

Fusarium Link

Fusarium incarnatum (Desm.) Sacc., Syll. Fung. (Abellini) 4: 712.1886.
Fusisporium incarnatum Desm., Ann. Sci. Nat., Bot., sér. 2, 10: 309.1838.
Fusarium semitectum Berk. & Ravenel, in Berkeley, Grevillea 3(27): 98.1875.
 Distribution: Karnataka (Mysuru).

Fusarium oxysporum Schldtl., Fl. Berol. (Berlin) 2: 139.1824.
Fusarium orthoceras var. *ciceris* Padwick, Indian J. Agric. Sci. 10: 283.1940 ('ciceri').
Fusarium orthoceras var. *pisi* Linford, Res. Bull. Agric. Exp. Stn. Univ. Wis. 85: 11.1928.
 Distribution: Karnataka (Bengaluru Rural, Mysuru).

Gangliostilb Subram. & Vittal

Gangliostilbe indica Subram. & Vittal, Kavaka 3: 70.1976.
 Distribution: Karnataka (Shivamogga).

Gibberella intricans Wollenw., Fusaria Auto gr. Delin. 3: no. 810.1930.
Fusarium equiseti (Corda) Sacc., Syll. Fung. (Abellini) 4: 707.1886.
 Distribution: Karnataka (Bengaluru UD).

Gliocladiopsis S.B.Saksena

Gliocladiopsis tenuis (Bugnic.) Crous & M.J. Wingf., Mycol. Res. 97(4): 446.1993.
Cylindro carpontenue Bugnic., Encyclop. Mycol. 11: 178.1939.
 Distribution: Karnataka (Chikkamagaluru).

Haematonectria Samuels & Nirenberg

Haematonectria haematococca (Berk. & Broome) Samuels & Rossman in Rossman, Samuels, Rogerson & Lowen, Stud. Mycol. 42: 135.1999.
Nectria haematococca Berk. & Broome, J. Linn. Soc., Bot. 14(74): 116.1875
Fusarium solani (Mart.) Sacc., Michelia 2 (7): 296.1881
 Distribution: Karnataka (Bengaluru UD).

Hyaloflorea Bat. & H. Maia

Hyaloflorea ramosa Bat. & H. Maia, Anais Soc. Biol. Pernambuco 13(1): 155.1955.
 Distribution: Karnataka (Bengaluru UD).

Lanatonectria Samuels & Rossman

Lanatonectria flavolanata (Berk. & Broome) Samuels & Rossman in Rossman et al., Stud. Mycol. 42: 139.1999.
Nectria flavolanata Berk. & Broome, J. Linn. Soc., Bot. 14(74): 114.1875.
 Distribution: Karnataka (Chikkamagaluru).

Ophionectria Sacc.

Ophionectria trichospora (Berk. & Broome) Sacc., Michelia 1(3): 323.1878.
 Bas: *Nectria trichospora* Berk. & Broome, J. Linn. Soc., Bot. 14(74): 115.1875.
 Distribution: Karnataka (Dakshina Kannada).

Tubercularia Weber ex F.H.Wigg.

Tubercularia lateritia (Berk.) Seifert, Stud. Mycol.27: 119.1985.
Stilbum cinnabarinum Mont., Ann. Sci. Nat., Bot., sér. 2, 8: 360.1837.
Stilbum lateritium Berk., Ann. Nat. Hist., Mag. Zool. Bot. Geol. 4: 291.1840.
 Distribution: Karnataka (Kodagu).

Ophiocordycipitaceae**Haptocillium** W. Gams & Zare

Haptocillium obovatum (Drechsler) Glockling, Mycologist 19(1): 4. 2005.
Acrostalagmus obovatus Drechsler, Phytopathology 31: 784.1941.
 Distribution: Karnataka (Bengaluru UD).

Incertaesedis**Hypocreales****Acremonium** Link

Acremonium alternatum Link, Mag. Gesell. Naturf. Freunde, Berlin3(1-2): 15.1809.
 Distribution: Karnataka (Bengaluru UD).

Acremonium charticola (Lindau) W. Gams, Cephalosporium-Artige Schimmel. (Stuttgart): 46.1971.
Cephalosporium charticola Lindau, Rabenh. Krypt.-Fl., ed. 2, 1.8: 107.1904.
 Distribution: Karnataka (Bengaluru UD).

Acremonium hansfordii (Deighton) W. Gams, Cephalosporium-Artige Schimmel. (Stuttgart): 71.1971.
Pseudofusidium hansfordii Deighton, Mycol. Pap. 118: 26.1969.
 Distribution: Karnataka (Bengaluru UD).

Acremonium implicatum (J.C. Gilman & E.V. Abbott) W. Gams, Trans. Brit. Mycol. Soc.64(3): 394.1975.
Monilia implicata J.C. Gilman & E.V. Abbott, J.Iowa State Coll., Sci. 1(3): 269.1927.
 Distribution: Karnataka (Bengaluru UD).

Acremonium vitis Catt., Arch. Labor. Bot. Critt. Univ. Pavia 2 & 3: 59.1876.
 Distribution: Karnataka (Bengaluru UD).

Acremonium zonatum (Sawada) W. Gams, Cephalosporium-Artige Schimmel. (Stuttgart): 119.1971.
Cephalosporium zonatum Sawada, Spec. Bull. Agric. Exp. Station Formosa 19: 603.1919.
 Distribution: Karnataka (Bengaluru UD).

Illosporium Mart.

Illosporium citri Muthappa, Mycopathol. Mycol. Appl.29: 60.1966.
 Distribution: Karnataka (Kodagu).

Sarocladium W. Gams & D.Hawksw.

Sarocladium glaucum (W. Gams) Summerb., Stud. Mycol. 68(1): 158. 2011.
Acremonium glaucum W. Gams, Cephalosporium-artige Schimmel. (Stuttgart): 68.1971.
 Distribution: Karnataka (Bengaluru UD).

Sarocladium strictum (W. Gams) Summerb., Stud. Mycol. 68(1): 158.2011.
Acremonium glaucum W. Gams, Cephalosporium-ArtigeSchimmel. (Stuttgart): 68.1971.
Cephalosporium acremonium Corda, Icon. fung. (Prague) 3: 11.1839.
 Distribution: Karnataka.

Stachybotrys Corda

Stachybotrys chartarum (Ehrenb.) S. Hughes, Can. J. Bot.36: 812.1958.
Stilbospora chartarum Ehrenb., Sylv. Mycol. Berol. (Berlin): 9, 21.1818.
Stachybotrys atra Corda, Icon. Fung. (Prague) 1: 21.1837.
 Distribution: Karnataka (Bengaluru UD).

Stachybotrys nephrospora Hansf., Proc. Linn. Soc. London 155: 45.1943.
 Distribution: Karnataka (Bengaluru UD).

Trichothecium roseum (Pers.) Link, Mag. Gesell. Naturf. Freunde, Berlin 3(1-2): 18.1809.
Trichoderma roseum Pers., Neues Mag. Bot. 1: 92.1794.
 Distribution: Karnataka (Dharwad, Mysuru, Uttara Kannada).

Magnaporthales

Magnaporthaceae

Magnaporthe R.A.Krause & R.K.Webster

Magnaporthe grisea (T.T. Hebert) M.E. Barr, Mycologia 69(5): 954.1977.
Ceratospaeria grisea T.T. Hebert, Phytopathology 61(1): 86.1971.
Pyricularia oryzae f. *stenotaphri* K.I. Wilson & Preethamb., Mycopathol. Mycol. Appl. 52(3-4): 221.1974
 ('*Piricularia oryzae* f. *stenotaphrii*').
 Distribution: Karnataka (Mysuru).

Melanosporales

Ceratostomataceae

Melanospora Corda

Melanospora zamiae Corda, Icon. Fung. (Prague) 1: 24.1837.
Melanospora cirrhata Berk., Grevillea 16(80): 102.1888.
 Distribution: Karnataka (Kodagu).

Meliolales

Armatellaceae

Armatella Theiss. & Syd.

Armatella cinnamomi Hansf. & Thirum., Farlowia 3: 286.1948.
 Distribution: Karnataka (Chikkamagaluru).

Armatella cryptocaryae Hosag., J. Econ. Taxon. Bot. 15(1): 198.1991.
 Distribution: Karnataka (Chikkamagaluru).

Meliolaceae

Amazonia Theiss.

Amazonia asterinoides (G. Winter) Theiss., Ann. Mycol. 11(6): 499. 1913.

Meliola asterinoides G. Winter, Hedwigia 25: 96. 1886.

Meliola asterinoides var. *major* Gaillard, Gen. Mel. 58. 1892 & Syll. Fung. 11: 262. 1895.

Distribution: Karnataka (Shivamogga).

Amazonia karnatakensis Hosag. & Manian, J. Econ. Taxon. Bot. 13(1): 45. 1989.

Distribution: Karnataka (Kodagu).

Amazonia leae Hansf. & Thirum., Farlowia 3: 287. 1948.

Distribution: Karnataka (Mysuru).

Amazonia mayteni Hosag., Kaver., Raghu & Goos, Mycotaxon 51: 107. 1994.

Distribution: Karnataka (Shivamogga).

Amazonia psychotriae (Henn.) Theiss., Ann. Mycol. 11(6): 499. 1913.

Meliola asterinoides var. *psychotriae* Henn., Hedwigia 43: 361. 1904.

Distribution: Karnataka (Shivamogga).

Amazonia syzygii Hosag., Mycotaxon 36(1): 236. 1989.

Distribution: Karnataka (Kodagu).

Appendiculella Hohn.

Appendiculella calophylli (F. Stevens) Toro, Mycologia 17(4): 144. 1925.

Meliola calophylli F. Stevens, Illinois Biol. Monogr. (Urbana) 2(4): 490. 1916

Appendiculella calophylli var. *apetali* Hosag., Kaver., Raghu & Goos, Mycotaxon 51: 108. 1994.

Distribution: Karnataka (Shivamogga).

Appendiculella calostroma (Desm.) Höhn., Sber. Akad. Wiss. Wien, Math.-naturw. Kl., Abt. 1 128: 556 (1919)

Sphaeria calostroma Desm., Bull. Soc. Bot. France 4: 22. 1857.

Distribution: Karnataka (Bengaluru UD).

Appendiculella capparigena Hosag., J. Mycopathol. Res. 44(1): 3. 2006 ('capparidigena')

Distribution: Karnataka (Kodagu).

Appendiculella ehretiae Hosag. & Raghu in Hosagoudar, Raghu & Pillai, Nova Hedwigia 58(3-4): 530. 1994.

Distribution: Karnataka (Chikkamagaluru).

Asteridiella McAlpine

Asteridiella callista (Rehm) Hansf., Beih. Sydowia 2: 687. 1961.

Meliola callista Rehm, Leafl. Philipp. Bot. 6: 2191. 1914.

Asteridiella callista (Rehm) Hansf., Sydowia 10(1-6): 47. 1957.

Distribution: Karnataka (Dakshina Kannada, Kodagu).

Asteridiella depokensis (Hansf.) Hansf., Sydowia16(1-6): 321.1963.

Irenina depokensis Hansf., Reinwardtia3(1): 109.1954.

Distribution: Karnataka (Kodagu).

Asteridiella eucleae (Hansf.) Hansf., Beih. Sydowia2: 497.1961.

Irenina eucleae Hansf., Proc. Linn. Soc. London159: 24.1947.

Asteridiella eucleae var. *microspora* Hosag. & Raghu, in Hosagoudar, Meliolales India: 88.1996.

Distribution: Karnataka (Uttara Kannada).

Asteridiella grewiae C.R. Patil ex Hosag., Meliolales India91.1996.

Distribution: Karnataka (Uttara Kannada).

Asteridiella heritiericola (Thite & D.K. Kulk.) Hosag., Meliolales India 91.1996.

Meliola heritiericola Thite & D.K. Kulk., J. Shivaji Univ. 18: 210.1978('herietariicola).

Distribution: Karnataka (Belagavi).

Asteridiella indica (Anahosur) A. Pande, Ascomycetes Penin. India: 264 2008 ('amoorae').

Irene indica Anahosur, Sydowia23(1-6): 58.1970.

Distribution: Karnataka (Kodagu).

Asteridiella kapoorii Hosag. & Raghu in Hosagoudar, Meliolales India92.1996.

Distribution: Karnataka (Chikkamagaluru).

Asteridiella linocierae (Syd. & P. Syd.) Hansf., Sydowia10(1-6): 48.1957.

Meliola linocierae Syd. & P. Syd., Ann. Mycol.12(6): 550.1914.

Distribution: Karnataka (Mysuru).

Asteridiella lophopetali Hosag. & Raghu, New Botanist20(1-4): 65.1993.

Distribution: Karnataka (Chikkamagaluru, Uttara Kannada).

Asteridiella malloti (Hansf. & Thirum.) Hansf., Beih. Sydowia2: 209.1961.

Irenina malloti Hansf. & Thirum., Farlowia3(3): 289 (1948)

Asteridiella malloti (Hansf. & Thirum.) Hansf., Sydowia10(1-6): 49.1957.

Distribution: Karnataka (Chikkamagaluru).

Asteridiella mastixiae Hosag. & Raghu in Hosagoudar, Meliolales India 96.1996

Distribution: Karnataka (Chikkamagaluru).

Asteridiella pothodis (Hansf. & Thirum.) Hansf., Beih. Sydowia2: 714.1961.

Asteridiella pothodis(Hansf. & Thirum.) Hansf., Sydowia10(1-6): 49.1957.

Distribution: Karnataka (Shivamogga).

Asteridiella sapotacearum (Hansf.) Hansf., Beih. Sydowia2: 501.1961.

Irene sapotacearum Hansf., Sydowia9(1-6): 7.1955.

Distribution: Karnataka (Kodagu).

Asteridiella schlegeliae (F. Stevens) Hansf., Beih. Sydowia2: 661 (1961)

Meliola glabroides var. *schlegeliae* F. Stevens, Illinois Biol. Monogr. (Urbana) 2(4): 488.1916.

Asteridiella schlegeliae var. *stereospermi* Hosag. & Raghu in Hosagoudar, Raghu & Pillai, Nova Hedwigia 58(3-4): 531.1994.

Distribution: Karnataka (Shivamogga, Uttara Kannada).

Asteridiella vacciniicola Hansf., Sydowia 11(1-6): 49.1958.
Distribution: Karnataka (Chikkamagaluru).

Asteridiella websteri Hosag., Nova Hedwigia 52(3-4): 498.1991 ('websterii').
Distribution: Karnataka (Uttara Kannada).

Irene Theiss.

Irene indica Anahosur, Sydowia 23(1-6): 58.1970.
Distribution: Karnataka (Kodagu).

Irenina F. Stevens

Irenina heudeloti (Gaillard) F. Stevens, Ann. Mycol. 25(5-6): 459.1927.
Meliola heudeloti Gaillard, Genre Meliola: 49.1892.
Distribution: Karnataka (Shivamogga).

Irenina trematis (Speg.) F. Stevens, Ann. Mycol. 25(5-6): 457.1927 ('tremae').
Meliola trematis Speg., Anal. Mus. Nac. Hist. Nat. B. Aires 23: 45, 1912 ('tremae')
Asteridiella trematis (Speg.) Hansf., Sydowia 10(1-6): 50.1957 ('tremae')
Distribution: Karnataka (Shivamogga).

Irenopsis F. Stevens

Irenopsis agumbensis A. Pande, Ascomycetes Penin. India: 265.2008.
Distribution: Karnataka (Shivamogga).

Irenopsis agumbensis Subhedar & V.G. Rao, J. Univ. Poona, Sci. Tech. 50: 26.1977.
Meliola agumbensis (Subhedar & V.G. Rao) Hosag., Indian Bot. Report. 7(1-2): 58.1988.
Distribution: Karnataka (Shivamogga).

Irenopsis ingae (F. Stevens & Tehon) F. Stevens, Ann. Mycol. 25(5-6): 433.1927.
Irene ingae F. Stevens & Tehon, Mucologia 18 (1): 20.1926.
Distribution: Karnataka (Kodagu).

Irenopsis mysorensis Hansf. & Thirum., Farlowia 3 (3): 287.1948.
Distribution: Karnataka (Shivamogga).

Irenopsis tjibodensis Hansf., Reinwardtia 3 (1): 106.1954.
Distribution: Karnataka (Shivamogga, Uttara Kannada).

Meliola Fr.

Meliola aethiops Sacc., Bull. dell'orto Bot. R. Univer. Napoli 6: 41.1921.
Meliola aethiops var. *moullavae* Hosag. & Raghu in Hosagoudar, Raghu & Pillai, Nova Hedwigia 58 (3-4): 533.1994.
Distribution: Karnataka (Shivamogga, Uttara Kannada).

Meliola affinis Syd. & P. Syd., Leafl. Philipp. Bot. 6: 1921.1913.
Meliola affinis var. *indica* Hosag., Nova Hedwigia 47(3-4): 538.1988.
Distribution: Karnataka (Dakshina Kannada).

Meliola Africana Hansf., Sydowia10(1-6): 62.1957.

Distribution: Karnataka (Shivamogga, Uttara Kannada).

Meliola altissimae Hosag., Mycotaxon 42: 129.1991.

Distribution: Karnataka (Shivamogga, Uttara Kannada).

Meliola amphitricha Fr., Elench. Fung. 2: 109.1828.

Distribution: Karnataka (Belagavi).

Meliola artocarpi H.S. Yates, Philipp. J. Sci., C, Bot. 12: 362.1917.

Meliola artocarpi var. *indica* Hosag., C.M. Pillai & Raghu in Hosagoudar, Meliolales of India 134.1996.

Distribution: Karnataka (Daksina, Kannada).

Meliola bakeri Syd. & P. Syd., Ann. Mycol.14(5): 355.1916.

Distribution: Karnataka (Cikkamagaluru).

Meliola bangalorensis Hansf. & Thirum., Farlowia3: 290.1948.

Distribution: Karnataka (Bengaluru UD).

Meliola bauhiniicola W. Yamam., Trans. Nat. Hist. Soc. Formosa31: 225.1941

Distribution: Karnataka (Shivamogga, Uttara Kannada).

Meliola bicornis Wint. Hedwigia 23: 99.1886.

Distribution: Karnataka (Uttara Kannada).

Meliola buteae Hafiz Khan, Azmatullah & Kafi, Biologia (Lahore)1(1): 112.1955.

Distribution: Karnataka (Uttara Kannada).

Meliola canarii Syd. & P. Syd., Ann. Mycol.12(6): 550.1914.

Distribution: Karnataka (Kodagu).

Meliola cansjerae Hansf. & Thirum., Farlowia3: 290.1948.

Distribution: Karnataka (Chikkamagaluru).

Meliola canthii Hansf., Proc. Linn. Soc. London157: 22.1945.

Distribution: Karnataka (Dakshina Kannada).

Meliola capensis (Kalchbr. & Cooke) Theiss., Ann. Mycol.10(1): 20 (1912)

Asterina capensis Kalchbr. & Cooke, Grevillea9(49): 32.1880. 154.1996 ('ermerginati').

Distribution: Karnataka (Shivamogga, Uttara Kannada).

Meliola carissae Doidge, *Bothalia* 1(2): 72 (1922)

Meliola carissae var. *indica* Hansf., Sydowia10(1-6): 67.1957.

Distribution: Karnataka (Shivamogga).

Meliola celastracearum Hosag. & B.R. Dayal in Hosagoudar, Meliolales of India: 161.1996.

Distribution: Karnataka (Chikkamagaluru).

Meliola ceropegia Hosag. & V.S. Ramach., Mycotaxon 42: 132.1991.

Distribution: Karnataka (Shivamogga).

Meliola chandrasekharanii Hosag. in Hosagoudar & Goos, Mycotaxon 37: 225.1990.
Distribution: Karnataka (Kodagu).

Meliola chukrasiae Hosag., Meliolales of India: 166.1996.
Distribution: Karnataka (Uttara Kannada).

Meliola cissampelicola Hansf. & Thirum., Farlowia 3: 291.1948.
Distribution: Karnataka (Mysuru).

Meliola clavulata G. Winter, Hedwigia 25: 98.1886.
Distribution: Karnataka (Chikkamagaluru).

Meliola clerodendricola Henn., Hedwigia 37: 288.1898.
Distribution: Karnataka (Shivamogga, Uttara Kannada).

Meliola cookeana Speg., Anal. Soc. Cient. Argent. 12(1): 41.1881.
Distribution: Karnataka (Uttara Kannada).

Meliola crescentiae F. Stevens, Ann. Mycol. 26(3-4): 240.1928.
Distribution: Karnataka (Dharwad).

Meliola cryptocaryicola Hosag. & Raghu, New Botanist 20(1-4): 67.1993 ('cryptocariicola')
Distribution: Karnataka (Shivamogga).

Meliola cynanchi Hosag., D.K. Agarwal, H. Biju & Archana, Indian Phytopath. 59(3): 345. 2006.
Distribution: Karnataka (Kodagu).

Meliola densa Cooke, Grevillea 12(63): 85.1884.
Distribution: Karnataka (Dakshina Kannada).

Meliola desmodii-laxiflori var. **indica** Hosag., D.K. Agarwal, H. Biju & Archana, Indian
Phytopath. 59(3): 346.2006.
Distribution: Karnataka (Dakshina Kannada, Kodagu).

Meliola dichapetali Hansf. & Thirum., Farlowia 3: 292.1948.
Distribution: Karnataka (Chikkamagaluru).

Meliola dichotoma Berk. & M.A. Curtis, Proc. Amer. Acad. Arts Sci. 4: 130.1860.
Meliola dichotoma var. *kusanoi* (Henn.) Hansf., Beih. Sydowia 2: 484.1961.
Distribution: Karnataka (Chikkamagaluru).

Meliola dimorphochaeta M.S. Patil & Maham., Indian Phytopath. 52(3): 250.1999.
Distribution: Karnataka (Shivamogga).

Meliola diospyri Syd. & P. Syd. in Sydow, Sydow & Butler, Ann. Mycol. 9(4): 381.1911.
Distribution: Karnataka (Chikkamagaluru).

Meliola diospyricola Hansf., Proc. Linn. Soc. New South Wales 78(3-4): 55.1953.
Distribution: Karnataka (Uttara Kannada).

Meliola elaeagni Hansf. & Thirum., Farlowia 3: 292.1948.
Distribution: Karnataka (Chikkamagaluru).

Meliola elmeri Syd. & P. Syd., Leafl. Philipp. Bot. 5: 1537.1912.
Distribution: Karnataka (Uttara Kannada).

Meliola entadicola Deighton, Sydowia 11(1-6): 104.1958.
Distribution: Karnataka (Dakshina Kannada).

Meliola erycibes-paniculatae Hosag.in Hosagoudar & Goos, Mycotaxon 37: 231.1990
('erycibes-paniculatae').
Distribution: Karnataka (Shivamogga, Uttara Kannada).

Meliola eugeniae-jamboloidis Hansf., Reinwardtia 3: 98.1954.
Distribution: Karnataka (Shivamogga, Uttara Kannada).

Meliola eugeniicola F. Stevens, Ann. Mycol. 26(3-4): 231.1928.
Distribution: Karnataka (Dakshina Kannada).

Meliola ficicola Hansf. & Thirum., Farlowia 3: 293.1948.
Distribution: Karnataka (Chikkamagaluru).

Meliola formosensis W. Yamam., Trans. Nat. Hist. Soc. Formosa 31: 18.1941.
Asteridiella formosensis (W. Yamam.) Hansf., Sydowia 10(1-6): 48.1957.
Distribution: Karnataka (Shivamogga, Uttara Kannada).

Meliola gamblei Hosag., Mycotaxon 42: 134.1991.
Distribution: Karnataka (Dakshina Kannada).

Meliola garciniae H.S. Yates, Philipp. J. Sci., C, Bot. 13: 369.1918.
Distribution: Karnataka (Shivamogga, Uttara Kannada).

Meliola gardneriae Hansf. & Thirum., Farlowia 3: 293.1948.
Distribution: Karnataka (Chikkamagaluru).

Meliola gemellipoda Doidge, Bothalia 1(2): 80.1922.
Distribution: Karnataka (Bengaluru UD).

Meliola gersoppaensis Hosag., C.M. Pillai & Raghu in Hosagoudar, Meliolales of India: 205.1996.
Distribution: Karnataka (Bengaluru UD, Shivamogga).

Meliola gneti Hansf., Reinwardtia 3: 85.1954.
Distribution: Karnataka (Belagavi).

Meliola gordoniae Hosag., Meliolales of India: 209.1996.
Distribution: Karnataka (Chikkamagaluru).

Meliola grewiae var. **longispora** Hosag. & V.S. Raju, J. Econ. Taxon. Bot. 6 (3): 717.1985.
Distribution: Karnataka (Belagavi).

Meliola groteana Syd. & P. Syd., Ann. Mycol. 11(5): 402.1913.
Distribution: Karnataka (Kodagu).

Meliola heyneae Hansf. & Thirum., Farlowia 3(3): 294.1948.
Distribution: Karnataka (Shivamogga).

Meliola holarrhenae Hansf. & Thirum., Farlowia 3: 294.1948.

Distribution: Karnataka

Meliola ichnocarpi F. Stevens & Roldan, Philipp. J. Sci., C, Bot. 56(1): 72.1935.

Distribution: Karnataka (Shivamogga).

Meliola ilicis-malabaricae Hosag. & Raghu, New Botanist 20(1-4): 67.1993.

