixon</b>		
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)
<b>24)</b>	<b>Genus: <i>Ectropothecium</i> Mitt.</b>		
65.	<i>E. cyperoides</i> (Hook. and Harv.) A. Jaeger	Mahabaleshwar-Pratapgarh way	Dabhade (1998)
<b>25)</b>	<b>Genus: <i>Hypnum</i> Hedw.</b>		
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)
<b>13]</b>	<b>Family: Pterigyantraceae Schimp.</b>		
<b>26)</b>	<b>Genus: <i>Vesicularia</i> (Mull. Hal.) Mull. Hal.</b>		
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)
<b>14]</b>	<b>Family: Pterobryaceae Kindb.</b>		
<b>27)</b>	<b>Genus: <i>Entodon</i> Mull. Hal.</b>		
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)
<b>28)</b>	<b>Genus: <i>Pterobryopsis</i> M. Fleisch.</b>		
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)
<b>15]</b>	<b>Family: Brachytheciaceae G. Roth.</b>		

29)	<b>Genus: <i>Rhynchostegiella</i></b> (Bruch and Schimp.) Limpr.		
79.	<i>R. humillima</i> (Mitt.) Broth.	Mahabaleshwar-Pratapgarh way (Fitzgerald Ghats)	Dabhade (1998)
16]	<b>Family: Fabroniaceae</b> Schimp.		
30)	<b>Genus: <i>Fabronia</i></b> Raddi.		
80.	<i>F. minuta</i> Mitt.	Bhimashankar	Chaudhary <i>et al.</i> (2008)
31)	<b>Genus: <i>Lieverella</i></b> 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]	<b>Family: Meteoriaceae</b> Kindb.		
32)	<b>Genus: <i>Diaphanodon</i></b> 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)	<b>Genus: <i>Meteoriopsis</i></b> 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)	<b>Genus: <i>Metorium</i></b>		
85.	<i>M. scrabiasculum</i>	Mahabaleshwar	Dabhade (1998)
18]	<b>Family: Plagiotheciaceae</b> Kindb.		
35)	<b>Genus: <i>Plagiothecium</i></b> 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)	<b>Genus: <i>Stereophyllum</i></b> 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]	<b>Family: Leucodontaceae</b> Schimp.		
37)	<b>Genus: <i>Leucodon</i></b> Schwagr.		
97.	<i>L. secundus</i> (Harv.) Mitt.	Mahabaleshwar (Fitzgerald Ghat on way to Pratapgarh Road)	Dabhade (1998)
20]	<b>Family: Neckeraceae</b> Schimp.		
38)	<b>Genus: <i>Pinnatella</i></b> M. Fleisch.		
98.	<i>P. alopercuroides</i> (Hook.) Fleisch.	Khandala	Blatter (1905), Dabhade

			(1998)
99.	<i>P. culcutensis</i> (C. Muell.) Fleisch.	Khandala (Duke Nose Valley), Mahabaleshwar (Mumbai Point)	Dabhade (1998)
<b>21]</b>	<b>Family: Sematophyllaceae</b> Broth.		
<b>39)</b>	<b>Genus: <i>Wijkia</i></b> Crum		
100.	<i>W. tanytricha</i> (Mont.) H.A. Crum	Bhimashankar	Dabhade (1998)
<b>VIII.</b>	<b>ORDER: ORTHOTRICHALES DIXON</b>		
<b>22]</b>	<b>Family: Orthotrichaceae</b> Arn.		
<b>40)</b>	<b>Genus: <i>Macromitrium</i></b> 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)
<b>41)</b>	<b>Genus: <i>Orthotrichum</i></b> Arn.		
103.	<i>O. virens</i> Venturi	Mahabaleshwar (Mumbai Point)	Dabhade (1998)
<b>IX.</b>	<b>ORDER: POLYTRICHALES M. FLEISCH</b>		
<b>23]</b>	<b>Family: Polytrichaceae</b> Schwagr.		
<b>42)</b>	<b>Genus: <i>Pogonatum</i></b> P. Beauv.		
104.	<i>P. aloides</i> (Hedw.) P. Beauv.	Bhimashankar and Mahabaleshwar	Dabhade (1998) and Chaudhary <i>et al.</i> (2008)
<b>X.</b>	<b>ORDER: POTTIALES M. FLEISCH</b>		
<b>24]</b>	<b>Family: Pottiaceae</b> Schimp.		
<b>43)</b>	<b>Genus: <i>Anoetangium</i></b> Schwagr.		
105.	<i>A. stracheyanum</i> Mitt.	Khandala	Dabhade (1998)
106.	<i>A. walkeri</i> Broth.	Panchgani	Sedgwick (1909)
<b>44)</b>	<b>Genus: <i>Barbula</i></b> Hedw.		
107.	<i>B. constricta</i> Mitt.	Trimbakeshwar	Chaudhary <i>et al.</i> (2008)
<b>45)</b>	<b>Genus: <i>Hydrogonium</i></b> (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)
<b>46)</b>	<b>Genus: <i>Hymenostomum</i></b> R. Br.		
110.	<i>H. edentulum</i> (Mitt.) Besch.	Mahabaleshwar (Panchgani)	Sedgwick (1909) and Dabhade (1998)
<b>47)</b>	<b>Genus: <i>Hymenostylium</i></b> 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)
<b>48)</b>	<b>Genus: <i>Hyophila</i></b> 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)
<b>49)</b>	<b>Genus: <i>Hyophilopsis</i></b> Card et. Dix.		
117.	<i>H. entosthodontacea</i> Card. Et Dix.	Panchgani and Purandar Fort	Blatter (1928) and Dabhade (2008)
<b>50)</b>	<b>Genus: <i>Merceya</i></b> Schimp.		
118.	<i>M. gedaena</i> (Lac.) Nog.	Malshej Ghats, Matheran and Panchgani	Sedgwick (1909), Dabhade (1998) and Chaudhary <i>et al.</i> (2008).
<b>51)</b>	<b>Genus: <i>Pleurochaete</i></b> Lindb.		

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

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