Distribution: Karnataka (Bengaluru UD, Shivamogga).

Meliola indica var. **careyae** F. Stevens, Ann. Mycol. 26(3-4): 223.1928.

Distribution: Karnataka (Shivamogga, Mysuru).

Meliola ixorae H.S. Yates, Philipp. J. Sci., C, Bot. 12: 365.1917.

Distribution: Karnataka (Shivamogga).

Meliola jasminicola Henn., Hedwigia 34: 11.1895.

Distribution: Karnataka (Shivamogga).

Meliola kanniyakumariana Hosag., Meliolales of India (Calcutta): 229 (1996)

Meliola kanniyakumariana var. *brahmagiriensis* Hosag., D.K. Agarwal, H. Biju & Archana, Indian Phytopath. 59 (3): 347.2006 ('brahmagiriense')

Distribution: Karnataka (Kodagu).

Meliola kapoorii Hosag. & Raghu in Hosagoudar, Meliolales India: 229.1996.

Distribution: Karnataka (Chikkamagaluru).

Meliola karnatakensis Hosag., C.M. Pillai & Raghu, in Hosagoudar, Meliolales of India: 232. 1996.

Distribution: Karnataka (Shivamogga).

Meliola kaveriappae Hosag., C.M. Pillai & Raghu in Hosagoudar, Meliolales India: 232.1996 ('kaveriappai')

Distribution: Karnataka (Shivamogga).

Meliola kingiodendri Hosag., B.R. Dayal & Goos, Mycotaxon 46: 205.1993.

Distribution: Karnataka (Kodagu).

Meliola kydiae-calycinae Hansf. & Thirum., Farlowia 3: 296.1948.

Distribution: Karnataka (Uttara Kannada).

Meliola longiseta Höhn., Sber. Akad. Wiss. Wien, Math.-naturw. Kl., Abt. 1, 116: 100.1907.

Distribution: Karnataka (Shivamogga, Uttara Kannada),

Meliola machili W. Yamam., Trans. Nat. Hist. Soc. Formosa 31: 23.1941.

Distribution: Karnataka (Kodagu).

Meliola macropoda Syd., Ann. Mycol. 24(5-6): 296.1926.

Distribution: Karnataka (Shivamogga, Uttara Kannada).

Meliola maesicola Hansf. & F. Stevens, J. Linn. Soc., Bot. 51: 277.1937.

Distribution: Karnataka (Kodagu).

Meliola malabarensis Hansf., Proc. Linn. Soc. London 157: 182.1946.
Distribution: Karnataka (Kodagu).

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Distribution: Karnataka (Shivamogga).

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Distribution: Karnataka (Kodagu).

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Distribution: Karnataka (Mysuru).

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Distribution: Karnataka (Chikkaballapur).

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Distribution: Karnataka (Chikkamagaluru).

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Distribution: Karnataka (Shivamogga).

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Distribution: Karnataka (Uttara Kannada).

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Distribution: Karnataka (Chikkamagaluru).

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Distribution: Karnataka (Uttara Kannada).

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Distribution: Karnataka (Kodagu).

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Distribution: Karnataka (Dakshina Kannada).

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Distribution: Karnataka (Dharwad).

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Distribution: Karnataka (Shivamogga, Uttara Kannada)

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Distribution: Karnataka (Uttara Kannada).

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 Distribution: Karnataka (Chikkamagaluru, Kodagu)
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 Distribution: Karnataka (Chikkamagaluru).
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 Distribution: Karnataka (Chikkamagaluru).
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 Distribution: Karnataka (Shivamogga).
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 Distribution: Karnataka (Belagavi).
- Meliola ziziphi** Hansf. & Thirum., Farlowia 3(3): 299.1948.
 Distribution: Karnataka (Chikkamagaluru).

Microascales

Halosphaeriaceae

Clavatospora Sv. Nilsson

- Clavatospora tentacula** Sv. Nilsson, Symb. Bot. Upsal. 18(2): 89.1964.
 Distribution: Karnataka (Dakshina Kannada).
- Corollospora maritima** Werderm., Notizbl. Königl. Bot. Gart. Mus. Berlin 8: 248.1922.
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Incertaesedis**Microascales****Ceratocystis** Ellis & Halst.

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 Distribution: Karnataka (Bengaluru UD).

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 Distribution: Karnataka (Kodagu).

Phyllachora Nitschke ex Fuckle

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 Distribution: Karnataka (Dakshina Kannada).

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 Distribution: Karnataka (Uttara Kannada).

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 Distribution: Karnataka (Kodagu).

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 Distribution: Karnataka (Dharwad).

Phyllachora annulata Sacc., Syll. Fung. (Abellini) 2: 610.1883.
 Distribution: Karnataka (Belagavi, Mysuru).

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 Distribution: Karnataka (Kodagu).

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 Distribution: Karnataka (Bengaluru UD).

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 Distribution: Karnataka (Uttara Kannada).

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 Distribution: Karnataka (Kodagu).

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Distribution: Karnataka (Mysuru, Uttara Kannada).
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Distribution: Karnataka (Bengaluru UD).
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Distribution: Karnataka (Kodagu, Mysuru).
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Distribution: Karnataka (Belagavi, Mysuru).
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Distribution: Karnataka (Chikkamagaluru).
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Distribution: Karnataka (Uttara Kannada).
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Distribution: Karnataka (Kodagu).
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Distribution: Karnataka (Belagavi,).
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Distribution: Karnataka (Kodagu).
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Catacauma microcentum (Berk. & Broome) Theiss. & Syd., Ann. Mycol. 13(3-4): 384.1915.
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Distribution: Karnataka (Dakshina Kannada).

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Distribution: Karnataka (Kodagu).

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Distribution: Karnataka (Kodagu, Tumakuru).

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Distribution: Karnataka (Belagavi, Mysuru).

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Distribution: Karnataka (Dharwad).

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Distribution: Karnataka (Mysuru, Uttara Kannada).

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Distribution: Karnataka (Kodagu, Uttara Kannad).

Polystigma DC.

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Distribution: Karnataka (Kodagu).

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Distribution: Karnataka.

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Stigmochora deightonii (Syd.) Arx in Müller & Arx, Beitr. Kryptfl. Schweiz 11(2): 662. 1962.

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Distribution: Karnataka (Uttara Kannada).

Diaporthales

Diaporthaceae

Diaporthe Nitschke

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Distribution: Karnataka (Mysuru).

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Distribution: Karnataka (Bengaluru UD).

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Distribution: Karnataka (Bengaluru UD).

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Distribution: Karnataka (Mysuru).

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Distribution: Karnataka (Belagavi).

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Distribution: Karnataka (Bengaluru UD).

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Distribution: Karnataka (Dharwad).

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Distribution: Karnataka (Bengaluru Rural).

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Phyllosticta manihot Speg., Anal. Mus. Nac. B. Aires, Ser. 3 13: 335.1911.
Distribution: Karnataka (Bengaluru UD).

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Distribution: Karnataka (Bengaluru UD).

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Distribution: Karnataka (Bengaluru UD).

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Phoma velata Sacc., *Michelia* 2(no. 6): 96.1880.
Phomopsis ambigua Traverso, Fl. Ital. Crypt., Pars 1: Fungi. Pyrenomycetae. Xylariaceae, Valsaceae, Ceratostomataceae 2(1): 266.1906.
Distribution: Karnataka (Belagavi, Bengaluru UD).

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Phoma vexans Sacc. & P. Syd., Syll. Fung. (Abellini) 14(2): 889.1899.
 Distribution: Karnataka (Belagavi).

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 Distribution: Karnataka (Bengaluru UD).

Gnomoniaceae

Gnomonia Ces. & De Not.

Gnomonia grewiae Anahosur, Sydowia 23(1-6): 57.1970.
 Distribution: Karnataka (Kodagu).

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 Distribution: Karnataka (Kodagu).

Pleuroceras Riess

Pleuroceras lobeliae Narendra & V.G. Rao, Curr. Sci. 44(8): 281.1975 ('lobelii')
 Distribution: Karnataka (Kodagu).

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Coniella Hohn.

Coniella eucalypticola Nag Raj, Can. J. Bot. 54: 1370.1976.
 Distribution: Karnataka (Mysuru).

Botryosphaeriaceae

Botryodiplodia (Sacc.) Sacc.

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 Distribution: Karnataka (Ballari).

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Sphaeropsis palmarum Cooke, Grevillea 5(33): 3.1876.
Phoma palmarum (Cooke) Sacc., Syll. Fung. (Abellini) 3: 157.1884.
 Distribution: Karnataka (Mysuru, Uttara Kannada).

Unplaced Saccharomycetales

Cyberlindnera Minter

Cyberlindnera jadinii (Sartory, R. Sartory, Weill & J. Mey.) Minter, Mycotaxon 110: 474. 2009.
Saccharomyces jadinii Sartory, R. Sartory, Weill & J. Mey., C. r. Hebd. Séanc. Acad. Sci., Paris, Sér. D, 194: 1688.1932.
Torulopsis utilis (Henneberg) Lodder, Verh. K. Akad. Wet., tweede sect. 32: 144.1934.
 Distribution: Karnataka (Mysuru)

Sordariales

Chaetomiaceae Chaetomium Kunze

Chaetomium bostrychodes Zopf, Abh. Bot. Ver. Prov. Brandenburg 19: 173. 1877.
Distribution: Karnataka (Bengaluru UD).

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Distribution: Karnataka (Bengaluru UD).

Chaetomium minutispora Aruna & Gopalkr. in Subrahm., Khedkar & Gopalkr., Kavaka 7: 21. 1980.
Distribution: Karnataka (Bengaluru UD).

Chaetomium pimprinum Aruna & Gopalkr. in Subrahm., Khedkar & Gopalkr., Kavaka 7: 21. 1980.
Distribution: Karnataka (Bengaluru UD).

Humicola Traaen

Humicola grisea Traaen, Nytt Mag. Natur. 52: 34. 1914.
Distribution: Karnataka (Mysuru).

Thielavia Zopf.

Thielavia terricola (J.C. Gilman & E.V. Abbott) C.W. Emmons, Bull. Torrey Bot. Club 57: 124. 1930.
Chaetomium terricola J.C. Gilman & E.V. Abbott, Proc. Indian Acad. Sci., Sect. B 74(5): 258. 1971.
Distribution: Karnataka (Bengaluru UD).

Lasiosphaeriaceae

Lasiosphaeria Ces. & De not.

Lasiosphaeria caryophylli T.S. Ramakr. & Sundaram, Indian Phytopath. 6(1): 27. 1954.
Distribution: Karnataka (Dakshina Kannada).

Sordariaceae Gelasinospora Dowding

Gelasinospora reticulata (C. Booth & Ebben) Cailleux, Bull. Trimest. Soc. Mycol. France 87(3): 534. 1972.
Thielavia reticulata C. Booth & Ebben, Trans. Brit. Mycol. Soc. 44(2): 216. 1961.
Anixiella reticulata (C. Booth & Ebben) Cain, Can. J. Bot. 39: 1668. 1961.
Distribution: Karnataka (Bengaluru UD).

Trichosphaeriales

Trichosphaeriaceae

Kananascus Nag Raj

Kananascus koorchalomagnatus Nag Raj, Mycotaxon 19: 203. 1984.
Distribution: Karnataka (Bengaluru UD).

Schweinitziella Speg.

Schweinitziella indica (Srinivas. & P.G. Sathe) A. Pande, Ascomycetes Penin. India: 478.2008.
Saccardomyces indicus Srinivas. & P.G. Sathe, Botanique 4(2): 115.1973 ('indica').
 Distribution: Karnataka (Belagavi).

Unplaced Trichosphaeriales

Nigrospora Zimm.

Nigrospora sacchari (Speg.) E.W. Mason, Trans. Brit. Mycol. Soc. 12(2-3): 161.1927.
Glenospora sacchari Speg., Revta Fac. Agron. Vet. Univ. Nac. La Plata 2: 248.1896.
 Distribution: Karnataka (Bengaluru UD).

order unknown, Family known

Apiosporaceae

Apiospora Sacc.

Apiospora montagnei Sacc., Nuovo Giorn. Bot. Ital. 7: 306.1875.
 Distribution: Karnataka (Mysuru).

Apiospora shiraiana (P. Syd.) Hara, List Japan. Fungi, ed.4:19.1954.
Melanconium shiraianum P. Syd., Hedwigia 38 (Beibl.): 143.1899.
 Distribution: Karnataka (Chikkaballapur).

Arthrimum Kunze

Arthrimum phaeospermum (Corda) M.B. Ellis, Mycol. Pap. 103: 8.1965.
Gymnosporium phaeospermum Corda, Icon. Fung. (Prague) 1: 1.1837.
Arthrimum phaeospermum var. *indicum* K.R. Khan & Sullia, Acta Bot. Indica 8(1):103.1980.
Papularia sphaerosperma (Pers.) Höhn., Sber. Akad. Wiss. Wien, Math.-Naturw. Kl., Abt. 1, 125(1-2): 114.1916.
 Distribution: Karnataka (Bengaluru Rural, Mysuru).

Glomerellaceae

Colletotrichum Corda

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 Distribution: Karnataka (Bengaluru UD).

Colletotrichum coccodes (Wallr.) S. Hughes, Can. J. Bot. 36: 754.1958.
Chaetomium coccodes Wallr., Fl. Crypt. Germ. (Norimbergae) 2: 265.1833.
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Gloeosporium mangiferae Henn., Verh. Bot. Ver. Prov. Brandenb. 40: 171.1899.
 Distribution: Karnataka (Bengaluru UD).

Colletotrichum coffeanum F. Noack, Z. PflKrankh. PflSchutz 2: 202.1901.
 Distribution: Karnataka (Kodagu).

Colletotrichum curvatum Briant & E.B. Martyn, Trop. Agric., Trin. 6: 258.1929.
 Distribution: Karnataka (Bengaluru UD).

Colletotrichum dematium (Pers.) Grove, J. Bot., Lond. 56: 341.1918.
Sphaeria dematium Pers., Syn. Meth. Fung. 1: 88.1801.
 Distribution: Karnataka (Bengaluru UD).

Colletotrichum dracaenae-fragrantis (H. Mori) Petr. & Syd., Ann. Mycol. 23(3-6): 251.1925.
Macrophoma dracaenae-fragrantis H. Mori, Boll. Soc. Bot. Ital.3: 131.1893.
 Distribution: Karnataka (Bengaluru UD).

Colletotrichum erythrinae Ellis & Everh. Bull. Torr. 437 (1895)
 Distribution: Karnataka (Uttara Kannada).

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 Distribution: Karnataka (Dharwad).

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 Distribution: Karnataka (Bengaluru UD).

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Distribution: Karnataka (Kodagu).

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Distribution: Karnataka (Chikkamagaluru).

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Distribution: Karnataka (Bengaluru UD).

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Distribution: Karnataka (Chikkamagaluru).

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Distribution: Karnataka (Dharwad).

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Distribution: Karnataka (Bengaluru UD).

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Distribution: Karnataka (Bengaluru UD).

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Distribution: Karnataka (Chikkamagaluru).

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Distribution: Karnataka (Kodagu).

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Distribution: Karnataka (Kodagu).

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Distribution: Karnataka (Kodagu).

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Distribution: Karnataka (Mysuru).

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Distribution: Karnataka (Mysuru).

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Distribution: Karnataka (Kodagu).

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Distribution: Karnataka (Kodagu).

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Distribution: Karnataka (Kodagu).

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Distribution: Karnataka (Kodagu).

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Distribution: Karnataka (Mysuru).

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Distribution: Karnataka (Belagavi).

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Distribution: Karnataka (Chikkamagaluru).

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Distribution: Karnataka (Kodagu).

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Distribution: Karnataka (Belagavi).

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Distribution: Karnataka (Belagavi).

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 Distribution: Karnataka (Kodagu).

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 Distribution: Karnataka (Uttara Kannada).

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 Distribution: Karnataka (Uttara Kannada).

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 Distribution: Karnataka (Kodagu).

Stilbohypoxylon Henn.

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 Distribution: Karnataka (Uttara Kannada).

Xylaria Hill. ex Schrank

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 Distribution: Karnataka (Kodagu).

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 Distribution: Karnataka (Kodagu).

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 Distribution: Karnataka (Kodagu).

Xylaria botrys Pat. Saccardo's Syll. Fung. IX: 534, 540; XII: 849
 Distribution: Karnataka (Kodagu).

Xylaria deserticola Speg., Anal. Mus. Nac. B. Aires, Ser. 3, 1: 70.1902.
 Distribution: Karnataka (Kodagu).

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 Distribution: Karnataka (Mysuru, Uttara Kannada).

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 Distribution: Karnataka (Chikkamagaluru, Mysuru).

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Distribution: Karnataka (Kodagu).

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Distribution: Karnataka (Kodagu).

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(*'symplocosii'*)
Distribution: Karnataka (Uttara Kannada).

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Sphaeria tuberosa Pers. in Gaudich. in Freyc., Voy. Uranie., Bot.: 180 1827.
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Distribution: Karnataka (Belagavi, Mysuru).

Order unknown, Family known

Apiosporaceae

Apiospora Sacc.

Apiospora montagnei Sacc., Nuovo Giorn. Bot. Ital. 7: 306.1875.
Distribution: Karnataka (Mysuru).

TAPHRINOMYCETES

Taphrinales

Taprinaceae

Taphrina Fr.

Taphrina lapponica Juel, Svensk Bot. Tidskr. 6: 353.1912.
Distribution: Karnataka (Bengaluru UD).

Taphrina laurencia Giesenh., Flora, Regensburg 76: 130.1892.
Distribution: Karnataka (Chikkamagaluru).

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Distribution: Karnataka (Chikkamagaluru).

AGARICOMYCETES

Agaricales

Agaricaceae

Calvatia E. M. Fries

Calvatia gigantea (Batsch) Lloyd, Mycol. Writ. 1 (Lycoperd. Australia) 1: 166.1904.
Lycoperdon giganteum Batsch, Elench. Fung. (Halle): 237. 1786.
Distribution: Karnataka (Chikkamagaluru).

Hydnangiaceae

Laccaria Berk. & Broome

Laccaria laccata var. **pallidifolia** (Peck) Peck, Bull. N.Y. St. Mus. 157: 92.1912.
Clitocybe laccata var. *pallidifolia* Peck, Ann. Rep. Reg. N.Y. St. Mus.43: 38.1890.
 Distribution: Karnataka (Chikkamagaluru, Kodagu).

Myceanaceae

Mycena (Pers.) Roussel

Mycena xanthophylla (Berk.) Sacc., Syll. Fung. (Abellini) 5: 272.1887.
Agaricus xanthophyllus Berk., Hooker's J. Bot. Kew Gard. Misc.2: 80.1850.
 Distribution: Karnataka (Kodagu).

Pleurotaceae

Pleurotus (Fr.) P.Kumm

Pleurotus eous (Berk.) Sacc., Syll. Fung. (Abellini) 5: 361.1887.
Agaricus eous Berk., Hooker's J. Bot. Kew Gard. Misc.2: 83.1850.
 Distribution: Karnataka (Mysuru).

Atheliales

Atheliaceae

Athelia Pers.

Athelia rolfsii (Curzi) C.C. Tu & Kimbr., Bot. Gaz. 139(4): 460.1978.
Corticium rolfsii Curzi, Boll. R. Staz. Patalog. Veget. Roma 2(11): 306.1932.
Sclerotium rolfsii Sacc., Ann. Mycol.9(3): 257.1911.
 Distribution: Karnataka (Bengaluru UD, Dharwad).

Cantharellales

Botryobasidiaceae

Haplotrichum Echw.

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Mucor croceus Mont. in Sagra, Hist. física, Polir. Nayt. Isl. Cuba9: 307.1845.
Allescheriella crocea (Mont.) S. Hughes, Mycol. Pap. 33: 97.1951.
 Distribution: Karnataka (Belagavi).

Ceratobasidiaceae

Ceratobasidium D.P.Rogers

Ceratobasidium theobromae (P.H.B. Talbot & Keane) Samuels & Keane in Samuels et al, Fungal Biology116(1): 19.2012.
Mucor croceus Mont. in Sagra, Hist. Física, Polir. Nayt. Isl. Cuba9: 307.1845.
Oncobasidium theobromae P.H.B. Talbot & Keane, Aust. J. Bot. 19: 203.1971.
 Distribution: Karnataka*

Thanatephorus Donk

Thanatephorus cucumeris (A.B. Frank) Donk, Reinwardtia3: 376.1956.
Hypochnus cucumeris A.B. Frank, Ber. Dt. Bot. Ges. 1: 62. 1883.
Rhizoctonia solani J.G. Kühn, Krankh. Kulturgew.: 224.1858.
 Distribution: Karnataka (Bengaluru UD).

Hydnaceae**Ingoldiella** D.E. Shaw

Ingoldiella hamata D.E. Shaw, Trans. Brit. Mycol. Soc. 59(2): 258.1972.
 Distribution: Karnataka (Dakshina Kannada).

Corticiales**Corticaceae****Corticium** Pers.

Corticium koleroga (Cooke) Höhn., Sber. Akad. Wiss. Wien, Math.-Naturw. Kl., Abt. 1, 119: 395.1910.
Pellicularia koleroga Cooke, Grevillea 4(31): 116. 1876.
 Distribution: Karnataka (Mysuru).

Hymenochaetales**Hymenochaetaeae****Inonotus** P.Karst

Inonotus glomeratus (Peck) Murrill, Mycologia 12(1): 18.1920.
Polyporus glomeratus Peck, Ann. Rep. New York St. Mus. 24: 78.1872.
 Distribution: Karnataka (Bengaluru UD, Chikkaballapur, Tumakuru).

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Polyporus tabacinus Mont., Ann. Sci. Nat. Bot., sér. 2, 3: 349. 1835.
 Distribution: Karnataka (Chikkamagaluru).

Phellinus Quel.

Phellinus noxius (Corner) G. Cunn., Bull. New Zeyland Dept. Sci. Industr. Res., Pl. Dis. Div. 164: 221.1965.
Fomes noxius Corner, Gard. Bull., Str. Settlem. 5(12): 324.1932.
 Distribution: Karnataka (Chikkamagaluru).

Phallales**Phallaceae****Clathrella** E. Fisch.

Clathrella delicata (Berk. & Broome) E. Fisch., Unters. Phalloid. 3: 36.1886 & in Engl. & Prantl, Nat. Pflanzenfam. Teil 1: 284.1900.
Clathrus delicatus Berk. & Broome, J. Linn. Soc., Bot. 14(74): 77. 1875.
 Distribution: Karnataka (Mysuru).

Dictyophora Desv.

Dictyophora merulina Berk., Intell. Obs. 9: 404.1866.

Distribution: Karnataka (Mysuru).

Polyporales**Fomitopsidaceae****Fomitella** Murrill

Fomitella rhodophaea (Lev.) T. Hatt., Mycoscience 46(5): 305. 2005.

Polyporus rhodophaeus Lev., Ann. Sci. Nat., Bot., sér. 3 2: 190. 1844.

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Distribution: Karnataka (Kodagu).

Ganodermataceae**Ganoderma** P. Karst.

Ganoderma lucidum (Curtis) P. Karst., Revue Mycol., Toulouse 3(9): 17.1881.

Boletus lucidus Curtis, Fl. Londin. 1: 72. 1781.

Distribution: Karnataka (Bengaluru UD, Uttara Kannada).

Meruliaceae**Irpex** Fr.

Irpex vellereus Berk. & Broome, J. Linn. Soc., Bot. 14(73): 61.1875.

Distribution: Karnataka (Shivamogga).

Polyporaceae**Microporus** P. Beauv.

Microporus xanthopus (Fr.) Kuntze, Revis. Gen. Pl. 3(2): 494.1898.

Polyporus xanthopus Fr., Observ. Mycol. (Havniae) 2: 255.1818.

Polystictus xanthopus (Fr.) Fr., Nova Acta R. Soc. Scient. Upsal., Ser. 3 1(1): 58.1855.

Distribution: Karnataka (Bengaluru UD, Chikkaballapur, Mysuru).

Polyporus P. Micheli

Polyporus grammocephalus Berk., London J. Bot. 1: 148.1842.

Distribution: Karnataka (Bengaluru UD, Chikkaballapur, Mysuru).

Polyporus sanguineus (L.) G. Mey., Prim. Fl. Esseq. 304.1818.

Boletus sanguineus L., Sp. Pl. ed. 2, 1646. 1763.

Polyporus sanguineus (L.) Fr., Syst. mycol. (Lundae) 1: 371.1821.

Polystictus sanguineus (L.) Fr., Nova Acta Reg. Soc. Sci. Upsal. 1: 75.1851.

Microporus sanguineus (L.) Kuntze, Rev. Gen. pl. 3: 497.1898.

Pycnoporus sanguineus (L.) Murrill, Bull. Torrey Bot. Club 31 (8): 421.1904.

Trametes sanguinea (L.) Lloyd, Mycol. Writ. 7 (72): 1291.1924.

Trametes cinnabarina var. *sanguinea* (L.) Pilát, Atlas Champ. Eur., Polypor., B, 1: 319.1940.

Trametes sanguinea (L.) Imazeki, Bulletin of the Tokyo Science Museum 6: 73.1943.

Coriolus sanguineus (L.) G. Cunn., Bulle. New Zealand Dept. Industr. Res. 81: 17.1949.

Fabiosporus sanguineus (L.) Zmitr., Mycena 1 (1): 93. 2001.

Distribution: Karnataka (Kodagu).

Polystictus Fr.

Polystictus tabacinus (Mont.) Fr., Nova Acta R. Soc. Scient. Upsal., Ser. 3, 1(1): 93. 1855.
Polyporus tabacinus Mont., Ann. Sci. Nat., Bot., sér. 2,3: 349.1835.
 Distribution: Karnataka (Kodagu).

Polystictus villosus Masee, Bull. Misc. Inf. Kew: 93.1906.
 Distribution: Karnataka (Mysuru).

Trametes Fr.

Trametes apiaria (Pers.) Zmitr., Wasser & Ezhov, Int. J. Medic. Mushrooms 14(3): 307.2012
Polyporus apiarius Pers., in Gaudich. in Freyc., Voy. Uranie., Bot.: 169. 1827
Hexagonia apiaria (Pers.) Fr., Epicr. Syst. Mycol. : 497.1838.
Hexagonia koenigii Berk. Ann. Mag. Nat. Hist., Ser. 1, 10:379.1843
Hexagonia apiaria var. *wightii* Klotzsch, Hedwegia 33:72.1913.
Hexagonia henschallii Lloyd, Mycol. Writ. 3:11.1910.
Scenidium apiarium (Pers.) Kuntze, Rev. Gen. Pl. 3: 516.1898.
 Distribution: Karnataka (Chamarajanagar).

Trametes hirsuta (Wulfen) Lloyd, Mycol. Writ. 7(73): 1319.1924.
Boletus hirsutus Wulfen, in Jacquin, Collnea Bot. 2: 149.1791.
Polyporus hirsutus (Wulfen) Fr., Syst. Mycol. (Lundae) 1: 265.1821.
 Distribution: Karnataka (Bengaluru UD, Kodagu).

Thelephorales**Thelephoraceae****Tomentella Pers.**

Tomentella vesiculosa Natarajan & Chandrash., Mycologia 70(6): 1294.1979.
 Distribution: Karnataka (Bengaluru UD).

PUCCINIOMYCOTINA**Microbotryales****Microbotryaceae****Sphacelotheca de Bary**

Sphacelotheca cymbopogonis-colorati Mundk. & Thirum., Mycol. Pap. 40: 3.1951
 Distribution: Karnataka (Bengaluru UD, Belur).

Sphacelotheca flagellata (Syd. & P. Syd.) Zundel, Bothalia 3: 301.1938.
Ustilago flagellata Syd. & P. Syd., Ann. Mycol. 9(2): 144.1911.
 Distribution: Karnataka (Bengaluru UD).

Sphacelotheca mutila Mundk. & Thirum., Mycol. Pap. 40: 4.1951.
 Distribution: Karnataka (Bengaluru UD).

Sphacelotheca vryburgii Zundel, Mycologia 23(4): 298.1931.
 Distribution: Karnataka (Chikkaballapur).

Pucciniales

Chaconiaceae

Maravalia Arthur

Maravalia echinulata (Niessl ex Rabenh.) Y. Ono, Mycologia 76(5): 904.1984.
Uromyces echinulatus Niessl, in Rabenh., Fungi Europ. Exsicc.: no. 2584.1881.
Scopella echinulata (Niessl) Mains, Ann. Mycol. 37(1-2): 58.1939.
 Distribution: Karnataka (Bengaluru UD).

Maravalia ichnocarpi (Thurum.) Sathe, Bull. Bot. Surv. India 11(1-2): 171.1971.
Acervulopsora ichnocarpi Thurum., Mycologia 37(3): 300.1945.
 Distribution: Karnataka (Bengaluru UD, Mysuru, Uttara Kannada). Yelwal

Maravalia mimusops (Cooke) Y. Ono, Mycologia 76(5): 907.1984.
Uromyces mimusops Cooke, Grevillea 10(56): 127.1882.
Scopella mimusops (Cooke) Cummins, Bull. Torrey Bot. Club 77: 209.1950.
 Distribution: Karnataka (Dakshina Kannada).

Maravalia pterocarpi (Thurum.) Thurum., Bull. Torrey Bot. Club 76: 339.1949.
Mainsia pterocarpi Thurum., Mycologia 39(2): 234.1947.
 Distribution: Karnataka (Chikkamagaluru).

Olivea Arthur

Olivea tectonae (Racib.) Thurum., Curr. Sci. 18: 176.1949.
Uredo tectonae Racib., Parasit. Alg. Pilze Java's (Jakarta) 1: 28.1900.
Chaonia tectonae T.S. Ramakr. & K. Ramakr., Indian Phytopath. 2: 19.1949.
 Distribution: Karnataka (Bengaluru UD).

Coleosporiaceae

Coleosporium Lev.

Coleosporium oldenlandiae E.J. Butler, Ann. Mycol. 12(2): 81.1914.
 Distribution: Karnataka (Mysuru).

Melampsoraceae

Melampsora Castagne

Melampsora euphorbiae-geniculatae F. Kern & Thurst., Mycologia 36(5): 507.1944.
 Distribution: Karnataka (Bengaluru UD).

Melampsora mundkurii Thurum. ex Ramachar & Bhagyan., Mycologia 69(5): 1078.1977.
 Distribution: Karnataka (Bengaluru UD).

Melampsora euphorbiae (Ficinus & C. Schub.) Castagne, Observ. Uréd. 2: 18.1843.
Xyloma euphorbiae Ficinus & C. Schub., Fl. Geg. Dresd. 2: 310.1823.
Melampsora ricini Pass., Erb. Critt. Ital., Ser. 2, fasc.: no. 684.1873.
 Distribution: Karnataka (Bengaluru UD).

Apiospora Sacc.

Apiospora shiraiana (P. Syd.) Hara, List Japan. Fungi. ed. 4: 19.1954.
Melanconium shiraianum P. Syd., Hedwigia 38(Beibl.): 143.1899.
 Distribution: Karnataka (Belagavi).

Phakopsoraceae**Cerotelium** Arthur

Cerotelium fici (Castagne) Arthur, Bull. Torrey Bot. Club 44: 509.1917.

Uredo fici Castagne, Pl. Crypt. Nord France, ed. 3,34: no. 1662.1848.

Distribution: Karnataka (Bengaluru UD, Mysuru).

Cerotelium trichosanthis (T.S. Ramakr. & Sundaram) Nag Raj, Govindu & Thirum., Sydowia 25(1-6): 158.1972.

Kuehneola trichosanthis T.S. Ramakr. & Sundaram, Proc. Indian Acad. Sci., Sect. B 5:114.1952

('trichosanthes')

Distribution: Karnataka (Chikkamagaluru).

Crossopsora Syd. & P. Syd.

Crossopsora ziziphi (Syd., P. Syd. & E.J. Butler) Syd. & P. Syd., Ann. Mycol.16(3-6): 243.1919.

Cronartium ziziphi Syd., P. Syd. & E.J. Butler, Ann. Mycol.10(3): 268.1912.

Distribution: Karnataka (Chikkaballapur).

Kweilingia Teng

Kweilingia divina (Syd.) Buritica, Revta Acad. Colomb. Cienc. Exact. Fis. Nat. 22(84): 330.1998.

Angiopsora divina Syd., Ann. Mycol.34(1-2): 71.1936.

Dasturella divina (Syd.) Mundk. & Khesw., Mycologia 35(2): 203.1943.

Distribution: Karnataka (Kodagu).

Phaeoseptoria Speg.

Phaeoseptoria eucalypti Hansf., Proc. Linn. Soc. New South Wales 82: 225.1957.

Distribution: Karnataka (Kodagu).

Phakopsora Dietel

Phakopsora formosana Syd. & P. Syd., Ann. Mycol.12(2): 109.1914.

Distribution: Karnataka (Bengaluru RD, Chamarajanagar).

Phakopsora mangalorica T.S. Ramakr. & Sundaram, Proc. Indian Acad. Sci., Pl. Sci. 35: 118.1952.

Distribution: Karnataka (Dakshina Kannada).

Phakopsora sterculiae Nag Raj, Govindu & Thirum., Sydowia 25(1-6): 160.1972

Distribution: Karnataka (Bengaluru UD).

Phakopsora tecta H.S. Jacks. & Holw. in Jackson, Mycologia 18(4): 148.1926.

Distribution: Karnataka (Bengaluru UD).

Phragmidiella Henn.

Phragmidiella heterophragmatis (Mundk. & Thirum.) Thirum. & Mundk., Indian Phyto -path. 2: 240.1950 ('heterophragmae').

Santapauella heterophragmatis Mundk. & Thirum., Mycologia37(5): 627.1945 ('heterophragmae')

Distribution: Karnataka (Bengaluru UD).

Phragmidiaceae

Kuehneola Magnus

Kuehneola flacourtia (Mundk.) Thirum., Mycologia 52(5): 691.1961.
Catenulopsora flacourtia Mundk. & Thirum., Ann. Bot., London, n.s. 7: 217.1943.
 Distribution: Karnataka (Bengaluru UD).

Pucciniaceae

Corbulopsora Communis

Corbulopsora cumminsii Thirum., Mycologia 39 (2): 235.1947.
 Distribution: Karnataka (Bengaluru UD).

Cystopsora E.J. Butler

Cystopsora antidesmatis T.S. Ramakr. & Sundaram, Trans. Brit. Mycol. Soc. 35(1): 26.1952.
 Distribution: Karnataka (Dakshina Kannada).

Endophyllum Lev.

Endophyllum cassiae (Bres.) F. Stevens & Mendiola, Philipp. Agric. 20: 16.1931.
Aecidium cassiae Bres., Revue Mycol., Toulouse 13: 66.1891.
Endophyllum cassiae Nag Raj, Govindu & Thirum., Sydowia 25(1-6): 158.1972.
 Distribution: Karnataka (Chikkamagaluru).

Endophyllum emiliae-sonchifoliae Nag Raj, Govindu & Thirum., Sydowia 25 (1-6): 159.1972.
 Distribution: Karnataka (Chikkamagaluru).

Endophyllum heliotropii Thirum. & Naras., New Phytol. 49: 119.1950.
 Distribution: Karnataka (Mandya).

Endophyllum kaernbachii (Henn.) F. Stevens & Mendiola, Philipp. Agric. 20: 7.1931.
Aecidium kaernbachii Henn., Beibl. Bot. Jahrb. Syst. 15(Beibl. 33): 5.1892 ('kärnbachii').
 Distribution: Karnataka (Chikkamagaluru).

Endophyllum spilanthi Thirum. & Govindu, Bot. Gaz. 115: 390.1954.
 Distribution: Karnataka (Bengaluru UD).

Micropuccinia Rostr.

Micropuccinia lateritia (Berk. & M.A. Curtis) Arthur & H.S. Jacks., Bull. Torrey Bot. Club 48: 41.1921.
Puccinia lateritia Berk. & M.A. Curtis, Exot. Fung. Schwein. Herb.: 281.1854.
 Distribution: Karnataka (Mysuru).

Prospodium Arthur

Prospodium erebia (Syd. & P. Syd.) Bagyan. & Ravinder, Mycotaxon 53: 434.1995 ('erebiae')
Puccinia erebia Syd. & P. Syd., Philipp. J. Sci., C, Bot. 8(5): 475.1913.
 Distribution: Karnataka (Bengaluru UD).

Puccinia P. Micheli

Puccinia abutili Berk. & Broome, J. Linn. Soc., Bot. 14(74): 91.1875.
 Distribution: Karnataka (Bengaluru UD).

Puccinia anodae P. Syd.&Syd., Monogr. Uredin. (Lipsiae) 1(3): 475.1904.

Distribution: Karnataka (Mysuru).

Puccinia bellurensis Thirum., Mycologia 37(3): 303.1945.

Distribution: Karnataka (Kolar ?).

Puccinia bottomleyae Doidge, Bothalia 3: 498.1939.

Distribution: Karnataka (Bengaluru UD).

Puccinia bulbostylidicola Thirum., Mycologia 39(2): 239.1947.

Distribution: Karnataka (Bengaluru UD).

Puccinia curcumae T.S. Ramakr.& Sundaram, Proc. Indian Acad. Sci., Pl. Sci. 38: 192.1953.

Distribution: Karnataka (Dakshina Kannada).

Puccinia desertorum Syd.& P. Syd., Beibl. Bot. Jahrb. Syst. 45: 259.1911.

Distribution: Karnataka (Bengaluru UD).

Puccinia duthiei Ellis & Tracy in Ellis & Everhart, Bull. Torrey Bot. Club 24(6): 283.1897 ('duthiae')

Distribution: Karnataka (Dharwad).

Puccinia heterospora Berk.& M.A. Curtis in Berk., J. Linn. Soc., Bot. 10(46): 356.1869.

Distribution: Karnataka (Chikkamagaluru, Dharwad, Kodagu, Mysuru).

Puccinia leiocarpa Thirum., Proc. Indian Natn Sci. Acad., Part B. Biol. Sci. 14: 469.1941.

Distribution: Karnataka (Bengaluru UD).

Puccinia pelargonii-zonalis Doidge, Bothalia 2(1a): 98.1926.

Distribution: Karnataka (Bengaluru UD).

Puccinia peraffinis Syd.& P. Syd., Ann. Mycol. 11(3): 326.1913.

Distribution: Karnataka (Chikkaballapur).

Puccinia polysora Underw., Bull. Torrey Bot. Club 24: 86.1897.

Distribution: Karnataka*

Puccinia prainiana Barclay, Sci. Mem. Med. Off. Army India 6: 3.1891.

Distribution: Karnataka (Mangaluru).

Puccinia purpurea Cooke, Grevillea 5(33): 15.1876.

Distribution: Karnataka (Dharwad).

Puccinia rhynchosporae Syd.& P. Syd., Ann. Mycol. 11(2): 103.1913.

Distribution: Karnataka (Kodagu).

Puccinia romagnoliana Maire & Sacc., Ann. Mycol. 1(3): 220.1903.

Distribution: Karnataka (Bengaluru UD).

Puccinia ruelliae Lagerh., Ured. Herbar. El. Fries: 71.1895.

Distribution: Karnataka (Belagavi).

Puccinia sacchari Patel, Kamat & Y.A. Padhye, Curr. Sci. 19: 122.1950.

Distribution: Karnataka (Mysuru).

Puccinia senecionis-scandentis Lindr., Acta Soc. Sci. Fenn. 26: 12.1904.
Distribution: Karnataka (Mysuru).

Puccinia solmsii (Kuntze) Sacc., Syll.fung. (Abellini) 14: 357.1899.
Dicaeoma solmsii Kuntze, Revis. Gen. Pl. 3(2): 470.1898.
Distribution: Karnataka (Chikkamagaluru, Mysuru ?).

Puccinia sorghi Schwein., Trans. Amer. phil. Soc., Ser. 2. 4 (2): 295.1834.
Distribution: Karnataka (Bengaluru UD).

Puccinia spongiosa Berk. & Broome, J. Linn. Soc., Bot. 14 (74): 91.1875.
Distribution: Karnataka (Mysore).

Puccinia substriata Ellis & Barthol., Erythea 5: 47.1897.
Puccinia substriata var. *indica* Ramachar & Cummins, Mycopathol. Mycol. Appl. 25(1-2): 30. 1965.
Distribution: Karnataka*

Puccinia thwaitesii Berk., in Berk. & Broome, Fungi Ceylon: no. 818.1875.
Distribution: Karnataka (Chikkaballapur, Chikkamagaluru, Mysuru).

Puccinia tiliaefolia T.S. Ramakr. & Sundaram, Proc. Indian Acad. Sci., Pl. Sci. 41: 194.1955.
Distribution: Karnataka (Chikkaballapur).

Puccinia versicolor Dietel & Holw. in Holw., Bot. Gaz. 24: 28.1897.
Distribution: Karnataka (Mandya? Bellur)

Puccinia volutarellae Thirum., Mycologia 37(3): 302.1945.
Distribution: Karnataka (Chikkaballapur).

Puccinia woodii (Kalchbr. & Cooke) P. Syd. & Syd., Monogr. Uredin. 1(5): 836.1904.
Hemileia woodii Kalchbr. & Cooke, Grevillea 9(49): 22.1880.
Distribution: Karnataka (Kodagu).

Trochodium Syd. & P. Syd.

Trochodium sampathense Thirum., J. Indian Bot. Soc. 21: 66.1942
Distribution: Karnataka (Chikkaballapur).

Uromyces (Link) Unger

Uromyces appendiculatus F. Strauss, Exanth. Pflanzen. (Wien): 277.1833.
Uromyces appendiculatus (Pers.) Link, Mag. Gesell. Naturf. Freunde, Berlin 8: 30.1816.
Distribution: Karnataka (Dharwad).

Uromyces bidentis Lagerh., in Patouillard & Lagerheim, Bull. Soc. Mycol. France 11(4): 213.1895.
Distribution: Karnataka (Chikkaballapur).

Uromyces commelinae Cooke, Trans. Roy. Soc. Edinburgh 31: 342.1888.
Distribution: Karnataka (Bengaluru UD).

Uromyces hobsonii Vize, in Cooke, Grevillea 4(31): 115.1876 ('hobsoni').
Distribution: Karnataka (Mysuru).

Uromyces leptodermus Syd. & P. Syd. in Sydow, Sydow & Butler, Ann. Mycol. 4(5): 430.1906.
Distribution: Karnataka (Bengaluru UD).

Uromyces viciae-fabae (Pers.) J. Schröt., Hedwigia 14: 98.1875.
Uredo viciae-fabae Pers., Syn. Meth. Fung. (Göttingen) 1: 221.1801.
Uromyces fabae (Pers.) de Bary, Grevillea 7(44): 135.1879.
Distribution: Karnataka (Bengaluru UD).

Zaghouania Pat.

Zaghouania oleae (E.J. Butler) Cummins, Bull. Torrey Bot. Club 87: 45.1960.
Cystopsora oleae E.J. Butler, Ann. Mycol. 8(3): 448.1910.
Distribution: Karnataka (Kodagu, Uttara Kannada).

Raveneliaceae

Haplophragmium Syd. & P.Syd.

Haplophragmium mysorensis Thirum., Mycologia 42(2): 224.1950.
Distribution: Karnataka (Chikkamagaluru).

Kernkampella Rajendren

Kernkampella breyniae-patentis (Mundk. & Thirum.) Rajendren, Mycologia 62(4): 839.1970.
Ravenelia breyniae-patentis Thirum. & Mundk., Mycol. Pap. 16: 21.1946.
Distribution: Karnataka (Uttara Kannada).

Kernkampella emblicae (Syd. & P. Syd.) G.F. Laundon, Mycotaxon 3(1): 144.1975.
Ravenelia emblicae Syd. & P. Syd. in Sydow, Sydow & Butler, Ann. Mycol. 4(5): 438.1906.
Distribution: Karnataka (Belagavi).

Ravenelia Berk.

Ravenelia acaciae-arabicae Mundk. & Thirum., Mycol. Pap. 16: 17.1946.
Distribution: Karnataka (Bengaluru UD, Kankanahalli)

Ravenelia acaciae-sumae Thirum. & Mundk., Mycol. Pap. 16: 18.1946.
Distribution: Karnataka (Bengaluru UD).

Ravenelia hobsonii Cooke, J. Roy. Microscop. Soc., Ser. 3: 386.1880 ('hobsoni').
Haploravenelia hobsonii (Cooke) S. Ito, Trans. Sapporo Nat. Hist. Soc. 17: 166.1943 ('hobsoni').
Distribution: Karnataka (Bengaluru UD).

Sphaerophragmium Magnus

Sphaerophragmium acaciae (Cooke) Magnus, Ber. Dt. Bot. Ges. 9: 121.1891.
Triphragmium acaciae Cooke, Grevillea 8(47): 94.1880.
Distribution: Karnataka (Belagavi).

Uncolaceae

Calidion Syd. & P. Syd.

Calidion bombacis (Petch) D.J. Soares & R.W. Barreto in Silva, Soares & Barreto, Brazilian J. Microbiol.40(1): 79.2009.

Uredo bombacis Petch, Ann. Roy. Bot. Gard. Peradeniya5(4): 247.1912.

Distribution: Karnataka (Chikkamagaluru).

Uropyxidaceae

Didymopsorella Thirum.

Didymopsorella macrospora (Mundk.&Thirum.) Thirum., Sci. Cult. 16(5): 210.1950.

Didymopsora macrospora Mundk. & Thirum., Proc. Indian Acad. Sci., Sect. B 16: 171.1942.

Distribution: Karnataka (Chikkamagaluru).

Tranzschelia Arthur

Tranzschelia pruni-spinosae (Pers.) Dietel, Ann..Mycol.20 (1-2): 31.1922.

Puccinia pruni-spinosae Pers., Syn. Meth. Fung. 1: 226.1801.

Distribution: Karnataka (Belagavi).

Incertaesedis

Pucciniales

Aecidium Pers.

Aecidium memecyli Thirum.,Mycologia 39(2): 245.1947.

Distribution: Karnataka (Chikkaballapur).

Aecidium argyreiae Berk.& Broome, J. Linn. Soc., Bot. 14(74): 94.1875

Distribution: Karnataka (Mysuru).

Aecidium cassiae Ellis &Kellerm., Trans. Kansas Acad. Sci.10: 91.1887.

Distribution: Karnataka (Mysuru).

Aecidium crini Kalchbr.,Grevillea 11(57): 26.1882.

Distribution: Karnataka (Chikkaballapur).

Aecidiumdeutziae Dietel, Hedwigia 37: 212.1898.

Distribution: Karnataka (Mysuru).

Aecidiumgarcinia Sundaram &V. Rao, Sci. Cult. 23: 98.1957.

Distribution: Karnataka (Mysuru).

Elateraecium Thirum.

Elateraecium salaciicola Thirum., F. Kern & B.V. Patil, Mycologia 58 (3): 394.1966 ('salacicola')

Distribution: Karnataka (Chikkamagaluru).

Hemileia Berk. & Broome

Hemileia canthii Berk. & Broome, J. Linn. Soc., Bot. 14(74): 93.1875.

Distribution: Karnataka (Belagavi, Mysuru).

Hemileia gardeniae-thunbergiae (Henn.) Maubl. & Roger, Bull. Trimest. Soc. Mycol. France 50: 202.1934.

Distribution: Karnataka (Chikkamagaluru).

Hemileia holarrhenae Syd. & P. Syd., Ann. Mycol. 12(2): 196.1914.

Distribution: Karnataka (Mysore).

Hemileia indica Masee, Bull. Misc. Inf., Kew 2: 40.1906.

Distribution: Karnataka (Belagavi).

Hemileia mysorensis Thirum. & Gopalakrishn., Mycologia 39 (2): 232.1947.

Distribution: Karnataka (Chikkamagaluru).

Hemileia thomasii Thirum. & Naras., Ann. Bot., London, n.s. 11: 87.1947.

Distribution: Karnataka (Shivamogga).

Hiratsuka Hara

Hiratsuka mycesdivinus Thirum., F. Kern & B.V. Patil, Sydowia 27(1-6): 80.1975.

Elateraecium divinum Thirum., F. Kern & B.V. Patil, Mycologia 58(3): 395.1966.

Distribution: Karnataka (Chikkamagaluru).

Masseella Dietel

Masseella breyniae Thirum., New Phytol. 42: 47.1943.

Distribution: Karnataka (Chikkaballapur).

Masseella capparidis (Hobson bis ex Cooke) Dietel, Ber. Dt. Bot. Ges. 13: 334 1895 ('capparidis').

Cronartium capparidis Hobson bis ex Cooke, Grevillea 14(71): 89.1886 ('capparidis').

Distribution: Karnataka (Belagavi).

Masseella narasimhanii Thirum., Proc. Indian Acad. Sci., Sect. B 18: 39.1943.

Kamatomyces narasimhanii (Thirum.) Sathe, Sydowia 19 (1-6): 189.1966.

Distribution: Karnataka (Bengaluru UD).

Phragmotelium Syd.

Phragmotelium mysorensense Thirum. & Mundk., Proc. Indian Acad. Sci., Sect. B 15(4): 191.1942 ('mysorensis')

Distribution: Karnataka (Chikkaballapur).

Uredo Pers.

Uredo callicarpae Petch, Ann. Roy. Bot. Gard. Peradeniya 5(4): 251.1912.

Distribution: Karnataka (Chikkamagaluru).

Uredo carissae Thirum., Mycologia 42(2): 230.1950.

Distribution: Karnataka (Chikkamagaluru).

Uredo cassiae-occidentalis T.S. Ramakr., Maharashtra Vidnyan Mandir Patrika 9(1-2): 139.1975.

Distribution: Karnataka (Chikkamagaluru).

Uredo celastri Arthur & Cummins, Philipp. J. Sci., C, Bot. 61: 476.1937.

Distribution: Karnataka (Chikkaballapur).

Uredo celastri Arthur & Cummins, Philipp. J. Sci., C, Bot. 61: 476.1937.

Distribution: Karnataka (Chikkaballapur).

Uredo chasaliae Petch, Ann. Roy. Bot. Gard. Peradeniya 4(5): 303.1909.

Distribution: Karnataka (Chikkaballapur).

Uredo elephantopi Petch, Ann. Roy. Bot. Gard. Peradeniya 5(4): 249 ('elephantopodis').

Distribution: Karnataka (Dakshina Kannada).

Uredo elettariae Thirum., Curr. Sci. 12(8): 232.1943.

Distribution: Karnataka (Chikkamagaluru).

Uredo exasperata Cooke, Grevillea 7: 95.1879.

Distribution: Karnataka (Belagavi).

Uredo hyperici-mysorensis Petch, Ann. Roy. Bot. Gard. Peradeniya 6(3): 213.1917.

Distribution: Karnataka (Chikkaballapur).

Uredo linearis Pers., Syn. Meth. Fung. (Göttingen) 1: 216.1801.

Distribution: Karnataka (Chikkaballapur).

Uredo lipocarphae Syd. & P. Syd., Ann. Mycol. 5(6): 509.1907.

Distribution: Karnataka (Mysuru).

Uredo ophiorrhizae Petch, Ann. Roy. Bot. Gard. Peradeniya 6 (3): 212.1917.

Distribution: Karnataka (Chikkamagaluru).

Uredo phaseoli F. Strauss, Ann. Wetter. Gesellsch. Ges. Naturk. 2: 98.1811.

Distribution: Karnataka (Bengaluru UD).

Uredo sesbaniae Henn., Ann. Mus. Congo Belge, Bot. Sér. 5, 2(2): 93.1907.

Distribution: Karnataka (Bengaluru UD).

Uredo setariae-italicae Dietel, Beibl. Bot. Jahrb. Syst. 32: 632.1903.

Distribution: Karnataka (Mysuru).

Uredo spinulosa (Cooke) Sacc., Syll. Fung. (Abellini) 9: 333.1891.

Bas: *Trichobasis spinulosa* Cooke, Grevillea 5 (33): 15.1876.

Distribution: Karnataka (Belagavi).

Uredo vestergreni Syd., Monogr. Uredin. Leipzig 1: 972.1902-04.

Distribution: Karnataka (Kodagu).

Tritirachiaceae**Tritirachium** Limber

Tritirachium roseum J.F.H. Beyma, Antonie van Leeuwenhoek 8: 119.1942.
Distribution: Karnataka (Dakshina Kannada).

EXOBASIDIOMYCETES**Doassansiales****Doassansiaceae**

Burrillia Setch.

Burrillia narasimhanii Thirum. & Mundk., Mycol. Pap.40: 8.1951.
Distribution: Karnataka (Bengaluru UD).

Heterodoassansia Vanky

Heterodoassansia hygrophilae (Thirum.) Vanky, Mycotaxon 95: 56. 2006.
Doassansia hygrophilae Thirum., Lloydia 9: 29.1946.
Distribution: Karnataka (Bengaluru UD, Chikkaballapur).

Rhamphosporaceae**Rhamphospora** D.D. Cunn.

Rhamphospora nymphaeae D.D. Cunn., Sci. Mem. Off. Med. Dept. Gov. India. 3: 32.1888.
Entyloma bidentis Henn., in Engler, Pflanzenw. Ost-Afrikas Nachbarg., Teil C: 49.1895.
Distribution: Karnataka (Bengaluru UD).

USTILAGINOMYCOTINA**USTILAGINOMYCETES****Urocystidales****Glomosporiaceae****Sporisorium** Ehrenb. ex Link

Sporisorium barberi (Mundk.) Vánky, Mycotaxon 85: 20. 2003.
Ustilago barberi Mundk., Trans. Brit. Mycol. Soc. 23(1): 98.1939.
Sorosporium barberi (Mundk.) L. Ling, Sydowia 5(1-2): 44.1951.
Distribution: Karnataka (Chikkaballapur).

Sporisorium Thirumii Vánky, Mycotaxon 59: 105.1996.
Sorosporium iseilematis Thirum., Lloydia 13: 175.1950.
Distribution: Karnataka (Chikkaballapur).

Sporisorium setariicola (Thirum. & Safeeulla) Bag & D.K. Agarwal, Indian Phytopath. 54(2): 224.2001 ('setaricolum').
Distribution: Karnataka (Kodagu).

Sorosporium wildemanianum Henn., Ann. Mus. Congo Belge, Bot. Sér. 5, 2: 87.1907.
Distribution: Karnataka (Chikkaballapur).

Urocystidaceae

Mundkurella Thirum.

Mundkurella heptapleuri Thirum., Mycologia 36(6): 596.1944.
Distribution: Karnataka (Bengaluru UD).

Urocystis Rabhen ex Fuckel

Urocystis cepulae Frost, in Farlow, Ann. Rep. Sec. Mass. St. Bd. Agric. 24: 175.1877.
Distribution: Karnataka (Mysuru).

Ustilaginales

Anthracoideaceae

Cintractia Cornu

Cintractia axicola (Berk.) Cornu, Ann. Sci. Nat. Bot., sér.6 15: 279. 1883.
Ustilago axicola Berk., Ann. Mag. nat. Hist., Ser. 2,9: 200.1852.
Distribution: Karnataka (Bengaluru UD, Mysuru).

Cintractia limitata G.P. Clinton, Proc. Boston Soc. Nat. Hist.31(9): 399.1904.
Cintractia minor (Clinton) H.S. Jacks., Mycologia 12(3): 153.1920.
Distribution: Karnataka (Bengaluru UD).

Farysia Racib.

Farysia americana Cif., Ann. Mycol.29(1-2): 73.1931.
Distribution: Karnataka (Chikkamagaluru).

Tolyposporium Woronin ex J. Schrot.

Tolyposporium kuwanoanum (Togashi & Y. Maki) Denchev & T. Denchev, Index Fungorum 144: 1. 2014.
Sorosporium kuwanoanum Togashi & Y. Maki, Ann. phytopath. Soc. Japan 10: 139 (1940)
Distribution: Karnataka (Bengaluru UD).

Ustanciosporium Vanky

Ustanciosporium scleriae-lithospermi (Thirum.) M. Piepenbr., Nova Hedwigia 70(3-4): 352. 2000.
Cintractia scleriae-lithospermi Thirum., Lloydia 13: 173.1950.
Distribution: Karnataka (Chikkamagaluru).

Pericladiaceae

Anthracocystis Bref.

Anthracocystis cymbopogonis (Mundk.) McTaggart & R.G. Shivas, Persoonia, Mol. Phyl. Evol. Fungi 29: 121.2012.
Tolyposporium cymbopogonis Mundk., Indian J. agric. Sci. 14: 51.1944.
Distribution: Karnataka (Bengaluru UD).

Anthracocystis formosana (Sawada) McTaggart & R.G. Shivas, *Persoonia* 29: 122.2012.
Ustilago formosana Sawada, Taiwan Hakubutsu Gakkwai Kwacho 14: 89.1918.
Sorosporium formosanum (Sawada) Sawada, Rep. Dept. Agri. Govt. Res. Inst. Formosa 35: 29.1928.
 Distribution: Karnataka (Bengaluru UD).

Anthracocystis tumefaciens (McAlpine) McTaggart & R.G. Shivas, *Persoonia* 29: 128. 2012.
Sorosporium tumefaciens McAlpine, Smuts Australia: 184.1910.
 Distribution: Karnataka (Mysuru).

Macalpinomyces Langdon & Full.

Macalpinomyces chrysopogonicola (Mundk. & Thirum.) Vánky, *Mycotaxon* 78: 320. 2001.
Sphacelotheca chrysopogonicola Mundk. & Thirum., in Thirum. & Mundkur, *Mycol. Pap.* 40:2. 1951.
 Distribution: Karnataka (Dharwad).

Macalpinomyces chrysopogonis (S. Ahmad) Vánky, *Mycotaxon* 62: 129.1997.
Ustilago chrysopogonis S. Ahmad, *Mycol. Pap.* 64: 2.1956.
 Distribution: Karnataka (Bengaluru UD).

Melanopsichium Beck

Melanopsichium pennsylvanicum Hirschh., *Not. Mus. La Plata, Bot.* 6(32):149.1941.
 Distribution: Karnataka (Bengaluru UD).

Pericladium Pass.

Pericladium tiliacearum Mundk. & Thirum., in Thirum., *Lloydia* 13: 176.1950.
 Distribution: Karnataka (Bengaluru Rural).

Sphacelotheca de Bary

Sphacelotheca erythraeensis (Syd. & P. Syd.) G.P. Clinton, in Zundel, *N. Amer. Fl.*: 996.1939
Ustilago erythraeensis Syd. & P. Syd., *Ann. Mycol.* 9(2): 144.1911.
Sporisorium erythraeense (Syd. & P. Syd.) Vánky, *Mycotaxon* 40: 163.1991.
 Distribution: Karnataka (Dharwad).

Sporisorium Ehrenb. ex Link

Sporisorium cruentum (J.G. Kühn) Vánky, *Symb. Bot. Upsal.* 24(2): 115.1985.
Ustilago cruenta J.G. Kühn, *Hamb. Gart. Blumenzeitg.* 28: 177.1872.
Sphacelotheca cruenta (J.G. Kühn) Potter, *Phytopathology* 2: 98.1912.
 Distribution: Karnataka (Bengaluru UD).

Sporisorium dichanthiicola (Mundk. & Thirum.) Vánky, *Fungal Diversity* 15: 229.2004 ('dichanthicola').
Sphacelotheca dichanthiicola Mundk. & Thirum. in Thirum. & Mundkur, *Mycol. Pap.* 40: 3.
 1951 ('dichanthicola').
 Distribution: Karnataka (Bengaluru UD).

Sporisorium inayati (Syd., P. Syd. & E.J. Butler) Vánky, *Mycotaxon* 59: 105.1996.
Ustilago inayati Syd., P. Syd. & E.J. Butler, *Ann. Mycol.* 5(6): 486.1907.
 Distribution: Karnataka (Bengaluru UD).

- Sporisorium isachnes** (Syd. & P. Syd.) Vánky, in Vánky & Guo, Acta Mycol. Sin., Suppl. 1: 230. 1987.
Ustilago isachnes Syd. & P. Syd., Ann. Mycol..10(1): 77.1912.
 Distribution: Karnataka (Bengaluru UD).
- Sporisorium iseilematis** (Syd., P. Syd. & E.J. Butler) Vánky, Mycotaxon 59: 104.1996.
Ustilago iseilematis Syd., P. Syd. & E.J. Butler, Ann. Mycol..4(5): 426.1906.
 Distribution: Karnataka (Chikkaballapur).
- Sporisorium manilense** (Syd. & P. Syd.) Vánky, Mycotaxon 59: 110.1996.
 Bas: *Ustilago manilensis* Syd. & P. Syd., Ann. Mycol.. 10(1): 77.1912.
 Distribution: Karnataka (Shivamogga).
- Sporisorium moniliferum** (Ellis & Everh.) L. Guo, Mycosystema 3: 82.1990.
Ustilago monilifera Ellis & Everh., Bull. Torrey Bot. Club 22(7): 362.1895.
Sphacelotheca monilifera (Ellis & Everh.) G.P. Clinton, J. Mycol. 8(3): 140.1902.
 Distribution: Karnataka (Chikkaballapur).
- Sporisorium ophiuri** (Henn.) Vánky, Publ. Herb. Ustilagin. Vánky (Tübingen) 3: 9.1986.
Ustilago ophiuri Henn., in Warburg, Monunia 1: 1.1900
Sphacelotheca ophiuri (Henn.) L. Ling, Sydowia 3(1-6): 127.1949.
 Distribution: Karnataka (Bengaluru UD).
- Sporisorium perforatum** Vánky, Mycotaxon 89(1): 104 (2004)
Sphacelotheca mnesitheae Mundk. & Thirum., Mycol. Pap. 40: 3.1951.
 Distribution: Karnataka (Chikkaballapur).
- Sporisorium scitamineum** (Syd.) M. Piepenbr., M. Stoll & Oberw., Mycol. Progr. 1(1): 75. 2002.
Ustilago scitaminea Syd., Ann. Mycol..22(3-6): 281.1924.
 Distribution: Karnataka (Bengaluru UD).
- Sporisorium sorghi** Ehrenb. ex Link, in Willd., Sp. Pl. 4, 6(2): 86.1825
Sphacelotheca sorghi (Ehrenb. ex Link) G.P. Clinton, J. Mycol. 8(3): 140.1902.
 Distribution: Karnataka (Bengaluru UD).
- Sporisorium tanglinense** (Tracy & Earle) L. Guo, Mycosystema 3: 85. 1990 ('tonglinensis').
Ustilago tanglinensis Tracy & Earle, Bull. Torrey Bot. Club 22: 175. 1895.
Sphacelotheca tanglinensis (Tracy & Earle) Zundel, Mycologia 36(4): 406. 1944.
 Distribution: Karnataka (Chikkaballapur).
- Sporisorium tenue** (Syd. & P. Syd.) Vánky, Fungal Diversity 15: 238. 2004.
Ustilago tenuis Syd. & P. Syd., Ann. Mycol.. 4(5): 425. 1906.
Sphacelotheca tenuis (Syd. & P. Syd.) Zundel, Mycologia 22(3): 137. 1930.
 Distribution: Karnataka (Bengaluru UD, Mysuru).
- Sporisorium zilligii** (Zundel) Vánky, Mycotaxon 95: 25. 2006.
Sphacelotheca zilligii Zundel, Mycologia 22(3): 142. 1930.
 Distribution: Karnataka (Chikkaballapur).

Ustilago (Pers.) Roussel

- Ustilago crameri** Korn., in Fuckel, Jahrb. Nassauischen Vereins Naturk. 27-28: 11.1874.
 Distribution: Karnataka (Mysuru).

Ustilago trichophora (Link) Kunze, Flora, Regensburg 13: 369. 1830.
Caeoma trichophorum Link in Willd., Sp. Pl. 4,6(2): 3. 1825.
 Distribution: Karnataka (Chikkaballapur).

CHYTRIDIOMYCOTA

Blastocladales

Physodermataceae

Physoderma Wallr.

Physoderma aeschynomenes Thirum. & M. D. Whitehead, Mycologia 43 (4): 435. 1951
 ('aeschynomenis').
 Distribution: Karnataka (Bengaluru UD).

Physoderma limnanthemii Thirum. Curr. Sci. 2: 131. 1950.
 Distribution: Karnataka (Bengaluru UD).

Chytridiales

Cladochytriaceae

Cladochytrium Nowak.

Cladochytrium aneurae Thirum., Trans. Brit. Mycol. Soc. 31(1-2): 8. 1947.
 Distribution: Karnataka (Mysuru, Shivamogga).

Synchytriaceae

Carpenterophlyctis Doweld

Carpenterophlyctis cannae (Mundk. & Thirum.) Doweld, Index Fungorum 30: 1. 2013.
Carpenterella cannae Mundk. & Thirum., Mycol. Pap. 40: 1. 1951.
 Distribution: Karnataka (Bengaluru UD).

Synchytrium de Bary & Woronin

Synchytrium atylosiae (Petch) Gäum., Ann. Mycol. 25: 174. 1927.
Aecidium atylosiae Petch, Ann. Roy. Bot. Gard. Peradeniya 4(5): 302. 1909.
 Distribution: Karnataka (Bengaluru UD).

Synchytrium dolichi (Cooke) Gäum., Ann. Mycol. 25(1-2): 172. 1927.
Aecidium dolichi Cooke, Grevillea 10(no. 56): 127. 1882.
 Distribution: Karnataka (Bengaluru UD).

Synchytrium lepidagathidis Mundk. & Mhatre, in Mahtre & Mundkur, Lloydia 8 (3): 135. 1945.
 Distribution: Karnataka (Bengaluru UD).

Synchytrium millingtoniicola Safeulla & Govindu, Curr. Sci. 21(11): 319. 1952.
 Distribution: Karnataka (Mysuru).

Olpidiales**Olpidiaceae****Olpidium** (A.Braun) J.Schrot.

Olpidium uredinis (Lagerh.) A. Fisch., Nouv. Chytr., J. de Bot. 7.1888.

Olpidiella uredinis Lagerh., J.Bot. Paris 2:438.1888.

Distribution: Karnataka (Mysuru).

GLOMEROMYCOTA**Glomerales****Glomeraceae****Glomus** Tul. & C. Tul.

Glomus rubiforme (Gerd. & Trappe) R.T. Almeida & N.C. Schenck, Mycologia 82(6): 709. 1990.

Sclerocystis rubiformis Gerd. & Trappe, Mycol. Mem.5: 60. 1974.

Distribution: Karnataka (Bengaluru UD).

ZYGOMYCOTA**Entomophthorales****Ancylistaceae****Conidiobolus** Bref.

Conidiobolus bangalorensis Sriniv. & Thirum., Mycologia 59(4): 702.1967.

Distribution: Karnataka (Bengaluru UD).

Conidiobolus lichenicola Sriniv. & Thirum., Mycopathol. Mycol. Appl.36(3-4): 344.1968.

Distribution: Karnataka (Chikkaballapur).

Entomophthoraceae**Entomophaga** A. Batko

Entomophaga grylli (Fresen.) A. Batko, Bull. Acad. Polon. Sci., Cl. II. sér. Sci. Biol. 12: 325. 1964.

Entomophthora grylli Fresen., Bot. Ztg.14: 882.1856.

Distribution: Karnataka (Bengaluru UD, Kodagu).

Neozygitaceae**Neozygites** Witlaczil

Neozygites fresenii (Nowak.) Remaud. & S. Keller, Mycotaxon 11(1): 332.1980.

Entomophthora fresenii (Nowak.) M.A. Gust., Lantbr Högsk. Annlr 31: 140.1965.

Distribution: Karnataka (Kodagu).

MUCOROMYCOTINA

Mucorales

Lichtheimiaceae

Rhizomucor Lucet & Constantin

Rhizomucor pusillus (Lindt) Schipper, Stud. Mycol.17: 54.1978.

Mucor pusillus Lindt, Arch. exp. Path. Pharmac. 21: 272.1886.

Distribution: Karnataka (Mysuru).

Mucoraceae

Mucor P. Micheli ex L.

Mucor hiemalis Wehmer, Ann. Mycol.1(1): 39.1903.

Distribution: Karnataka (Bengaluru UD).

Mucor racemosus Fresen., Beitr. Mykol. 1: 12.1850.

Distribution: Karnataka (Bengaluru UD).

Rhizopodaceae

Rhizopus Ehrenb.

Rhizopus stolonifer (Ehrenb.) Vuill., Rev. Mycol. (Toulouse)24: 54. 1902.

Mucor stolonifer Ehrenb., Sylv. Mycol. Berol.: 25.1818.

Rhizopus artocarp Racib., Parasit. Alg. Pilze Java's 1: 11.1900.

Distribution: Karnataka (Bengaluru UD).

Syncephalastraceae

Circinella Tiegh. & G. Le Monn

Circinella simplex Tiegh., Ann. Sci. Nat., Bot., sér. 6,1: 92.1875.

Distribution: Karnataka (Bengaluru UD).

Basidiobolales

Basidiobolaceae

Basidiobolus Eidam

Basidiobolus ranarum Eidam, Beitr. Biol. Pfl.4: 194.1886.

Basidiobolus haptosporus Drechsler, Bull. Torrey Bot. Club74: 411.1947.

Distribution: Karnataka (Bengaluru UD).

PROTOZOAN ANALOGUES

Echinostelidales

Clastodermataceae

Clastoderma A. Blytt

Clastoderma debaryanum A. Blytt, Bot. Ztg.38: 343.1880.

Distribution: Karnataka (Chikkamagaluru).

Liceidales**Cribrariaceae****Cribraria Pers.**

Cribraria tenella Schrad., Nov. Gen. Pl. 6.1797.

Distribution: Karnataka (Kodagu).

Tubiferaceae**Lycogala Adans.**

Lycogala exiguum Morgan, J. Cincinnati Soc. Nat. Hist. 15: 134.1893.

Distribution: Karnataka (Hassan)

Physarales**Didymiaceae****Diderma Pers.**

Diderma testaceum (Schrad.) Pers., Syn. Meth. Fung. (Göttingen) 1: 167.1801.

Didymium testaceum Schrad., Nov. Gen. Pl. (Lipsiae): 25.1797.

Distribution: Karnataka (Kodagu).

Physarida**Physaraceae****Craterium Trentep.**

Craterium aureum (Schumach.) Rostaf., Śluzowce Monogr. (Paryz): 124.1875.

Trichia aurea Schumach., Enum. Pl.2: 208.1803.

Distribution: Karnataka (Mysuru).

Craterium leucocephalum (Pers.) Ditmar in Sturm, Deutschl. Fl., 3 Abt. (Pilze Deutschl.) 1(1): 21.1813.

Stemonitis leucocephala Pers. in Gmelin, Syst. Nat. ed 13,2(2): 1467.1792.

Distribution: Karnataka (Kodagu).

Physarum Pers.

Physarum bogoriense Racib., Hedwigia 37: 52.1898.

Distribution: Karnataka (Kodagu).

Physarum compressum Alb. & Schwein., Consp. Fung. (Leipzig): 97. 1805.

Distribution: Karnataka (Kodagu).

Physarum didermoides (Ach. ex Pers.) Rostaf., Śluzowcemonogr. (Paryz): 97. 1875.

Spumaria didermoides Ach. ex Pers., Syn. Meth. Fung. (Göttingen) 1: 29. 1801.

Distribution: Karnataka (Kodagu).

Physarum leucopus Link, Mag. Ges. Naturf. Freunde, Berlin 3(1-2): 27.1809.

Distribution: Karnataka (Kodagu).

Physarum luteolum Peck, Ann. Rep. New York St. Mus. Nat. Hist. 30: 50. 1878.
Distribution: Karnataka (Hassan).

Physarum mutabile (Rostaf.) G. Lister, Monogr. Mycetozoa, Edn 2 (London): 53. 1911.
Crateriachea mutabilis Rostaf., Śluzowce Monogr. (Paryz): 126. 1875.
Distribution: Karnataka (Kodagu).

Physarum nudum T. Macbr. in Peck & Gilbert, Amer. J. Bot. 19: 134. 1932.
Distribution: Karnataka (Chikkaballapur).

Physarum rigidum (G. Lister) G. Lister, Monogr. Mycetozoa, ed. 3 (London): 36. 1925.
Physarum viride var. rigidum G. Lister, Monogr. Mycetozoa, ed. 2 (London): 56. 1911.
Distribution: Karnataka (Kodagu).

Physarum vernum Sommerf. in Fries, Syst. Mycol. (Lundae) 3(1): 146. 1829.
Distribution: Karnataka (Kodagu).

Stemonitales

Stemonitidaceae

Diachea Fr.

Diachea bulbilosa (Berk. & Broome) Lister in Penzig, Myxomyc. Fl. Buitenzorg: 47. 1898.
Didymium bulbillosum Berk. & Broome, J. Linn. Soc., Bot. 14(74): 84. 1875.
Distribution: Karnataka (Chikkamagaluru).

Stemonitis Gled.

Stemonitis axifera (Bull.) T. Macbr., N. Amer. Slime-Moulds: 120. 1889.
Trichia axifera Bull., Hist. Champ. France 1: 118. 1791.
Distribution: Karnataka (Kodagu).

Stemonitis fusca Roth, in Roemer & Usteri, Mag. Bot. 1(2): 26. 1787.
Distribution: Karnataka (Kodagu).

Stemonitis pallida Wingate in T. Macbr., N. Amer. Slime-Moulds: 123. 1899.
Distribution: Karnataka (Kodagu).

Stemonitis smithii T. Macbr., Bull. Iowa Lab. Nat. Hist. 2: 381. 1893.
Distribution: Karnataka (Kodagu).

Trichiales

Arcyriaceae

Arcyria Hill. ex F.H. Wigg.

Arcyria cinerea (Bull.) Pers., Syn. Meth. Fung. (Göttingen) 1: 184. 1801.
Trichia cinerea Bull., Herb. Fr. 10: tab. 477, f. 3. 1790.
Distribution: Karnataka (Kodagu).

Arcyria denudata (L.) Wettst., Verh. Zool.-Bot. Ges. Wien 35: 353. 1886.
Clathrus denudatus L., Sp. Pl. 2: 1179. 1753.
Distribution: Karnataka (Kodagu).

Arcyria insignis Kalchbr. & Cooke in Kalchbr., Grevillea 10 (56): 143. 1882.
Distribution: Karnataka (Kodagu).

Trichiaceae

Hemitrichia Rostaf.

- Hemitrichia calyculata** (Speg.) M.L. Farr, *Mycologia* 66(5): 887. 1974.
Hemiarocyria calyculata Speg., *Anal. Soc. Cient. Argent.* 10(5-6): 152.1880.
Hemitrichia stipitata (Masse) T. Macbr., *N. Amer. Slime-Moulds*, ed. 1:207.1899.
Hemiarocyria stiptata Masee, *J. Roy. Micros. Soc.* 1889(1):354.1889.
 Distribution: Karnataka (Chikkamagaluru).

Metatrichia Ing.

- Metatrichia vesparium** (Batsch) Nann.-Bremek. ex G.W. Martin & Alexop., *Myxomycetes* (New York): 143 (1969)
Lycoperdon vesparium Batsch, *Elench. fung., Cont. Prim. (Halle)*: 253 .1786.
Hemitrichia vesparium (Batsch) T. Macbr., *N. Amer. Slime-Moulds* (New York): 203. 1899.
 Distribution: Karnataka (Chikkamagaluru).

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Plate 1 : **A.** *Formitella rhodophaea* (Lev.) T. Hatt.; **B.** *Polyporus grammacephalus* Berk.; **C.** *Xylaria polymorpha* (Pers.) Grev.; **D.** *Ganoderma lucidum* (Curtis) P. Karst.; **E.** *Trametes hirsuta* (Wul.) Lloyd; **F.** *Microporus xanthopus* (Fr.) Kunze.; **G.** *Inonotus glomeratus* (Peck) Murr.

Lichens of Karnataka

A Checklist

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Support by

Karnataka Biodiversity Board

Summary

Karnataka, a southern peninsular state of India and part of the Western Ghat biodiversity hot spot region has been assessed for its lichen diversity through the listing of species. Lichenologically, the state is not explored thoroughly although sporadic lichen collections from some selected localities in the Shivamoggha, Chikmagaluru, Uttara and Dakshina Kannada, Kodagu, Udupi and other districts were made and published. But as a whole, major areas like protected and other reserved forest areas remained unexplored or underexplored. Rapid deforestation for various purposes is gradually reducing the number of lichen habitats and thereby affecting the lichen diversity in the state. In order to know the present status of lichen diversity in the state, a check list has been prepared under the initiatives under taken by the Karnataka state biodiversity board. Currently, 527 species 1 sub species 4 varieties and 1 forma distributed with in 380 crustose, 107 foliose, 30 fruticose and 10 squamulose growth forms under 135 genera and 50 families are known from the state of Karnataka against 2728 species under 342 genera reported so far, from India. It forms 19.31% lichen flora of the country with 49 species exclusively endemic to the state and another 63 species distributed in the state are endemic to India. Graphidaceae with 155 species and genus *Graphis* with 30 species show maximum diversity in the state. All the families, genera within families and species within genera are arranged alphabetically along with currently accepted nomenclature and citations.

Since lichens are used in pollution and climate change studies and also one of the sources of unique secondary metabolites used in pharmaceutical industry, the documentation and monitoring are necessary at state level. It will be fruitful to take up this region as representative area of Western Ghats for systematic collection and documentation of lichen biota in future.

INTRODUCTION

Lichens, nature's most unique and successful alliances constitute one of the important components of biodiversity and are evolved through the symbiotic association of two components, a photosynthetic alga or cyanobacteria and a heterotrophic (dependent on external sources of carbon compounds) fungus. In India, these are distributed in varying numbers in all the states and Karnataka is no exception to this. Karnataka (between latitudes 11° 30' to 18° 25' N and longitudes 74° 10' to 78° 35' E, with a total geographical area of 191,791 Sq km), one of the southern peninsular states of the country forms a part of Western Ghats biodiversity hotspot with two distinct physiographic regions viz. the hilly or Maland and Maidan or the plain region of varying height. Lichenologically, the area is quite rich and interesting and has not been explored thoroughly. Sporadic collections were made previously from Agumbe, Jog falls, Lalbagh garden, Udupi, Hebri, Peercode, Sirsi, Kumta, Kalkoppa forest, Nandi hills, Anamod Ghat, Sringeri, Hogga, Charmudi Ghat, Talecauvery, Coorg, Rippon peth, Tirthahalli, Shivamoggha, Chikmagaluru, Uttar and North Kanada, Kodagu areas etc. by the Agarkar Research Institute Pune and the then school of lichenology at Lucknow University, Lucknow. Recently some collections have also been made by Botanical survey of India. But as a whole, major area particularly protected areas comprising a total of 6,351 sq. km area (5 National Parks viz. Anshi, Bandipur, Bannerghatta, Kudremukh, Nagarahole and 21 Wildlife Sanctuaries) and some private forests/areas remained underexplored or unexplored. Rapid deforestation and indiscriminate exploitation of these forests are gradually reducing the number of lichen species in the state.

Currently, about 527 species, 1 sub species, 4 varieties, and 1 forma distributed under 135 genera and 50 families are known from the state of Karnataka against 2728 species under 342 genera known so far, from India. It forms 19.31% lichen flora of the country. In addition, 112 species of lichens are endemic, of which 49 species are exclusively endemic to Karnataka while remaining 63 species distributed in the state are endemic to India. Lichen diversity is interesting and an analysis indicates that 405 species grow on the

bark of trees (Corticolous), 26 on stones (Saxicolous), 4 on the ground (Terricolous) and 22 on the live leaves (Foliicolous, Plate, 2C). 70 species occur on more than one substratum. Similarly, growth wise 380 species are crustose, followed by 107 foliose, 30 fruticose and 10 squamulose forms. Graphidaceae shows maximum diversity with 155 species, followed by Parmeliaceae with 60 species and Arthoniaceae with 34 species. At generic level, *Graphis* is maximum speciose with 30 species, followed by *Porina* with 22 species.

These recorded taxa are scattered in many publications of revisionary and systematic nature. The important ones include Patwardhan and Kulkarni (1977), Awasthi and Upreti (1980), Patwardhan and Makhija (1981), Patwardhan & al. (1985), Makhija and Patwardhan (1985, 1990 and 1994), Nagarkar & al. (1988), Makhija & al. (1994), Chatterjee and al. (1996), Nayaka & Upreti (2002), Nayaka & al. (2003), Adawadkar and Makhija (2007), Vinayaka & al. (2010), Dudani & al., (2015, 2018), Rashmi & Rajkumar (2015), Singh and Singh (2017) and Joshi & al (2018). For more information about the synonymy of species and other details of publications from the state, the checklist published by Singh and Sinha (2010) is useful and should be consulted. However, a comprehensive treatment of lichens from the state is lacking. Being part of the hotspot region with suitable climatic conditions, more species of lichens including new discoveries are expected to be added, if under explored and unexplored areas are surveyed extensively in the state of Karnataka.

The checklist is compiled based on the published literature as well as some collections and their identifications made by the author. Some doubtful species, erroneous identifications and species identified upto generic level have been excluded from the list. All the families, genera and species within genera reported so far, from the state are arranged alphabetically. Each species is provided with currently accepted name with author(s) name(s), followed by standard abbreviated citation. Basionym of all the species and few important synonyms are also provided along with the habitat and chemical constituents of species/variety as far as possible. District-wise distribution within Karnataka is provided, followed by the distribution in other states and countries in alphabetical order. However, some species are reported from Karnataka, but their distribution is not known. These species are marked by an asterisk (*) in distribution column.

Since lichens are used in pollution and climate change studies and also one of the sources of unique secondary metabolites used in pharmaceutical industry, the documentation and monitoring are necessary at state level. It will be fruitful to take up this region as representative area of Western Ghats for systematic collection and study of lichens. This will also provide the baseline information for the conservation and sustainable use of these resources in Karnataka in particular and Western Ghats in general.

Analysis of Lichens

Family	No. of Genera	No. of Species	No. of Subsp.	No. of Varieties	Forma	No. of Endemic Species
1. Arthoniaceae	04	34				25
2. Arthopyreniaceae	01	05				
3. Brigantieaceae	01	02				
4. Caliciaceae	07	22		02		02
5. Candelariaceae	01	01				
6. Catillariaceae	01	02				
7. Chrysothricaceae	01	01				
8. Cladoniaceae	01	05				
9. Coccocarpiaceae	01	03				
10. Coenogoniaceae	01	02				
11. Collemataceae	01	08				
12. Gomphillaceae	04	04				
13. Graphidaceae	31	155	01			49
14. Haematommaceae	01	01				
15. Lecanographaceae	02	04				
16. Lecanoraceae	01	17		01		
17. Letrouitiaceae	01	04				
18. Lichinaceae	01	03				
19. Lobariaceae	02	02				
20. Lopadiaceae	01	01				01
21. Malmideaceae	01	01				
22. Megalosporaceae	01	02				
23. Megasporaceae	01	01				
24. Monoblastiaceae	01	08				04
25. Mycosphaerelliaceae	01	01				
26. Naetrocymbaceae	01	02				

27. Ochrolechiaceae	02	06				
28. Opegraphaceae	01	03				
29. Pannariaceae	02	03				01
30. Parmeliaceae	12	60				08
31. Peltulaceae	01	01				
32. Pertusariaceae	02	18				02
33. Phlyctidaceae	01	01				01
34. Physciaceae	03	27				
35. Pilocarpaceae	03	04				
36. Porinaceae	01	22				09
37. Pyrenulaceae	04	19				01
38. Ramalinaceae	05	26		01		
39. Ramboldiaceae	01	01				
40. Roccellaceae	05	06				01
41. Sphaerophoraceae	01	01				
42. Sphinctrinaceae	01	01				
43. Stereocaulaceae	01	02				
44. Stictidaceae	01	01				01
45. Strigulaceae	02	07			01	
46. Teloschistaceae	06	07				
47. Tephromelaceae	01	01				
48. Trapeliaceae	01	01				
49. Trypetheliaceae	07	16				06
50. Verrucariaceae	01	02				01
Total	135	527	01	04	01	112

Arthoniaceae

Arthonia Ach., nom. cons.

Arthonia cinnabarina (DC.) Wallr., Fl. Cryptog. Germ. 3: 320. 1831.

Coniocarpon cinnabarinum DC. in Lamarck & De Candolle, Fl. Franç., ed. 3, 2: 323. 1805.

Spiloma tumidula Ach., Methodus: 11, tab 1, fig. 5. 1803.

Arthonia tumidula (Ach.) Ach., Neues J. Bot. 1: 11. 1806.

Arthonia cinnabarina var. *tumidula* (Ach.) Wallr., Fl. Cryptog. Germ. 3: 320. 1831.

Distribution: Karnataka (Western Ghats), Arunachal Pradesh, Goa, Tamil Nadu, West Bengal;
Cosmopolitan.

Habitat: Corticolous.

Arthonia inconspicua Stirt., Proc. Roy. Soc. Glasgow 11: 319. 1879.

Distribution: Karnataka (Kodagu), Tamil Nadu; endemic.

Habitat: Corticolous

Arthonia medusula (Pers.) Nyl., Mem. Soc. Imp. Sci. Nat. Cherbourg 5: 132. 1857.

Opegrapha medusula Pers., Wetterauischen Ges. Gammte Naturk. 2: 15, tab. 10, fig. 1 1811.

Distribution: Karnataka (Kodagu, Western Ghats), Peninsular India; Europe.

Habitat: Corticolous.

Arthonia pellea Leighton, Trans. Linn. Soc. London 27: 180. 1869.

Distribution: Karnataka (Shivamogga); Sri Lanka.

Habitat: Corticolous.

Arthonia reniformis (Pers.) Röhl., Deutschl. Fl. 3, 2 Abth.: 29. 1813;

Opegrapha reniformis Pers., Neue Ann. Bot. 1: 31. 1794.

Arthonia obscura Ach., Neues J. Bot. 1(3): 14. 1806; Bélanger, Voy. Indes Or. : 132. 1838.

Distribution: Karnataka (Western Ghats) Kerala, Tamil Nadu; Europe, N America.

Habitat: Corticolous.

Arthothelium A.Massal.

Arthothelium abnorme (Ach.) Müll. Arg., Flora 63: 287. 1880.

Opegrapha abnormis Ach., Lichenogr. Universalis: 259. 1810.

Distribution: Karnataka (Haveri), Assam, Maharashtra, Tamil Nadu, West Bengal; tropical and subtropical regions.

Habitat: Corticolous.

Chemistry: No lichen substances.

Arthothelium achromaticum Makhija & Patw., J. Hattori Bot. Lab. 78: 200. 1995.

Distribution: Karnataka (Udupi); endemic.

Habitat: Corticolous.

Chemistry: No lichen substances.

Arthothelium albescens Patw. & Makhija, Biovigyanam 7: 125. 1981.

Distribution: Karnataka (Bengaluru, Dakshina Kannada, Shivamogga, Uttara Kannada, Udupi), Kerala; endemic.

Habitat: Corticolous.

Chemistry: Two unidentified lichen substances.

Arthothelium anomalum Makhija & Patw., J. Hattori Bot. Lab. 78: 203. 1995.

Distribution: Karnataka (Udupi), endemic.

Habitat: Corticolous.

Chemistry: An unidentified substance.

Arthothelium aphanocarpum (Nyl.) Zahlbr. Cat. Lich. Univ. 2: 121. 1922.

Arthonia aphanocarpum Nyl. Mem. Soc. Imp. Sci. Nat. Cherbourg 4: 90. 1856.

Distribution: Karnataka (Uttara Kannada), Andaman & Nicobar islands; Guyana.

Habitat: Corticolous

Chemistry: Unidentified substances.

Arthothelium awasthii Patw. & Makhija, Biovigyanam 7: 126. 1981.

Arthothelium verruculosum Patw. & Makhija, Biovigyanam 7: 127. 1981.

Distribution: Karnataka (Chamarajanagar, Chikkaballapur, Dharwad), Assam, Maharashtra, Meghalaya and Nagaland; endemic.

Habitat: Corticolous.

Chemistry: Two unknown substances.

Arthothelium chiodectoides (Nyl.) Zahlbr., Cat. Lich. Univ. 2: 122. 1922.

Arthonia chiodectoides Nyl., Flora 52: 72. 1869.

Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Goa, Himachal Pradesh, Maharashtra, Sikkim, West Bengal; endemic.

Habitat: Corticolous.

Arthothelium chlorofuscum Makhija & Patw., J. Hattori Bot. Lab. 78: 206. 1995.

Distribution: Karnataka (Shivamogga, Udupi); endemic.

Habitat: Corticolous

Arthothelium corticatum Makhija & Patw., J. Hattori Bot. Lab. 78: 208. 1995.

Distribution: Karnataka (Chikkamagaluru); endemic.

Habitat: Corticolous.

Chemistry: Confluentic (?) acid.

Arthothelium fuscoroseum Makhija & Patw., J. Hattori Bot. Lab. 78: 211. 1995.

Distribution: Karnataka (Bangaluru UD); endemic.

Habitat: Corticolous.

Chemistry: No lichen substances.

Arthothelium karnatakensis Makhija & Patw., J. Hattori Bot. Lab. 78: 212. 1995.

Distribution: Karnataka (Udupi); endemic.

Habitat: Corticolous.

Chemistry: Two unidentified substances.

Arthothelium maculatum Makhija & Patw., J. Hattori Bot. Lab. 78: 212. 1995.

Distribution: Karnataka (Koppal); endemic.

Habitat: Corticolous.

Chemistry: No lichen substances.

Arthothelium ramosum Makhija & Patw., J. Hattori Bot. Lab. 78: 216. 1995.

Distribution: Karnataka (Chikkaballapur); endemic.

Habitat: Corticolous.

Chemistry: Confluentic acid.

Arthothelium zahlbrucknerii Makhija & Patw., J. Hattori Bot. Lab. 78: 220. 1995.

Distribution: Karnataka (Dakshin Kannada); endemic

Habitat: Corticolous.

Chemistry: An unidentified substance.

Cryptothecia Stirt., nom. cons.

Cryptothecia albomaculata Makhija & Patw. in T.A. Sarma & al. (eds.), Curr. Res. Pl. Sci.: 62. 1994.

Distribution: Karnataka (Udupi); endemic.

Habitat: Corticolous.

Chemistry: An unknown substance.

Cryptothecia candida (Kremp.) R.Sant., Symb. Bot. Upsal. 12(1): 65. 1952; D.D Awasthi & Agarwal, J. Indian Bot. Soc. 48(1 & 2): 67. 1969.

Myriostigma candidum Kremp., Nuovo Giorn. Bot. Ital. 7: 45. 1875.

Karnataka (Kodagu), Arunachal Pradesh, Meghalaya, West Bengal; pantropical but more common in tropical America and Malaysia and scarce in tropical Africa.

Habitat: Foliicolous.

Cryptothecia culbersoniae Patw. & Makhija, Biovigyanam 7: 125. 1981.

Distribution: Karnataka (Udupi, Kodagu), Maharashtra; endemic.

Habitat: Corticolous.

Chemistry: Gyrophoric, confluent and 2'-O-methylperatolic acids

Cryptothecia emergens Makhija & Patw., Biovigyanam 11(1): 6. 1985.

Distribution: Karnataka (Udupi); endemic.

Habitat: Corticolous.

Chemistry: Gyrophoric, confluent acids and an unidentified substance

Cryptothecia faveolata Makhija & Patw. in T.A. Sarma & al. (eds.), Curr. Res. Pl. Sci.: 64. 1994.

Distribution: Karnataka (Shivamogga), Kerala; Australia.

Habitat: Corticolous.

Chemistry: Confluent, gyrophoric acids and an unidentified substance.

Cryptothecia lunulata (Zahlbr.) Makhija & Patw., Biovigyanam 11(1): 6. 1985;

Arthothelium lunulatum Zahlbr. in Reehinger, Denkschirf. Kaiserl. Akad. Wiss., Wien. Math. -Naturwiss. Kl. 88: 17. 1911.

Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Arunachal Pradesh, Goa, Madhya Pradesh, Maharashtra, Tamil Nadu, West Bengal; Papua New Guinea.

Habitat: Corticolous.

Chemistry: Gyrophoric and barbatic acids.

Cryptothecia macrocarpa Makhija & Patw. in T.A. Sarma & al. (eds.), Curr. Res. Pl. Sci.: 66. 1994.

Distribution: Karnataka (Shivamogga); endemic.

Habitat: Corticolous.

Chemistry: An unknown substance.

Cryptothecia nilgiriensis Makhija & Patw., Biovigyanam 7: 123. 1981.

Distribution: Karnataka (Shivamogga), Madhya Pradesh, Tamil Nadu; endemic

Habitat: Corticolous.

Chemistry: Psoromic acid.

Cryptothecia phlyctidiformis (Müll. Arg.) D.D. Awasthi & Kr.P.Singh, Curr.Sci. 47(18): 657. 1973.
Phaeographina phlyctidiformis Müll.Arg. J. Linn. Soc. Bot., 29: 228. 1892.
 Karnataka (Shivamogga), Manipur; endemic to India.
 Habitat : Corticolous.
 Chemistry: Norstictic and constictic acids.

Cryptothecia porosa Makhija & Patw. in T.A. Sarma et al., Curr. Res. Pl. Sci.: 67. 1994.
 Distribution: Karnataka (Udupi), endemic
 Habitat: Corticolous.
 Chemistry: Confluent acid.

Cryptothecia punctulata Makhija & Patw., Biovigyanam 13(2): 47. 1987.
 Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands; endemic.
 Habitat: Corticolous.
 Chemistry: No lichen substances.

Cryptothecia scripta G.Thor, Symb. Bot. Upsal. 32(1): 285. 1997.
Cryptothecia subnidulans sensu auct., non Stirton, 1877.
 Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Tamil Nadu, West Bengal; Africa, Papua New Guinea.
 Habitat: Corticolous.
 Chemistry: Psoromic acid.

Cryptothecia stirtonii A.L.Sm., Trans. Brit. Mycol. Soc. 11: 193. 1926.
 Distribution: Karnataka (Shivamogga), Tamil Nadu, West Bengal; endemic
 Habitat: Corticolous.
 Chemistry: Psoromic acid.

Cryptothecia subsecta Stirt., Proc. Roy. Soc. Glasgow 11: 320. 1897.
 Distribution: Karnataka (Shivamogga), West Bengal; endemic
 Habitat: Corticolous.

Stirtonia A.L.Sm

Stirtonia ghattensis Sumesh N. Dudani, Nayaka, Komal K. Ingle & S. Joseph. Turk. J. Bot. 42: 347. 2018.
 Distribution: Karnataka (Uttar Kannada); endemic.
 Habitat: Corticolous
 Chemistry: UV+ White; No lichen substances.

Stirtonia santessonii Makhija & Patw. Biovigyanum 13(2): 49. 1987.
 Distribution: Karnataka (Kodagu), Andaman & Nicobar island; endemic.
 Habitat: Corticolous
 Chemistry: No diagnostic lichen substances.

Arthopyreniaceae

Arthopyrenia A.Massal.

Arthopyrenia analepta (Ach.) A. Massal., Ric. Auton. Lich. Crost.: 165. fig. 326. 1852.

Lichen analeptus Ach. Lichenogr. Suec. Prodr.: 15. 1798.

Arthopyrenia lapponina Anzi. Comment. Soc. Crittong. Ital., 2(1): 25. 1864.

Distribution: Karnataka (Kodagu), Arunachal Pradesh, Kerala, Tamil Nadu; Cosmopolitan.

Habitat: Corticolous.

Arthopyrenia grisea (Schleich. ex Schaer.) Körb., Syst. Lich. Germ.: 369. 1855.

Verrucaria epidermidis var. *grisea* Schleich. ex Schaer., Lich. Helv. Spic., Sect. 2: 56. 1826.

Distribution: Karnataka (Shivamogga), Arunachal Pradesh; Europe.

Habitat: Corticolous.

Arthopyrenia indusiata Müll.Arg., Flora 66: 288. 1883.

Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Kerala; Brazil.

Habitat: Corticolous.

Arthopyrenia minor R.C.Harris in Tucker & Harris, Bryologist 83: 7. 1980.

Distribution: Karnataka (Bangaluru UD) Andaman & Nicobar Islands, Kerala, West Bengal; USA.

Habitat: Corticolous.

Arthopyrenia nidulans Müll.Arg., Flora 68: 326. 1885.

Distribution: Karnataka (Bangaluru UD), Andaman & Nicobar Islands, Goa, Madhya Pradesh and Uttar Pradesh; Sri Lanka.

Habitat: Corticolous.

Brigantiaeaceae

Brigantiaea Treves.

Brigantiaea leucoxantha (Spreng.) R.Sant. & Hafellner in Hafellner & Bellemère, Nova Hedwigia 35: 246. 1982. (Plate, 1 C)

Lopadium leucoxanthum (Spreng.) Zahlbr., Sitzungsber. Kaiserl. Akad. Wiss. Wien, Math. -Naturwiss. Cl. 3: 398. 1902.

Lecidea leucoxantha Spreng., Kongl. Vetensk. Acad. Handl. 1820: 46. 1820.

Brigantiaea leucoxantha (Spreng.) R.Sant. & Hafellner in Hafellner & Bellemère, Nova Hedwigia 35: 246. 1982.

Distribution: Karnataka (Kodagu, Shivamogga, Uttara Kannada), Arunachal Pradesh, Kerala, Madhya Pradesh, Tamil Nadu; Brazil, Sri Lanka.

Habitat: Corticolous.

Chemistry: Atranorin, zeorin and a yellow spot at Rf value 0.72.

Brigantiaea nigra D.D.Awasthi in D. D. Awasthi & Srivastava, Proc. Indian Acad. Sci., Pl. Sci. 99(3): 172. 1989.

Lopadium nigrum (D.D.Awasthi) Kr.P.Singh & G.P.sinha, Indian Lich. Annot. Checklist: 279. 2010.

Brigantiaea nigra D.D.Awasthi in D. D. Awasthi & Srivastava, Proc. Indian Acad. Sci., Pl. Sci. 99(3): 172. 1989.

Distribution: Karnataka (Shivamogga), Kerala, Tamil Nadu; endemic.

Habitat: Corticolous.

Chemistry: Atranorin, zeorin and an unidentified substance.

Caliciaceae

Amandinea M. Choisy ex Scheid. & M. Mayrhofer

Amandinea punctata (Hoffm.) Coppins & Scheid., Lichenologist 25(4): 343. 1993.

Verrucaria punctata Hoffm., Deutschl. Fl. : 192. 1796.

Buellia punctata (Hoffm.) A.Massal., Ric. Auton. Lich. Crost.: 81 fig. 165, 1852;.

Distribution: Karnataka (Kodagu), Himachal Pradesh, Jammu & Kashmir, Madhya Pradesh and Manipur; Australia, Bhutan, Brazil, Great Britain, South Georgia, sandwich Island, Scandinavia; Antarctica, Europe, North America.

Habitat: Corticolous

Chemistry: No lichen substances.

Buellia De Not., nom. cons.

Buellia confusa D.D. Awasthi, Biblioth. Lichenol. 40: 2. 1991.

Distribution: Karnataka (Kodagu), Kerala and Tamil Nadu; endemic.

Habitat: Corticolous

Chemistry: Atranorin and norstictic acid.

Buellia erubescens Arnold, Verh. Zool. Bot. Ges. Wien 25: 493. 1875.

Buellia stillingiana J.Steiner, Oesterr. Bot. Z. 68: 144. 1919.

Distribution: Karnataka (BangaluruUD), Madhya Pradesh, Tamil Nadu; Europe, USA.

Habitat: Corticolous.

Chemistry: Atranorin, norstictic acid and zeorin.

Buellia pharcidia (Ach.) Malme, Lich. Suec. Exsic. Fasc. 8: 182. 1910.

Lecanora pharcidia Ach., Syn. Meth. Lich.: 147. 1814.

Diplotomma pharcidium (Ach.) M.Choisy, Bull. Mens. Soc. Linn. Lyon 19: 156. 1950.

Distribution: Karnataka*, Jammu & Kashmir, Kerala, Madhya Pradesh, Tamil Nadu; Europe.

Habitat: Corticolous.

Chemistry: No lichen substances.

Buellia posthabita (Nyl.) Zahlbr., Cat. Lich. Univ. 7: 390. 1931).

Lecidea posthabita Nyl., Lich. Nov. Zel.: 111. 1888.

Distribution: Karnataka (Hassan), Madhya Pradesh, Manipur; Nova Granata.

Habitat: Saxicolous on walls.

Chemistry: No lichen substances.

Cratiria Marbach

Cratiria dissimilis (Nyl.) Marbach, Biblioth. Lichenol. 74: 177. 2000.

Lecidea dissimilis Nyl., Ann. Sci. Nat., Bot., ser. 4, 15 : 48. 1861.

Buellia isidiophora D.D.Awasthi & Upreti, Curr. Sci. 50(18): 821. 1981.

Distribution: Karnataka (Dakshina Kannada), Kerala; New Caledonia, Papua New Guinea, Philippines.

Habitat: Corticolous.

Chemistry: Norstictic, connorstictic acids and atranorin.

Cyphelium Ach.

Cyphelium sessile (Pers.) Trevis., Flora 45: 4. 1862.

Calicium sessile Pers., Tentam. Dispos. –Meth. Fungor.: 59. 1797.

Calicium stigonellum Ach., Methodus: 88. 1803.

Distribution: Karnataka (Western Ghats), Kerala, Tamil Nadu; Europe, N America.

Habitat: Corticolous.

Dirinaria (Tuck.) Clem.*Pyxine* sect. *Dirinaria* Tuck.**Dirinaria applanata** (Fée) D.D.Awasthi in D.D. Awasthi & Agarwal, J. Indian Bot. Soc. 49: 135. 1970.*Parmelia applanata* Fée, Essai Crypt. Ecorc.: 126. 1824, tab. 32, fig. 2 & Suppl.: 123, tab. 42, fig. 18. 1837.var. **applanata**

Distribution: Karnataka (Chikkamagaluru, Dharwad, Kodagu, Shivamogga), Andaman & Nicobar Islands, Madhya Pradesh, Maharashtra, Nagaland, Sikkim, Tamil Nadu, Uttar Pradesh, Uttarakhand, West Bengal; tropical and subtropical

Habitat: Usually corticolous, occasionally saxicolous.

Chemistry: Atranorin and divaricatic acid and triterpenoids.

Dirinaria confluens (Fr.) D.D.Awasthi, Biblioth. Lichenol. 2: 28. 1975.*Parmelia confluens* Fr., Syst. Orb. Veg. 1: 284. 1825.*Physcia confluens* (Fr.) Nyl., Syn. Lich. 1(2): 430. 1860.var. **confluens**

Distribution: Karnataka (Chikkamagaluru, Kodagu, Mysuru, Shivamogga), Andaman & Nicobar Islands, Arunachal Pradesh, Kerala, Madhya Pradesh, Maharashtra, Nagaland, Odisha, Sikkim, Tamil Nadu, Uttar Pradesh; Cosmopolitan.

Habitat: Corticolous and saxicolous.

Chemistry: Atranorin and divaricatic acid and triterpenoids.

Dirinaria consimilis (Stirt.) D.D.Awasthi in D.D. Awasthi & Agarwal, J. Indian Bot. Soc. 49: 135. 1970.*Physcia consimilis* Stirt., Proc. Roy. Soc. Glasgow 11: 310. 1879.*Pyxine consimilis* (Stirt.) Stirt., Trans. & Proc. New Zealand Inst. 30: 395. 1898.

Distribution: Karnataka (Bangaluru UB, Chikkamagaluru, Kodagu, Shivamogga), Arunachal Pradesh, Assam, Himachal Pradesh, Kerala, Madhya Pradesh, Manipur, Nagaland, Sikkim, Tamil Nadu, Uttar Pradesh, West Bengal; tropical region of Africa and Asia.

Habitat: Corticolous, rarely saxicolous

Chemistry: Atranorin and sekikaic acid.

Dirinaria papillulifera (Nyl.) D.D.Awasthi, Bryologist 67: 369. 1964.*Physcia papillulifera* Nyl., Acta Soc. Sci. Fenn. 26(10): 9. 1900.

Distribution: Karnataka (Kodagu), Andaman & Nicobar Islands, Orissa, Tamil Nadu, Uttar Pradesh and West Bengal. Primarily distributed in the tropical parts of Asia (India, Indonesia, Sri Lanka and Thailand), and also known from Brazil, Jamaica, Nicaragua, Panama in the tropical America.

Habitat: Corticolous.

Chemistry: Atranorin and divaricatic acid.

Pyxine Fr.**Pyxine austroindica** D.D.Awasthi, Phytomorphology 30: 364. 1980.

Distribution: Karnataka (Shivamogga), Kerala; endemic.

Habitat: Corticolous.

Chemistry: Atranorin and terpenes.

Pyxine coccifera (Fée) Nyl., Mem. Soc. Imp. Sci. Nat. Cherbourg 5: 108. 1857.*Parmelia coccifera* Fée, Essai crypt. Ecorc. Officin. 126. 1824.

Distribution: Karnataka (Chikkamagaluru, Shivamogga), Assam, Kerala, Manipur, Meghalaya, Nagaland, West Bengal; Pantropical.

Habitat: Corticolous.

Chemistry: Atranorin, triterpenes and pyxiferin.

Pyxine cöcoes (Sw.) Nyl., Mem. Soc. Imp. Sci. Nat. Cherbourg 5: 108. 1857.

Lichen cöcoes Sw., Nov. Gen. Sp. Pl.: 146. 1788.

(Plate, 2H)

var. **cöcoes**

Distribution: Karnataka (Chikkamagaluru, Shivamogga), Assam, Goa, Kerala, Madhya Pradesh, Maharashtra, Manipur, Odisha, Tamil Nadu, Uttar Pradesh, West Bengal; Pantropical.

Habitat: Corticolous.

Chemistry: Lichexanthone triterpenes.

var. **prominula** (Stirt.) D.D. Awasthi in D. Awasthi & Upreti, Indian J. Bot. 3(2): 183. 1980.

Pyxine prominula Stirt., Trans. & Proc. New Zealand Inst. 30: 397. 1898.

Distribution: Karnataka (Bengaluru UD), Madhya Pradesh, Maharashtra, Tamil Nadu, West Bengal; Pantropical.

Habitat: Corticolous.

Pyxine consocians Vain., Philipp. J. Sci., C, 8: 109. 1913.

Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Manipur, Nagaland; Africa, Australia, Philippines, Taiwan.

Habitat: Corticolous.

Chemistry: Norstictic acid and triterpenes.

Pyxine cylindrica Kashiw., Bull. Natl. Sci. Mus. Tokyo, B, 3(2): 66. 1977.

Distribution: Karnataka*, Andaman & Nicobar Islands, Goa, Kerala, Madhya Pradesh; Papua New Guinea, Taiwan, Thailand.

Habitat: Corticolous.

Chemistry: Atranorin, norstictic acid and triterpenes.

Pyxine minuta Vain., Acta Soc. Fauna Fl. Fenn. 7(1): 156. 1890.

Pyxine microspora Vain., Philipp. J. Sci., C, 8: 110. 1913.

Distribution: Karnataka, (Bengaluru UD, Chikkamagaluru, Shivamogga), Tamil Nadu, Uttarakhand; Bhutan, C & S America, E Africa, Philippines.

Habitat: Saxicolous.

Chemistry: Lichexanthone, triterpenes and pigment.

Pyxine palniensis D.D. Awasthi, Phytomorphology 30: 374. 1980.

Distribution: Karnataka (Western Ghats), Tamil Nadu; endemic.

Habitat: Saxicolous.

Chemistry: Triterpenes.

Pyxine petricola Nyl. in Crombie., J. Bot. London 14: 263. 1876.

var. **petricola**

Distribution: Karnataka (Bengaluru UD, Kodagu), Assam, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Kerala, Madhya Pradesh, Maharashtra, Tamil Nadu; Pantropical

Habitat: Corticolous or saxicolous.

Chemistry: Lichexanthone; triterpenes and pigment.

var. **pallida** Swinscow & Krog, Norweg. J. Bot. 22: 62. 1975.

Distribution: Karnataka (Bengaluru UD); East Africa.

Corticolous.

Pyxine reticulata (Vain.) Vain., Ann. Acad. Sci. Fenn., ser. A, 6: 70. 1914.

Physcia reticulata Vain. in Hiern & al., Cat. Afr. Pl. 2(2): 412. 1901.

Distribution: Karnataka (Bengaluru UD, Chikkamagaluru, Shivamogga), Andaman & Nicobar Islands, Tamil Nadu; tropical Africa.

Habitat: Corticolous.

Chemistry: Atranorin and triterpenes.

Pyxine sorediata (Ach.) Mont. in Sagra, Hist. Cuba Bot. 9: 188. 1824.

Lecidea sorediata Ach., Syn. Meth. Lich.: 54. 1814.

Distribution: Karnataka (Chikkamagaluru), Arunachal Pradesh, Himachal Pradesh, Kerala, Madhya Pradesh, Manipur, Nagaland, Sikkim, Tamil Nadu, Uttarakhand, West Bengal; Bhutan, Nepal, Sri Lanka, Thailand; tropical to subtropical regions.

Habitat: Corticolous and saxicolous

Chemistry: Triterpenes and pigment.

Sculptolumina Marbach

Sculptolumina japonica (Tuck.) Marbach, Biblioth. Lichenol. 74: 297. 2000.

Lecidea japonica Tuck., Proc. Amer. Acad. Arts. 5: 421. 1862.

Buellia conformis Vain., Étud. Class. Lich. Brésil 1: 168. 1890.

Distribution: Karnataka (Shivamogga), Madhya Pradesh, Tamil Nadu; Africa, S America, Australia, China, Sri Lanka, Thailand

Habitat: Corticolous.

Chemistry: Flavooobscurin B 1, Flavooobscurin X, Myeloconon D 1 and pigment

Candelariaceae

Candelaria A.Massal.

Candelaria concolor (Dicks.) Stein in Cohn, Krypt. Fl. Schles. 2(2): 84. 1879.

Lichen concolor Dicks., Fasc. Pl. Crypt. Br.: Pl. 9, fig. 8. 1783.

Distribution: Karnataka (Bengaluru UD, Hassan, Kodagu, Mandya, Tumkur), Himachal Pradesh, Jammu & Kashmir, Nagaland, Sikkim, Uttarakhand; Africa, Bhutan, Brazil, China, Europe, Japan, Madagascar, N America. New Zealand, Taiwan.

Habitat: Corticolous and saxicolous.

Chemistry: Calycin and pulvinic dilactone.

Catillariaceae

Catillaria A.Massal.

Catillaria leptocheiloides (Nyl.) Zahlbr., Cat. Lich. Univ. 4: 19. 1926.

Lecidea leptocheiloides Nyl. in Crombie, J. Linn. Soc. Bot. 16: 225. 1877.

Distribution: Karnataka (Hassan) Goa, Kerala, Manipur, Tamil Nadu; Pacific Islands (Tahiti).

Habitat: Corticolous.

Chemistry: Zeorin and atranorin.

Catillaria pulverea (Borrer) Lettau, Hedwigia 52: 136. 1912.

Lecidea pulverea Borrer in Hooker & Sowerby, Engl. Bot. Suppl. 2, tab. 2726. 1834.

Distribution: Karnataka (Shivamogga), Jammu & Kashmir; Europe. New Zealand.

Habitat: Corticolous.

Chrysothricaceae

Chrysothrix Mont., nom. cons.

Chrysothrix candelaris (L.) J.R.Laundo, Lichenologist 13(2): 110. 1981.

Byssus candelaris L., Sp. Pl. 2: 1169. 1753.

Lepraria candelaris (L.) Fr., Sched. Critic.: 16. 1824.

Distribution: Karnataka (Bengaluru, Kodagu), Himachal Pradesh, Jammu & Kashmir, Sikkim, Tamil Nadu; Cosmopolitan.

Habitat: Corticolous.

Chemistry: Calycin.

Cladoniaceae

Cladonia P.Browne, nom. cons.

Cladonia cartilaginea Müll.Arg., Flora 63: 260. 1880.

Distribution: Karnataka (Hassan), Arunachal Pradesh, Himachal Pradesh, Jammu & Kashmir, Kerala, Manipur, Meghalaya, Sikkim, Tamil Nadu, Uttarakhand, West Bengal, Nepal; Africa, C and S America, tropical Asia. Habitat: Terricolous.

Chemistry: Strain (1) fumarprotocetraric acid; strain (2) fumarprotocetraric, stictic, constictic and cryptostictic acids; strain (3) psoromic and 2-o-demethylpsoromic acids; strain (4) fumarprotocetraric acid complex and homosekikaic acid and strain (5) usnic and isousnic acids.

Cladonia fruticulosa Kremp., Verh. K. K. Zool. -Bot. Ges. Wien. 30: 331. 1881.

Distribution: Karnataka (Chikkamagaluru), Arunachal Pradesh, Kerala, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tamil Nadu, Uttarakhand, West Bengal; Bhutan, Nepal, Sri Lanka; Africa, Australasia Oceania, SE Asia.

Habitat: Terricolous.

Chemistry: Strain (1) Psoromic acid; strain (2) psoromic and usnic acids; strain (3) fumarprotocetraric, protocetraric and lichesterinic acids.

Cladonia macilenta Hoffm., Deutschl. Fl. 2: 126. 1796.

Distribution: Karnataka (Kodagu), Arunachal Pradesh, Himachal Pradesh, Kerala, Sikkim, Tamil Nadu and West Bengal –hills; Bhutan, Nepal, Sri Lanka; Africa, Asia, North and South America, Australasia and Europe.

Habitat: Decaying wood.

Chemistry: Strain (1) Thamnic and barbatic acids; strain (2) barbatic acid; rarely usnic, squamatic acids and bellidiflorin also.

Cladonia mauritiana Ahti & J.C.David in David & Hawksworth, Biblioth. Lichenol. 57: 94. 1995.

Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Kerala, Tamil Nadu; Madagascar, Malaysia, Mauritius, Reunion, Camoro Islands, Seychelles, Thailand.

Habitat: Terricolous.

Chemistry: Fumarprotocetraric, protocetraric and confumarprotocetraric acids.

Cladonia ramulosa (With.) J.R.Laundon, Lichenologist 16: 225. 1984.

Lichen ramulosus With., Bot. Arr. Veg. Gr. Brit.: 723. 1776.

Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Himachal Pradesh, Jammu & Kashmir, Kerala, Manipur, Meghalaya, Nagaland, Sikkim, Tamil Nadu, Uttarakhand and West Bengal; Cosmopolitan.,

Habitat: Terricolous.

Chemistry: Fumarprotocetraric acid and traces of protocetraric acid.

Coccocarpiaceae

Coccocarpia Pers.

Coccocarpia erythroxyli (Spreng.) Swinscow & Krog, *Norweg. J. Bot.* 23: 256. 1976.

Lecidea erythroxyli Spreng., *Kungl. Vetensk. Acad. Nya Handl.* 1: 47. 1820.

Distribution: Karnataka (Chikkamagaluru, Shivamogga), Andaman & Nicobar Islands, Arunachal Pradesh, Assam, Himachal Pradesh, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Nagaland, Sikkim, Tamil Nadu, Uttarakhand, West Bengal; Cosmopolitan.

Habitat: Corticolous, saxicolous, muscicolous and terricolous.

Coccocarpia palmicola (Spreng.) Arv. & D.J.Galloway, *Bot. Not.* 132: 242. 1979.

Lecidea palmicola Spreng., *Kongl. Vetensk. Acad. Nya Handl.* 1: 46. 1820.

Distribution: Karnataka (Chikkamagaluru, Shivamogga), Andaman & Nicobar Islands, Arunachal Pradesh, Assam, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Nagaland, Sikkim, Tamil Nadu, Uttarakhand, West Bengal; Pantropical

Habitat: Corticolous, saxicolous, terricolous and occasionally foliicolous.

Coccocarpia pellita (Ach.) Müll.Arg. em. R.Sant., *Symb. Bot. Upsal.* 12(1): 420. 1952; Arvidsson, *Opera Bot.* 67: 76. 1982; D. Awasthi, *Beih. Nova Hedwigia* 17: 45. 1965; Kavaka 12(2): 86. 1985 & Comp. *Macrolich. India, Nepal & Sri Lanka*: 120. 2007.

Parmelia pellita Ach., *Lichenogr. Universalis*: 468. 1810.

Distribution: Karnataka (Chikkamagaluru district), Andaman & Nicobar Islands, Arunachal Pradesh, Himachal Pradesh, Kerala, Manipur, Meghalaya, Nagaland, Sikkim, Tamil Nadu, Uttarakhand, West Bengal; Pantropical.

Habitat: Corticolous, saxicolous and terricolous.

Coenogoniaceae

Coenogonium Ehrenb.

Coenogonium dilucidum (Kremp.) Kalb & Lücking in Lücking & Kalb, *Bot. Jahrb. Syst.* 122: 29. 2000.

Lecidea dilucida Kremp., *J. Mus. Godeffroy* 1(4): 103. 1873.

Dimerella dilucida (Kremp.) R.Sant., *Symb. Bot. Upsal.* 12(1): 394. 1952.

Distribution: Karnataka (Kodagu), Andaman & Nicobar Islands; pantropical.

Habitat: Foliicolous.

Chemistry: No lichen substances.

Coenogonium luteum (Dicks.) Kalb & Lücking, in Lücking & Kalb, *Bot. Jahrb. Syst.* 122(1): 32. 2000.

Lichen luteus Dicks., *Fasc. Pl. Crypt. Brit* 1: 11. 1785.

Dimerella lutea (Dicks.) Trevis., *Rendiconti Reale Ist. Lombardo Sci.*, ser. 2, 13: 66. 1880.

Distribution: Karnataka (Kodagu), Arunachal Pradesh, Tamil Nadu and West Bengal; Australia, Costa Rica, Ecuador, Great Britain, New Zealand, South Africa; Europe, North and South America. Cosmopolitan.

Habitat: Corticolous and foliicolous

Chemistry: No lichen substances.

Collemataceae

Leptogium (Ach.) Gray *Collema* sect. *Leptogium* Ach.

Leptogium austroamericanum (Malme) C.W.Dodge, Ann. Missouri Bot. Gard. 20: 419. 1933.

Leptogium cyanescens var. *austroamericanum* Malme, Ark. Bot. 19(8): 21. 1924.

Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Arunachal Pradesh, Goa, Himachal Pradesh, Kerala, Madhya Pradesh, Maharashtra, Manipur, Uttarakhand; Pantropical.

Habitat: Corticolous.

Leptogium burnetiae C.W.Dodge, Beih. Nova Hedwigia 12: 120. 1964.

Distribution: Karnataka (Chikkamagaluru, Shivamogga), Himachal Pradesh, Jammu & Kashmir, Kerala, Madhya Pradesh, Maharashtra, Manipur, Nagaland, Sikkim, Tamil Nadu, Uttarakhand, West Bengal; Africa, America, Asia, Europe.

Habitat: Corticolous.

Leptogium chloromelum (Sw.) Nyl., Syn. Lich. 1(2): 128. 1860

Lichen chloromelus Sw., Fl. Ind. Occid. 3: 1892. 1806.

Distribution: Karnataka (Chikkamagaluru, Kodagu, Shivamogga), Himachal Pradesh, Kerala, Madhya Pradesh, Maharashtra, Tamil Nadu, Uttarakhand; tropical America.

Habitat: Corticolous.

Leptogium cochleatum (Dicks.) P.M.Jørg. & P.James, Lichenologist 15: 113. 1983.

Lichen cochleatus Dicks., Fasc. Crypt. Brit. 1: 13. 1785.

Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Nagaland, Sikkim, Tamil Nadu, Uttarakhand, West Bengal; Australia; Africa, Europe.

Habitat: Corticolous.

Leptogium denticulatum Nyl., Ann. Sci. Nat., Bot., ser. 5, 7: 302. 1867.

Distribution: Karnataka (Chikkamagaluru, Shivamogga), Andaman & Nicobar Islands, Arunachal Pradesh, Goa, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Nagaland, Sikkim, Tamil Nadu, West Bengal; Pantropical

Habitat: Corticolous, saxicolous, muscicolous or terricolous.

Leptogium indicum D.D.Awasthi & P.Akhtar, Geophytology 8(2): 197. 1979.

Distribution: Karnataka (Shivamogga district, Sivappa's Fort Complex, Kavaledurga), Kerala, Maharashtra, Rajasthan and Sikkim. Endemic to India.

Habitat: Corticolous or saxicolous on the walls of monuments.

Leptogium pichneum (Ach.) Malme, Ark. Bot. 19(8): 20. 1924.

Collema tremelloides var. *pichneum* Ach., Syn. Meth. Lich.: 243. 1814.

Distribution: Karnataka (Hassan), Andaman & Nicobar Islands, Kerala, Madhya Pradesh, Tamil Nadu; Japan, Philippines, S America, Sri Lanka.

Habitat: Saxicolous on the walls of monuments.

Leptogium ulvaceum (Pers.) Vain., Ann. Acad. Sci. Fenn., ser. A, 15(6): 38. 1921.

Collema ulvaceum Pers. in Gaudich., Voy. Uraine : 203. 1827.

Distribution: Karnataka (Chikkamagaluru, Shimogga), Arunachal Pradesh, Kerala, Madhya Pradesh, Nagaland, Tamil Nadu; SE Asia.

Habitat: Corticolous.

Gomphillaceae

Aderkomyces Bat.

Aderkomyces albostrigosus (R.Sant.) Lücking, Sérus. & Vězda, Lichenologist 37: 161. 2005.

Tricharia albostrigosa R.Sant., Symb. Bot. Upsal. 12(1): 388. 1952.

Distribution: Karnataka (Kodagu), Arunachal Pradesh, Manipur, Meghalaya, Nagaland, Sikkim, Tamil Nadu, West Bengal; tropical America.

Habitat: Foliicolous.

Chemistry: No lichen substances.

Aulaxina Fée

Aulaxina quadrangula (Stirt.) R.Sant. in Thorold, J. Ecol. 40: 129. 1952.

Platygrapha quadrangula Stirt., Proc. Roy. Soc. Glasgow 11: 103. 1878.

Distribution: Karnataka (Kodagu), Andaman & Nicobar Islands, Arunachal Pradesh, Goa; Angola, Argentina, Bolivia, Brazil, Costa Rica, Cuba, Ecuador, French Guiana, Guatemala, Haiti, Panama, Peru, Thailand, Trinidad and Tobago, Venezuela

Habitat: Foliicolous.

Chemistry: No lichen substances.

Echinoplaca Fée

Echinoplaca epiphylla Fée, Essai Crypt. Ecorc. : 50 & 93, tab. I, fig. 29. 1824.

Distribution: Karnataka (Kodagu), Arunachal Pradesh, Manipur, Meghalaya, Sikkim, West Bengal; pantropical.

Habitat: Foliicolous.

Chemistry: No lichen substances, Gyrophoric acid.

Tricharia Fée

Tricharia triseptata R. Sant., Symb.Bot. Upsal. 12(1) : 380. 1952.

Distribution: Karnataka (Kodagu), Manipur; tropical America & Africa.

Habitat: Foliicolous.

Graphidaceae

Acanthothesis Clem.

Acanthothesis archeri B.O. Sharma, Makhija & Khadilkar, Lichenologist 42(5): 548. 2010. **(Plate, 1A)**

Distribution: Karnataka (Udupi); endemic.

Habitat: Corticolous.

Chemistry: No lichen substances.

Acanthothesis celata B.O. Sharma, Makhija & Khadilkar, Lichenologist 42(5): 550. 2010

Distribution: Karnataka (Udupi); endemic.

Habitat: Corticolous.

Chemistry: No lichen substances.

Anomomorpha Nyl ex Hue

Anomomorpha elegans B.O. Sharma, Makhija & Khadilkar, Lichenologist. 42(3): 281. 2010. **(Plate,1B)**

Distribution: Karnataka (Shivamogga, Uttara Kannada); endemic.

Habitat: Corticolous.

Chemistry: Salazinic acid.

Astrochapsa Parmen, Lücking & Lumbsch

Astrochapsa pseudophlyctis (Nyl.) Parmen, Lücking & Lumbsch, *PLoS ONE* 7(12): e51392, 9. 2012.

Graphis pseudophlyctis Nyl., in Hue, *Nouv. Arch. Mus. Hist. Nat.* 3: 163. 1891.

Distribution: Karnataka (Shivamogga), Meghalaya and Sikkim.

Habitat: Corticolous.

Austrotrema I. Medeiros & al.

Austrotrema terebrans (Nyl.) I. Medeiros & al. *Fieldiana Life and Earth Sciences* 9: 17. 2017.

Thelotrema terebrans Nyl., *Bull. Soc. Linn. Normandie, ser. 2, 7*: 166. 1873.

Distribution: Karnataka Andaman & Nicobar Islands Kerala, Maharashtra and Tamil Nadu), Australia, New Caledonia, Sri Lanka; Africa.

Habitat: Corticolous.

Chemistry: Stictic acid chemosyndrome.

Chapsa A.Massal.

Chapsa hiata (Hale) Sipman, *Phytotaxa* 55: 38. 2012.

Thelotrema hiatum Hale, *Smithsonian Contr. Bot.* 38: 44. 1978.

Distribution: Karnataka (Udupi, South Canara); Panama.

Habitat: Corticolous.

Chemistry: No lichen substances.

Chapsa laceratula (Mull. Arg.) Rivas Plata & Lücking, *Lichnolog* 42 : 183. 2010.

Thelotrema laceratulum Müll. Arg., *Flora* 70: 399. 1887.

Distribution: Karnataka (Chickmagalur, Shivamogga, UttaraKannada), Maharashtra, Tamil Nadu); Australia, Sri Lanka.

Habitat: Corticolous.

Chemistry: No lichen substances.

Chapsa leprocarpa (Nyl.) A. Frisch, *Biblioth. Lechenol.* 92: 108. 2006.

Graphis leprocarpa Nyl., *Acta Soc. Sci. Fenn.* 7 : 472. 1863.

Thelotrema leprocarpum (Nyl.) Tuck., *Gen. Lich.*: 139. 1872.

Distribution: Karnataka (Chikkamagaluru, Shivamogga, Udupi), Andaman & Nicobar Islands; Sri Lanka; Americas, tropical Africa,

Habitat: Corticolous. Chemistry: No lichen substances.

Chapsa leprocarpoides (Hale) Cáceres, & Lücking, *Libri Bot.* 22: 52 .2007.

Thelotrema leprocarpoides Hale, *Bull. Br. Mus. (Nat. Hist.), Bot.* 8(3): 259. 1981

Thelotrema confertum Nagarkar, Sethy & Patw., *Kavaka* 12(2): 58. 1985.

Distribution: Karnataka (Shivamogga, Udupi) and Sri Lanka; tropical areas.

Habitat: Corticolous.

Chemistry: no lichen substances.

Cruentotrema Rivas Plata & al.

Cruentotrema cruentatum (Mont.) Rivas Plata, Lumbsch & Lücking., *Fungal Diversity* 52: 119. 2012.

Stictis cruentata Mont. *Annls Sci. Nat. Bot. ser 4, 3*: 96. 1855.

Distribution: Karnataka (Uttarakannada) rain forests.

Habitat: Corticolous.

Chemistry: no lichen substances.

Cruentotrema kurandense (Mangold) Rivas Plata, Lumbsch & Lucking, Fungal Diversity 52: 119 2012.
Ocellularia kurandensis Mangold, Fl. Australia (Melbourne), 57: 656 2009.
 Distribution: Karnataka (Chickmagaluru) and tropical rain forests.
 Habitat: Corticolous.
 Chemistry: no lichen substances.

Diorygma Eschw.

Diorygma aeolum (Stirt.) Pushpi Singh & Kr. P. Singh, Lichenologist 49(5): 527.2017
Diorygma megasporum Kalb & al., Symb. Bot. Upsal. 34(1): 160. 2004.
 Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Manipur, Maharashtra, Meghalaya, Nagaland, Sikkim and West Bengal
 Habitat: Corticolous.
 Chemistry: Constictic, cryptostictic and stictic(major) acids

Diorygma albovirescens Makhija & al., Mycotaxon 109: 382. 2009.
 Distribution: Karnataka (Shivamogga) and Maharashtra.
 Habitat: Corticolous.
 Chemistry: Constictic, cryptostictic and stictic (major) acids.

Diorygma junghuhnii (Mont. & Bosch) Kalb, Staiger & Elix, Symb. Bot. Upsal. 34(1): 157. 2004.
Ustalia junghuhnii Mont. & Bosch. in Junghuhn, Pl. Jungh. 4: 477. 1855.
Graphina junghuhnii (Mont. & Bosch.) Müll.Arg., Flora 65: 386. 1882. *Phaeographina junghuhnii* (Mont. & Bosch) Zahlbr., Ann. Cryptog. Exot. 1: 148. 1928.
 Distribution: Karnataka (Dakshin Kannada, Kodagu, Shivamogga, Udupi, Uttar Kannada), Andaman & Nicobar Islands, Kerala, Maharashtra, Manipur, Nagaland, Sikkim, Tamil Nadu; Brazil, Guatamala, Indonesia, New Caledonia, Paraguay, Solomon Islands, Tahiti and Thailand.
 Habitat: Corticolous.

Diorygma megaspermum Makhija & al., Mycotaxon, 109: 386. 2009.
 Karnataka (Shivamogga) and Maharashtra; endemic to India.
 Habitat : Corticolous.
 Chemistry: Consalazinic, constictic, cryptostictic and stictic(major) acids.

Diorygma poitaei (Fée) Kalb, Staiger & Elix, Symb.Bot. Upsal. 34(1):164. 2004.
Graphis poitaei Fée. Essai Crypt.Exot.(Paris): 46.1825 (1824).
 Distribution: Karnataka (Kodagu) and neotropical regions.
 Habitat: Corticolous.
 Chemistry: Hypostictic and hypoconstictic acids

Diorygma pruinsum (Eschw.) Kalb, Staiger & Elix, Symb. Bot. Upsal. 31(1): 166. 2004.
Leiogramma pruinsum Eschw. in Martius, Icon. Select. Plant. Cryptog., Fasc. 1: 12, tab. 7, fig. 3. 1828.
Helminthocarpon pruinsum (Eschw.) Müll.Arg., Flora 71: 523. 1888
 Distribution: Karnataka (Kodagu) and Assam; Australia, Brazil, Cameroon, Dominica, Indonesia, Kenya, New Caledonia, Singapore, Tanzania, Thailand and U.S.A.
 Habitat: Corticolous.
 Chemistry: Protocetraric acid.

Diorygma soozanum (Zahlbr.) M. Nakan. & Kashiw., in Nakanishi, Kashiwadani & Moon, Bull. Natn. Sci. Mus., Tokyo, B 29(2): 86. 2003.
Graphina soozana Zahlbr., Feddes Repert. 31: 215 (1933)
 Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Assam and Nagaland . Habitat: Corticolous.
 Chemistry: Norstictic and: connorstictic acids.

Diorygma subalbatum (Patw. & Makhija) B.O. Sharma & Makhija, Mycotaxon 109: 216. 2009.

Helminthocarpon subalbatum Patw. & Makhija, Biovigyanam 7: 128. 1981.

(Plate, 1 D)

Distribution: Karnataka (Udupi); endemic.

Habitat: Corticolous.

Chemistry: Norstictic and stictic acids.

Diorygma rufosporum (Patw. & C.R. Kulk.) B.O. Sharma & Makhija, Mycotaxon 109: 214. 2009.

Phaeographina rufospora Patw. & C.R. Kulk. Indian. J. Bot. 2(2): 138. 1979.

Distribution: Karnataka (Belgaun, Koppal, Shivamogga) and Maharashtra; endemic.

Habitat: Corticolous.

Diploschistes Norman

Diploschistes actinostoma (Pers. ex Ach.) Zahlbr. Hedwigia 31: 34 (1892).

Distribution: Karnataka (Bellari), Himachal Pradesh, Jammu & Kashmir, Meghalaya, Tamil Nadu and Uttarakhand); Australia, Bhutan, Macronesia, Nepal, New Zealand, North Africa, Socotra, South Africa, West Indies. Cosmopolitan.

Habitat: Saxicolous (on siliceous rocks).

Chemistry: Lecanoric acid

Diploschistes candidissimus (Kremp.) Zahlbr. Cat. Lich. Univ. 2: 600 (1923).

Distribution: Karnataka (Hassan), Jammu & Kashmir, Madhya Pradesh, Rajasthan, Tamil Nadu and Uttarakhand; Asia, Australia, Europe, North Africa.

Habitat: Saxicolous

Chemistry: Lecanoric acid (major)

Diploschistes euganeus (A.Massal.) J.Steiner, Verhandl. Zool. Bot. Ges. Wien 69: 96. 1919.

Limboria euganea A.Massal., Ric. Auton. Lich. Crost.: 155. 1852.

Distribution: Karnataka (Chikkamagaluru), Uttarakhand; Algeria, Australia, Brazil, Cape Verde Island, New Zealand, South Africa, Zimbabwe ; Europe. Cosmopolitan.

Habitat: Saxicolous (on siliceous rocks).

Diploschistes muscorum (Scop.) R.Sant. in Hawksworth & al., Lichenologist 12(1): 106. 1980.

Lichen muscorum Scop., Fl. Carniol., ed. 2, 2: 365. 1772.

subsp. **bartlettii** Lumbsch, Herzogia 7: 602. 1987; Pant & Upreti, Lichenologist 25(1) : 43. 1993.

Distribution: Karnataka (Chikkamagaluru), Meghalaya, Tamil Nadu, Uttarakhand, West Bengal; Palaeotropical.

Habitat: Saxicolous and muscicolous.

Chemistry: lecanoric acid (major), diploschistesic acid (trace), orsellinic acid (trace).

Diploschistes scruposus (Schreb.) Norman, Nyt Mag. Naturvidensk. 7: 232 .1853.

Lichen scruposus Schreb., Spic. Fl. Lips.: 133. 1771.

Distribution: Karnataka (Banglore), Himachal Pradesh, Jammu & Kashmir, Madhya Pradesh, Maharashtra, Meghalaya, Sikkim, Tamil Nadu, Uttarakhand and West Bengal; N.W.Karakoram, Sri Lanka, Nepal; widely distributed.

Habitat: Saxicolous and terricolous

Chemistry. Lecanoric and diploschistesic acids.

Fissurina Fée

Fissurina cingalina (Nyl.) Staiger, *Biblioth. Lichenol.* 85: 128. 2002.

Graphis cingalina Nyl. *Acta Soc. Sci. Fenn.*, 26 (10):21. 1900.

Distribution: Karnataka (Shivamogga), Kerala, Maharashtra, Manipur and Tamil Nadu.

Habitat: Corticolous.

Chemistry: No lichen substances.

Fissurina coarctata Makhija & Adaw., *Lichenologist* 39(2): 171. 2007.

Graphis subnitidula Nyl. in Tuckerman, *Syn. N. Amer. Lich.* 2: 123. 1888.

Graphina subnitidula (Nyl.) Zahlbr., *Cat. Lich. Univ.* 2: 427. 1923.

Distribution: Karnataka (Uttara Kannada), Andaman & Nicobar Islands, Meghalaya; endemic.

Habitat: Corticolous.

Chemistry: No lichen substances.

Fissurina disposita B.O. Sharma, Khadilkar & Makhija. *Lichenologist* 44(3): 347. 2012. **(Plate, 1E)**

Distribution: Karnataka (Chikmagalur), Meghalaya; endemic to India.

Habitat: Corticolous.

Chemistry: No lichen substances.

Fissurina dumastioides (Fink) Staiger, *Biblioth. Lichenol.* 85: 161. 2002;

Graphis dumastioides Fink, *Mycologia* 19: 213. 1927.

Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Kerala, Tamil Nadu; Dominica, Indonesia, Porto Rico, Thailand.

Habitat: Corticolous.

Chemistry: Norstictic acid and traces of stictic acid.

Fissurina immersa B.O. Sharma, Khudilkar & Makhija. *Lichenologist* 44(3): 347. 2012. **(Plate, 1F)**

Distribution: Karnataka (Kodagu), endemic.

Habitat: Corticolous.

Chemistry: Norstictic acid

Fissurina karnatakensis Makhija & Adaw., *Lichenologist* 39(2): 176. 2007. **(Plate, 1G)**

Distribution: Karnataka (Udupi), endemic.

Habitat: Corticolous.

Chemistry: Protocetraric and fumarprotocetraric acids.

Fissurina longiramea Makhija & Adaw., *Lichenologist* 39(2): 178. 2007.

Distribution: Karnataka (Udupi), Andaman & Nicobar Islands; endemic.

Habitat: Corticolous.

Chemistry: No lichen substances..

Fissurina microcarpa B.O. Sharma, Khudilkar & Makhija. *Lichenologist* 44(3):343. 2012. **(Plate, 1H)**

Distribution: Karnataka (Chikkamagaluru), Tamil Nadu; endemic.

Habitat: Corticolous.

Chemistry: Stictic acid.

Fissurina nitidescens (Nyl.) Nyl. *Lich. Jab.*: 108. 1890; B.O. Sharma et al., *Lichenologist.* 44(3): 350. 2012.

Graphis nitidescens Nyl. *Zahlbr. Cat. Lich. Univ.* 2: 410. 1888.

Distribution: Karnataka (Chikkamagaluru), Kerala; Africa, Australia, USA and Brazil.

Habitat: Corticolous.

Fissurina monospora C. Knight, Transact. Newzealand Instit. 15: 354. 1883; B.O. Sharma & al., Lichenologist. 44(3): 349. 2012.
 Distribution: Karnataka (Chikkamagaluru); Newzealand.
 Habitat: Corticolous.
 Chemistry: No lichen substances.

Fissurina simplex B.O. Sharma, Khudilkar & Makhija, Lichenologist 44(3):351. 2012. (Plate, 2A)
 Distribution: Karnataka (Uttara Kannada), Kerala; endemic.
 Habitat: Corticolous.
 Chemistry: Stictic and hypostictic acid.

Fissurina sporolata B.O. Sharma, Khudilkar & Makhija, Lichenologist 44(3): 351. 2012. (Plate, 2B)
 Distribution: Karnataka (Udupi), endemic.
 Habitat: Corticolous.
 Chemistry: No lichen substances.

Fissurina subcontexta (Nyl.) Nyl., Lich. Nova Zeland.: 125. 1888.
Graphis subcontexta Nyl., Bull. Soc. Linn. Normandie, ser. 2., 2: 118. 1868
 Distribution: Karnataka (Shivmogga) and Arunachal Pradesh
 Habitat: Corticolous.
 Chemistry: No lichen substances.

Fissurina submonospora B.O. Sharma, Khudilkar & Makhija, Lichenologist 44(3): 352. 2012.
 Distribution: Karnataka (Shivamogga, Uttara Kannada), Kerala, Tamil Nadu; endemic.
 Habitat: Corticolous.
 Chemistry: No lichen substances.

Fissurina subnitidula (Nyl.) Staiger Biblioth. Lichenol. 82: 153. 2002, B.O. Sharma & al., Lichenologist 44(3): 353. 2012.
Graphis subnitidula Nyl., Syn. N. Amer. Lich. (Boston) 2: 123 .1888. Distribution: Karnataka (Uttara Kannada); Africa.
 Habitat: Corticolous.
 Chemistry: No lichen substances.

Fissurina taeniocarpoides Makhija & Adaw., Lichenologist 39(2): 181. 2007.
Graphis batavana Zahlbr., Ann. Mycol. 29: 76. 1931.
 Distribution: Karnataka (Dakshin Kannad, Shivamogga), Andaman & Nicobar Islands, Kerala, Tamil Nadu; Indonesia.
 Habitat: Corticolous.
 Chemistry: No lichen substances.

Fissurina triticea (Nyl.) Staiger, Biblioth. Lichenol. 85: 156. 2002.
Graphis triticea Nyl., Ann. Sci. Nat., Bot., ser. 4, 19: 367. 1863.
 Distribution: Karnataka (Udupi), Kerala, Tamil Nadu; Pantropical.
 Habitat: Corticolous.
 Chemistry: Stictic acid.

Fissurina verrucosa Makhija & Adaw., Lichenologist 39(2): 183. 2007.
 Distribution: Karnataka (Uttara Kannada); endemic.
 Habitat: Corticolous.
 Chemistry: Fumarprotocetraric and protocetraric (trace) acids.

Glyphis Ach.

Glyphis cicatricosa Ach., Syn. Meth. Lich.: 107. 1814.

Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Goa, Kerala, Sikkim, Tamil Nadu, West Bengal; Pantropical.

Habitat: Corticolous.

Chemistry: No Lichen substances.

Glyphis confluens Zenk. in Goebel & Kunze, Pharmazeut. Waarekunde 1: 163. 1827-29.

Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Kerala, Odisha, Sikkim, Tamil Nadu; Pantropical

Habitat: Corticolous.

Chemistry: Zeorin, usnic acid (?) and an unidentified substance.

Graphis Adans.

Graphis acharii Fée, Essai Crypt. Ecorc. : 39, t. 10, f. 4. 1824.

Graphina acharii (Fée) Müll. Arg., Mem. Soc. Phys. Genève 29 (8): 38. 1887.

Distribution: Karnataka*, Arunachal Pradesh, Kerala, Sikkim, West Bengal; Pantropical.

Habitat: Corticolous.

Chemistry: Norstictic acid (K+ yellow forming red crystals)

Graphis ajarekarii Patw. & C.R.Kulk., Norweg. J. Bot. 26(1): 45. 1979.

Distribution: Karnataka (Kodagu), Kerala, Maharashtra, Tamil Nadu; endemic.

Habitat: Corticolous.

Chemistry: Norstictic, stictic and constictic acids.

Graphis alboglaucescens Adaw. & Makhija, Mycotaxon 99: 312. 2007.

Distribution: Karnataka (Chikkaballapur); endemic.

Habitat: Corticolous.

Chemistry: Norstictic acid.

Graphis aurita Eschw. in Martius, Fl. Bras. Enum. Pl. 1: 90. 1833.

Graphis persulcata Stirt., Proc. Roy. Soc. Glasgow 11: 315. 1879.

Distribution: Karnataka (Chikkaballapur), Andaman & Nicobar Islands, Assam, Kerala, Maharashtra, Sikkim, Tamil Nadu; Australia.

Habitat: Corticolous.

Chemistry: No lichen substances.

Graphis caesiella Vain., Acta Soc. Fauna Fl. Finn. 7: 122. 1890.

Distribution: Karnataka (Shivamogga, Uttara Kannada), Arunachal Pradesh and Lakshadweep .

Habitat: Corticolous.

Chemistry: Stictic and constictic acids.

Graphis cincta (Pers.) Aptroot in Archer, Fl. Australia 57: 651. 2009.

Opegrapha cincta Pers., Ann. Wetter. Ges. 2: 15, tab. 10, f. 4. 1811.

Graphis guimarana Vain., Ann. Acad. Sci. Fenn., ser. A, 15(6): 248. 1921.

Distribution: Karnataka (Chikkamagaluru, Haveri; Uttara Kannada), Goa, Kerala, Maharashtra, Tamil Nadu; Australia, Philippines, West Indies.

Habitat: Corticolous.

Chemistry: Norstictic acid.

Graphis congesta (Fée) Müll.Arg., Mem. Soc. Phys. Genève 29(8): 35. 1887.

Opegrapha congesta Fée, Essai Crypt. Ecorc. Suppl. : 155. 1837.

Distribution: Karnataka (Shivamogga), Kerala, Tamil Nadu; Neotropics, Eastern Palaeotropics.

Habitat: Corticolous.

Chemistry: Norstictic acid.

Graphis dendrogramma Nyl. in Cromb., J. Linn. Soc., Bot. 16: 226. 1878.

Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Kerala, Nagaland, Sikkim and West Bengal

Habitat: Corticolous.

Chemistry:

Graphis duplicata Ach., Syn. Meth. Lich.: 81. 1814.

Graphis schizograpta Müll.Arg., Flora 65: 335. 1882.

Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Kerala, Maharashtra, Manipur, Nagaland, Tamil Nadu, Uttarakhand; China, Costa Rica, Indonesia.

Habitat: Corticolous.

Chemistry: No lichen substances.

Graphis eburnea Adaw. & Makhija, Mycotaxon 99: 314. 2007.

Distribution: Karnataka (Uttara Kannada); endemic.

Habitat: Corticolous.

Chemistry: Norstictic acid.

Graphis filiformis Adaw. & Makhija, Mycotaxon 99: 314. 2007.

Distribution: Karnataka (Shivamogga). Eastern Asia.

Habitat: Corticolous.

Chemistry: Norstictic and connorstictic acids.

Graphis handelii Zahlbr. in Hand-Mazz-, Symb. Sin. 3: 39 & 40. 1930.

Distribution: Karnataka (Uttara Kannada), West Bengal, Manipur, Meghalaya, Andhra Pradesh; Australia, China, Costa Rica, Hawaii, New Caledonia and Paraguay

Habitat: Corticolous

Chemistry: Norstictic acid.

Graphis hiascens (Fée) Nyl., Ann. Sci. Nat., Bot., ser. 4, 11: 226. 1859.

Opegrapha hiascens Fée, Essai Crypt. Ecorc. Suppl. : 25, pl. 36, fig. 1. 1831.

Graphina hiascens (Fée) Müll.Arg., Mem. Soc. Phys. Genève 29(8): 42. 1887.

Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Manipur, Nagaland, Tamil Nadu; Philippines, Singapore, Sri Lanka; S America.

Habitat: Corticolous.

Chemistry: Norstictic acid.

Graphis insulana (Müll.Arg.) Lücking & Sipman in Lücking & al., Fieldiana, Bot.: 84. 2008.

Graphina insulana Müll.Arg., Bot. Jahrb. Syst. 4: 56. 1883.

Graphina nylanderi Patw. & C.R.Kulk., Norweg. J. Bot. 26(1): 47. 1979.

Distribution: Karnataka (Shivamogga), Maharashtra; Australia, Costa Rica, Malaysia, Philippines, Sri Lanka.

Habitat: Corticolous.

Chemistry: Norstictic acid.

Graphis isidiza Adaw. & Makhija, Lichenologist 36(6): 361. 2004.

Distribution: Karnataka*, Tamil Nadu; endemic.

Habitat: Corticolous.

Chemistry: Constictic acid and stictic acid (trace).

Graphis lineola Ach., Lichenogr. Universalis: 264. 1810.

Distribution: Karnataka (Bangaluru UD), Arunachal Pradesh, Tamil Nadu, Uttarakhand, West Bengal; Pantropical.

Habitat: Corticolous.

Graphis longiramea Müll.Arg., J. Linn. Soc., Bot. 29: 225. 1892.

Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Manipur, Meghalaya, Nagaland, Sikkim, Tamil Nadu, West Bengal; Guadeloupe Islands.

Habitat: Corticolous.

Chemistry: Constictic and stictic acids.

Graphis parvicarpa B.O. Sharma and Khadilkar, Lichenologist. 43(5): 487. 2011.(Plate,2D)

Distribution: Karnataka (Chikkaballapur) ; endemic.

Habitat: Corticolous. Chemistry: Norstictic acid.

Graphis pertriosa (Kremp.) A.W.Archer, Telopea 11: 73. 2005.

Enterographa pertriosa Kremp., Nuovo Giorn. Bot. Ital. 7: 39. 1875.

Chiodecton pertricosum (Kremp.) Zahlbr., Cat. Lich. Univ. 2: 48. 1922.

Graphina pertriosa (Kremp.) Zahlbr. in Engler, Bot. Jahrb. Syst. 60: 480. 1926

Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Manipur, Tamil Nadu; Australia, Indonesia, Malaysia, Tanzania.

Habitat: Corticolous.

Chemistry: Norstictic acid.

Graphis pinicola Zahlbr. in Handel-Mazzetti, Symb. Sin. 3:40 & 43. 1930.

Graphis foliicola var. *major* D.D.Awasthi & Kr.P.Singh, Norweg. J. Bot. 19: 242. 1972.

Distribution: Karnataka (Kodagu), Tamil Nadu; pantropical.

Habitat: Foliicolous.

Graphis pseudoaquilonia Lücking, Lichenologist, 44 (3): 393. 2012.

Distribution: Karnataka (Shivamogga), and Assam .

Habitat: Corticolous.

Chemistry: Norstictic acid.

Graphis pyrrocheiloides Zahlbr., Cat. Lich. Univ. 2: 321. 1923.

Distribution: Karnataka (Kodagu, Shivamogga), Maharashtra, West Bengal; Pantropical.

Habitat: Corticolous.

Chemistry: Norstictic acid.

Graphis rimulosa (Mont.) Trevis., Spighe e Pagile: 11. 1853.

Opegrapha rimulosa Mont. Ann. Sci. Nat., Bot., ser. 2, 18: 271. 1842.

Distribution: Karnataka*, Arunachal Pradesh, Kerala, Maharashtra, Manipur, Nagaland, Tamil Nadu and Uttarakhand; Pantropical.

Habitat: Corticolous.

Chemistry: No lichen substances.

Graphis salacinilongiramea Adaw. & Makhija, Mycotaxon 99: 318. 2007.

Distribution: Karnataka (Chikkamagaluru, Kodagu); endemic.

Habitat: Corticolous.

Chemistry: Salazinic (major), stictic (major), hypoconstictic and hyposalazinic acids

Graphis scripta (L.) Ach., Vetensk.-Akad. Nya Handl. (Stockholm): 145. 1809.

Lichen scriptus L., Sp. Pl.: 1140. 1753.

Graphis scripta var. *flexuosa* A.Massal., Mem. Lichenogr.: 108. 1853.

Distribution: Karnataka (Bangaluru UD, Kodagu), Arunachal Pradesh, Assam, Goa, Himachal Pradesh, Kerala, Manipur, Nagaland, Sikkim, Tamil Nadu, West Bengal; Cosmopolitan.

Habitat: Corticolous.

Chemistry: No lichen substances.

Graphis stenotera Vain., Ann. Acad. Sci. Fenn., ser. A, 15(6): 243. 1921.

Distribution: Karnataka (Chikkamagaluru), Kerala, Tamil Nadu; Costa Rica, Philippines, Taiwan.

Habitat: Corticolous.

Chemistry: Stictic (major) and constictic (trace) acids.

Graphis streblocarpa (Bél.) Nyl., Flora 49: 133. 1866.

Graphina streblocarpa (Bél.) Müll.Arg., Flora 65: 502. 1882.

Graphina fissofurcata (Leight.) Müll.Arg., Flora 65: 385. 1882

Opegrapha streblocarpa Bél., Voy. Indes Or. 2: 426. 1924.

Graphis fissofurcata Leight., Trans. Linn. Soc. London 27: 177, t. 36, f. 18. 1869.

Distribution: Karnataka (Chikkamagaluru, Kodagu, Shivamogga), Kerala, Meghalaya, Nagaland, Sikkim, Tamil Nadu, West Bengal; Australia, E Africa, Indonesia, Japan, Papua New Guinea, Sri Lanka.

Habitat: Corticolous and saxicolous.

Chemistry: Stictic and constictic acids.

Graphis subserpentina Nyl., Acta Soc. Sci. Fenn. 7: 465. 1863.

Graphina subserpentina (Nyl.) Müll.Arg., Bull. Soc. Roy. Bot. Belgique 32: 152. 1893.

Distribution: Karnataka (Chikkamagaluru, Shivamogga), Arunachal Pradesh, Kerala, Maharashtra, West Bengal; Palaeotropics.

Habitat: Corticolous.

Chemistry: Norstictic acid.

Graphis subvittata Adaw. & Makhija, Mycotaxon 99: 322. 2007.

Distribution: Karnataka (Chikkaballapur); endemic.

Habitat: Corticolous.

Chemistry: Stictic (major), constictic and norstictic (major) acids.

Graphis vittata Müll.Arg., Flora 65: 335. 1882.

Distribution: Karnataka (Kodagu; Shivamogga), Arunachal Pradesh, Kerala, Madhya Pradesh, Maharashtra, Sikkim; Pantropical.

Habitat: Corticolous.

Chemistry: Stictic and constictic acids.

Hemithecium Trevis.

Hemithecium andamanicum (Makhija, Adw. & Patw) B.O. Sharma & Khadlkar in B.O. Sharma & al., Lichenologist 44(3): 350. 2012.

Graphina andamanica Makhija, Adaw. & Patw., Biovigyanam 18(2): 22. 1992.

Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands; endemic.

Habitat: Corticolous.

Chemistry: Stictic, norstictic and constictic acids.

Hemithecium aphanes (Mont. & Bosch) M.Nakan. & Kashiw., Bull. Natl. Sci. Mus. Tokyo, B, 29(2): 88. 2003.
Graphis aphanes Mont. & Bosch in Junghuhn, Pl. Jungh. 4: 474. 1855.
 Distribution: Karnataka (Belagavi, Shivamogga, Uttara Kannada), Andaman & Nicobar Islands, Arunachal Pradesh, Kerala and Maharashtra; Australia, Bonnin Island, Indonesia, Japan, Solomon Islands and Thailand.
 Habitat: Corticolous.
 Chemistry: Stictic and constictic acids.

Hemithecium croceum Makhija & Adaw., Mycotaxon 91: 348. 2005.
 Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands; endemic.
 Habitat: Corticolous.
 Chemistry: Stictic acid

Hemithecium epixanthum (Mont. & Bosch) Chitale & Makhija in Chitale, Makhija & B.O.Sharma, Mycotaxon 108: 85. 2009.
Graphis epixantha Mont. & Bosch in Junghuhn, Pl. Jungh. 4: 472. 1855.
Graphina epixantha (Mont. & Bosch) Zahlbr., Cat. Lich. Univ. 2: 405. 1923.
 Distribution: Karnataka (Belagavi, Shivamogga), Andaman & Nicobar Islands, Maharashtra; Indonesia.
 Habitat: Corticolous.
 Chemistry: Stictic and constictic acids.

Hemithecium flexile (Makhija, Adaw. & Patw.) B. O. Sharma & Khadlkar in B. O. Sharma & al., Lichenologist 44(3): 358. 2012.
Graphina flexilis Makhija, Adaw. & Patw., Biovigyanam 18(2): 25. 1992.
 Distribution: Karnataka (Kodagu, Shivamogga), Andaman & Nicobar Islands; endemic.
 Chemistry: Norstictic, stictic and constictic acids.

Hemithecium fulvescens Adaw. & Makhija, Mycotaxon 92: 389. 2005.
 Distribution: Karnataka (Chikkamagaluru, Dakshin Kannada, Udupi); endemic.
 Habitat: Corticolous.
 Chemistry: Stictic, constictic and protocetraric acids.

Hemithecium lamii (Redinger) V.Tewari & Upreti in Dubey & al., Phytotaxonomy 7: 24. 2007.
Phaeographina lamii Redinger, Rev. Bryol. Lichénol. 9: 71. 1936.
 Distribution: Karnataka (Shivamogga), Andama & Nicobar Islands, Arunachal Pradesh, West Bengal; Indonesia.
 Habitat: Corticolous.
 Chemistry: Stictic and constictic acids.

Hemithecium nakanishianum (Patw. & C.R.Kulk.) Makhija & A.Dube in Makhija & al., Mycotaxon 93 : 370. 2005.
Graphis nakanishiana Patw. & C.R.Kulk., Norweg. J. Bot. 26: 46. 1979.
 Distribution: Karnataka (Belagavi, Chikkamagalur, Kodagu, Shivamogga, Udupi, Uttara Kannadaa); Arunachal Pradesh, Assam, Kerala, Maharashtra, Nagaland, Sikkim, Tamil Nadu, West Bengal; Australia.
 Habitat: Corticolous.
 Chemistry: Norstictic, stictic and constictic acids.

Hemithecium norlabiatum (Patw. & C.R. Kulk.) B.O. Sharma & Khadlkar in B.O. Sharma & al. Lichenologist 44(3): 360. 2012.
Graphina norlabiata Patw. & C.R.Kulk., Biovigyanam 5: 6. 1979.
 Distribution: Karnataka (Shivamogga, Udupi, Uttara Kannadaa), Kerala; endemic
 Habitat: Corticolous.
 Chemistry: Norstictic acid.

Hemithecium salacinilabiatum (Patw. & C.R.Kulk.) Chitale & Makhija in Chitale, Makhija & B.O.Sharma, Mycotaxon 108: 88. 2009.

Graphina salacinilabiata Patw. & C.R.Kulk., Biovigyanam 5: 6. 1979.

Habitat: Corticolous.

Distribution: Karnataka (Chikkamagaluru, Dakshina Kannada, Kodagu, Shivamogga), Kerala, Maharashtra; endemic.

Chemistry: Salazinic acid.

Hemithecium scariosum Makh. & Adaw. Mycotaxon 91: 350. 2005.

Distribution: Karnataka (Uttara Kannada), Andaman & Nicobar island; endemic

Habitat: Corticolous

Chemistry: Stictic, Salazinic, constictic (trace) acids.

Hemithecium staigerae Adaw. & Makhija, Mycotaxon 92: 390. 2005.

Distribution: Karnataka (Western Ghats)*, Tamil Nadu; endemic.

Habitat: Corticolous.

Chemistry: Testacein A, testacein B and consalazinic acid.

Hemithecium stictilabiatum (Patw. & C.R.Kulk.) Chitale & Makhija in Chitale, Makhija & B.O.Sharma, Mycotaxon 108: 89. 2009.

Graphina stictilabiata Patw. & C.R.Kulk., Biovigyanam 5: 7. 1979.

Distribution: Karnataka (Belagavi, Dakshina Kannada, Kodagu, Shivamogga), Maharashtra; endemic.

Habitat: Corticolous.

Chemistry: Stictic acid.

Hemithecium verrucellosum B.O. Sharma & Khadilkar in B.O. Sharma & al., Lichenologist. 44(3): 361. 2012.

Distribution: Karnataka (Uttara Kannadaa) ; endemic.

Habitat: Corticolous.

Chemistry: Stictic and canstictic acids.

Leucodecton A.Massal.

Leucodecton fissurinum (Hale) A.Frisch, Biblioth. Lichenol. 92: 156. 2006.

Myriotrema fissurinum Hale, Bull. Br. Mus. (Nat. Hist.), Bot. 8(3): 279. 1981.

Distribution: Karnataka*, Kerala and Tamil Nadu; Sri Lanka; Africa.

Habitat: Corticolous.

Chemistry: Stictic and constictic acids.

Leucodecton glaucescens (Nyl.) A.Frisch, Biblioth. Lichenol. 92: 164. 2006.

Thelotrema glaucescens Nyl., Ann. Sci. Nat., Bot., ser. 4, 19: 332. 1863.

Myriotrema glaucescens (Nyl.) Hale, Mycotaxon 11:133. 1980.

Leptotrema glaucescens (Nyl.) Müll.Arg., Flora 65: 499. 1882.

Distribution: Karnataka*, Kerala and Tamil Nadu; Australia, C and S America, Sri Lanka.

Habitat: Corticolous.

Chemistry: Stictic and constictic acids.

Melanotrema A.Frisch

Melanotrema platystomum (Mont.) A.Frisch, Biblioth. Lichenol. 92: 397. 2006.

Thelotrema platystomum Mont., Ann. Sci. Nat., Bot., ser. 2, 19: 79. 1843.

Ocellularia platystoma (Mont.) Zahlbr., Cat. Lich. Univ. 2: 598. 1923.

Distribution: Karnataka (Shivamogga, Udupi), Andaman & Nicobar Islands; Africa, N & S America, Philippines, Pacific region, Sri Lanka.

Habitat: Corticolous.

Chemistry: No. lichen substances.

Myriotrema Fée

Myriotrema clandestinum (Fée) Hale, Mycotaxon 11: 133. 1980.

Thelotrema clandestinum Fée, Essai Crypt. Ecorc.: 90. 1837.

Thelotrema terebratulum Nyl., Ann. Sci. Nat., Bot., ser. 5, 7: 315. 1867.

Ocellularia terebratula (Nyl.) Müll. Arg., Mem. Soc. Phys. Genève 29(8): 12. 1887.

Myriotrema terebratulum (Nyl.) Hale, Mycotaxon 11: 135. 1980.

Distribution: Karnataka (Dakshina Kannada, Kodagu, Shivamogga, Udupi, Uttara Kannada), Andaman & Nicobar Islands, Arunachal Pradesh, Kerala, Maharashtra, Meghalaya; Pantropical

Habitat: Corticolous.

Chemistry: Psoromic (major) and subpsoromic (minor to trace) acids.

Myriotrema microporum (Mont.) Hale, Mycotaxon 11: 134. 1980.

Thelotrema microporum Mont., Ann. Sci. Nat., Bot., ser. 3, 10: 130. 1848.

Ocellularia micropora (Mont.) Müll. Arg., Flora 74: 112. 1891 & Nuovo Giorn. Bot. Ital. 23: 129. 1891.

Distribution: Karnataka (Kodagu, Udupi, Uttara Kannada), Assam, Kerala, Meghalaya, Tamil Nadu, West Bengal; Africa, Australasia, Indonesia, Japan, Malaysia, Pacific region, Philippines, Sri Lanka, Taiwan.

Habitat: Corticolous.

Chemistry: Psoromic acid (major), ± subpsoromic acid (minor), 2-O-demethyl psoromic acid (minor).

Nadvornikia Tibell

Nadvornikia hawaiiensis (Tuck.) Tibell, Beih. Nova Hedwigia 79: 672. 1984.

Acolium hawaiiense Tuck., Proc. Amer. Acad. Arts Sci. 7: 232. 1866.

Tylophoron diplotylium Nyl., Bull. Soc. Linn. Normandie, ser. 2, 2: 46. 1868.

Nadvornikia diplotyliia (Nyl.) G. Pant & D.D. Awasthi, Biovigyanum 15(1): 12. 1989.

Distribution: Karnataka*, Andaman Islands; Australia, Brazil, Hawaii, New Caledonia.

Habitat: Corticolous.

Chemistry: Stictic, constictic and traces of norstictic acids.

Nitidochapsa Parmen, Lücking & Lumbsch

Nitidochapsa leprieurii (Mont.) Parmen, Lücking & Lumbsch, *Bryologist* 116(2): 129. 2013 (**Plate, 2E**)

Chapsa leprieurii (Mont.) A.Frisch, Biblioth. Lichenol. 92: 105. 2006.

Stictis leprieurii Mont., Ann. Sci. Nat., Bot., ser. 4, 3: 97. 1855.

Phaeotrema leprieurii (Mont.) Sherwood, Mycotaxon 5: 203. 1977.

Thelotrema leprieurii (Mont.) Hale, Mycotaxon 11: 131. 1980.

Distribution: Karnataka*, Kerala, Tamil Nadu; Africa, Australia, Indonesia, Philippines, S America, Sri Lanka.

Habitat: Corticolous. Chemistry: No lichen substances.

Ocellularia G.Mey., nom. cons.

Ocellularia allosporoides (Nyl.) Patw. & C.R.Kulk., Kavaka 5: 5. 1977.

Thelotrema allosporoides Nyl., Bull. Soc. Linn. Normandie, ser. 2, 7: 167. 1873.

Ocellularia verrucmarginata Patw., Sethy & Nagarkar, Biovigyanam 11(2): 135. 1985.

Ocellularia canariana Patw., Sethy & Nagarkar, Biovigyanam 11(2): 134. 1985.

Distribution: Karnataka (Chikkamagaluru, Dakshina Kannada, Shivamogga, Uttara Kannada), Andaman & Nicobar Islands, Maharashtra, Kerala, Meghalaya; New Zealand.

Habitat: Corticolous.

Chemistry: Norisonotatic and norsubnotatic acids. Chemistry.

Ocellularia arecae (Vain.) Hale, Mycotaxon 11: 136. 1980.

Thelotrema arecae Vain., Hedwigia 46: 174. 1907.

Distribution: Karnataka (Dakshina Kannada), Kerala, Tamil Nadu; Sri Lanka, Thailand.

Habitat: Corticolous.

Chemistry: Hypoprotocetraric acid.

Ocellularia canariana Patw., Sethy & Nagarkar, Biovigyanam 11(2): 134. 1985.

Distribution: Karnataka (Uttara Kannada), endemic.

Habitat: Corticolous.

Chemistry: Psoromic acid.

Ocellularia diacida Hale, Mycotaxon 7(2): 378. 1978.

Distribution: Karnataka (Shivamogga, Udupi, Uttara Kannada); Sri Lanka.

Habitat: Corticolous.

Chemistry: Unknown 'Diacid' present.

Ocellularia eumorpha (Stirt.) Hale, Mycotaxon 11: 136. 1980.

Thelotrema eumorphum Stirt., Proc. Roy. Soc. Glasgow 10: 158. 1877.

Distribution: Karnataka (Shivamogga, Chikkamagaluru), Uttarakhand; tropical Africa & Asia.

Habitat: Corticolous.

Chemistry: Hypoprotocetraric acid (major).

Ocellularia garoana Patw. & Nagarkar, Biovigyanam 6: 7. 1980.

Distribution: Karnataka (Dakshina Kannada), Meghalaya; endemic.

Habitat: Corticolous.

Chemistry: Psoromic acid.

Ocellularia groenhartii Hale, Mycotaxon 3: 173. 1975.

Distribution: Karnataka (Chikkamagaluru, Dakshina Kannada, Kodagu, Shivamo Zgga, Kannada), Kerala, Tamil Nadu; Indonesia, Solomon Island.

Habitat: Corticolous.

Chemistry: 'Chonestoma' and 'Olivacea' unknowns.

Ocellularia jamesii (Patw. & C.R.Kulk.) D.D.Awasthi, Biblioth. Lichenol. 40: 3. 1991.

Leptotrema Jamesii Patw. & C.R.Kulk., Norweg. J. Bot. 24: 131. 1997.

Distribution: Karnataka (Udupi), endemic.

Habitat: Corticolous.

Chemistry: No lichen substances.

Ocellularia karnatakensis Hale, Mycotaxon 7(2): 378. 1978.

Distribution: Karnataka (Shivamogga, Chikkamagaluru, Uttara Kannada), endemic.

Habitat: Corticolous.

Chemistry: 'Chonestoma' unknown.

Ocellularia keralensis Patw. & C. R.Kulk. ex Hale, Bull. Br. Mus. Nat. Hist., Bot. 8: 308 .1981.

Distribution: Karnataka (Uttarakannada).

Habitat: Corticolous.

Chemistry: No lichen substances present.

Ocellularia mahabalei (Patw. & C.R.Kulk.) D.D. Awasthi, Biblioth. Lichenol.: 40: 3. 1991.

Thelotrema mahabalei Patw. & C.R.Kulk., Norweg. J. Bot. 24: 128. 1977.

Distribution: Karnataka (Chikkamagaluru), Kerala; endemic.

Habitat: Corticolous.

Chemistry: No lichen substances.

Ocellularia masonhalei (Patw. & C. R.Kulk.) Lücking, Herzogia 29: 507. 2016.

Myriotrema masonhalei (Patw. & C.R.Kulk.) Hale, Mycotaxon 11: 133. 1980.

Thelotrema masonhalei Patw. & C.R.Kulk., Norweg. J. Bot. 24: 128. 1977.

Distribution: Karnataka (Chikkamagaluru, Shivamogga, Uttara Kannada), Kerala, Maharashtra; Sri Lanka.

Habitat: Corticolous.

Chemistry: Psoromic acid.

Ocellularia papillata (Leight.) Zahlbr., Cat. Lich. Univ. 2: 597. 1923.

Thelotrema papillatum Leight., Trans. Linn. Soc. London. 27: 169. 1869.

Distribution: Karnataka (Chikkamagaluru, Shivamogga, Udupi, Uttara Kannada), Arunachal Pradesh, Assam, Kerala, Tamil Nadu; Dominica, New Caledonia, Panama, Philippines, Sri Lanka, West Indies.

Habitat: Corticolous.

Chemistry: No lichen substances.

Ocellularia pluripora Hale, Bull. Br. Mus. (Nat. Hist.), Bot. 8(3): 319. 1981.

Distribution: Karnataka (Dakshina Kannada); Sri Lanka.

Habitat: Corticolous.

Chemistry: Psoromic acid.

Ocellularia subperforata Nagarkar, Sethy & Patw., Biovigyanam 13(1) : 36. 1988.

Distribution: Karnataka (Shivamogga, South Canara, Udupi), Andaman & Nicobar Islands, Assam, Kerala, Tamil Nadu; Brazil, Dominica, Hawaii Islands, Indonesia, Panama, Solomon Islands, Sri Lanka, West Indies.

Habitat: Corticolous.

Chemistry: Protocetraric acid (major), \pm virensic acid (minor or trace).

Ocellularia terebrata (Ach.) Müll.Arg., Flora 70: 398. 1887.

Thelotrema terebratum Ach., Kongl. Vetensk. Acad. Nya. Handl. 33: 88. 1812.

Distribution: Karnataka (Chikkamagaluru, Dakshina Kannada), Andaman & Nicobar Islands, Maharashtra, Kerala, Tamil Nadu; S America, tropical Africa, Pacific region.

Habitat: Corticolous.

Chemistry: Psoromic acid (major), 2-O-demethylpsoromic acid (minor), \pm subpsoromic acid (minor).

Ocellularia thelotremoides (Leight.) Zahlbr., Cat. Lich. Univ. 2: 603. 1923.

Ascidium thelotremoides Leight., Trans. Linn. Soc. London 27: 170. 1870.

Thelotrema thelotremoides (Leight.) Hale in Patwardhan & Kulkarni, Kavaka 5: 13. 1977.

Distribution: Karnataka (Shivamogga), Kerala, Manipur, Tamil Nadu, Sri Lanka, Thailand.

Habitat: Corticolous.

Chemistry: Fumarprotocetraric and protocetraric acids.

Ocellularia udupiensis Patw., Sathy & Nagarkar, Biovigyanam 11(2): 135. 1985.

Distribution: Karnataka (Udupi), endemic.

Habitat: Corticolous.

Chemistry: An unknown substance.

Ocellularia upretii S. Joshi, Divakar, Lumbsch & Lücking, Lichenologist 50(6): 660. 2018

Distribution: Karnataka (Chikmagalur); endemic

Habitat: Corticolous.

Chemistry: No lichen substances found.

Ocellularia violacea Räsänen Suom. Elain-ja Kasvit. Seuran Van. Tiendon. Pöytäkirjat 3:184 .1949.

Distribution: Karnataka (Shivamogga).

Habitat: Corticolous.

Chemistry: Protocetraric acid.

Pallidogramme Staiger

Pallidogramme awasthii (Patw. & C.R. Kulk.) Kr. P. Singh & Pushpi Singh, Lichenologist 49(5): 529. 2017.

Phaeographina awasthii Patw. & C.R.Kulk., Norweg. J. Bot. 26: 49. 1979.

Distribution: Karnataka (Chamarajanagara), Kerala, Tamil Nadu, West Bengal; endemic.

Habitat: Corticolous.

Chemistry: No lichen substances.

Phaeographina Müll.Arg.

Phaeographina is now an illegitimate name (Lücking *et al.* 2007). Therefore, all the following four species have to be transferred to other genera after examination of types. Since type specimens have not been examined so far, these species for time being are accommodated under the genus *Phaeographina*.

Phaeographina canarensis Patw. & C.R.Kulk., Indian J. Bot. 2(2): 135. 1979.

Distribution: Karnataka (Kodagu, Udupi, Uttara Kannada); endemic.

Habitat: Corticolous.

Chemistry: Norstictic acid.

Phaeographina coorgiana Patw. & C.R.Kulk., Norweg. J. Bot. 26(1): 50. 1979.

Distribution: Karnataka (Kodagu), Kerala; endemic.

Habitat: Corticolous.

Chemistry: No lichen substances.

Phaeographina limbata Müll.Arg., J. Linn. Soc., Bot. 30: 461. 1895.

Distribution: Karnataka (Shivamogga), Kerala, Sikkim; Africa.

Habitat: Corticolous.

Chemistry: No lichen substances.

Phaeographis Müll.Arg.

Phaeographis dendritica (Ach.) Müll.Arg., Flora 65: 382. 1882.

Opergrapha dendritica Ach., Methodus : 31. 1803.

Distribution: Karnataka (Kodagu), Arunachal Pradesh and West Bengal. Cosmopolitan.

Habitat: Corticolous.

Chemistry: Norstictic acid.

Phaeographis intricans (Nyl.) Staiger, Biblioth. Lichenol. 85: 329. 2002.

Graphis intricans Nyl., Acta Soc. Sci. Fenn. 7: 473. 1863.

Distribution: Karnataka (Shivamogga), Kerala, Nagaland and Tamil Nadu; Australia, Brazil, Colombia, Costa Rica, Ecuador, Indonesia, New Zealand, Sri Lanka and Thailand; Africa

Chemistry: Stictic, constictic and norstictic acids.

Phaeographis nilgiriensis Kr.P.Singh & D.D.Awasthi, Bull. Bot. Surv. India 21 (1-4): 105. 1979.

Distribution: Karnataka (Shivamogga), Tamil Nadu, Sikkim; endemic.

Habitat: Corticolous.

Phaeographis subdividens (Leight.) Müll.Arg., Flora 65: 383. 1882.

Graphis subdividens Leight., Trans. Linn. Soc. London 27: 177. 1869.

Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Himachal Pradesh, Kerala; Australia, Solomon Islands, Sri Lanka.

Habitat: Corticolous.

Chemistry: No lichen substances.

Phaeographis submaculata Zahlbr., Ann. Mycol. 30: 433. 1932

Distribution: Karnataka (Kodagu), Kerala, Tamil Nadu; China.

Habitat: Corticolous.

Chemistry: Norstictic acid.

Phaeographis submarcescens (Leight.) Zahlbr., Cat. Lich. Univ. 2: 387. 1923.

Graphis submarcescens Leight., Trans. Linn. Soc. London 27: 178. 1869.

Distribution: Karnataka (Shivamogga), West Bengal; Sri Lanka.

Habitat: Corticolous.

Chemistry: Stictic acid.

Platygramme Fée

Platygramme caesiopruinosa (Fée) Fée, Bull. Soc. Bot. France 21: 30. 1874.

Arthonia caesiopruinosa Fée, Essai Crypt. Ecorc. Suppl.: 36, tab. 40. 1837.

Phaeographina caesiopruinosa (Fée.) Müll.Arg., Mem. Soc. Phys. Genève 29(8): 49. 1887.

Distribution: Karnataka (Chamrajanagar, Hassan), Arunachal Pradesh, Assam, Kerala, Manipur, Nagaland, Sikkim, Tamil Nadu, West Bengal; Pantropical.

Habitat: Corticolous.

Chemistry: An unknown substance.

Platygramme platyloma (Müll.Arg.) M.Nakan. & Kashiw., Bull. Natn. Sci. Mus. Tokyo, B, 29(2): 89. 2003.

Phaeographina platyloma Müll.Arg., Flora 65: 398. 1882.

Phaeographina pudica var. *platyloma* (Müll.Arg.) Redinger, Rev. Bryol. Lichénol. 9: 97. 1936.

Distribution: Karnataka (Shivamogga), Odisha; Australia, Indonesia, Japan.

Habitat: Corticolous.

Chemistry: No lichen substances.

Platygramme wattiana (Müll.Arg.) V.Tewari & Upreti, Indian J. Forest. 31(3): 458. 2008.

Phaeographina wattiana Müll.Arg., J. Linn. Soc., Bot. 29: 227. 1892.

Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Assam, Kerala, Manipur, Sikkim; endemic.

Habitat: Corticolous.

Chemistry: No lichen substances.

Platythecium Staiger

Platythecium colliculosum (Mont.) Staiger, Biblioth. Lichenol. 85: 380. 2002.

Sclerophyton colliculosum Mont., Ann. Sci. Nat., Bot., 16: 61. 1851.

Graphina colliculosa (Mont.) Hale, Lich. Amer. Exsicc. No. 156. 1976.

Distribution: Karnataka (Western Ghats), Andaman & Nicobar Islands, Kerala; Brazil, Dominica, Fiji, Hongkong, Indonesia, Panama, Papua New Guinea, Philippines, Vanuatu.

Habitat: Corticolous.

Chemistry: Salazinic acid.

Platythecium grammitis (Fée) Staiger, Biblioth. Lichenol. 85: 385. 2002.

Graphis grammitis Fée, Essai Crypt. Ecorc. : 47, tab. 11, fig. 3. 1824.

Distribution: Karnataka (Western Ghats), Kerala, Tamil Nadu; Pantropical

Habitat: Corticolous.

Pseudotopeliopsis Parmen, Lücking & Lumbsch

Pseudotopeliopsis laceratula (Müll. Arg.) Parmen & al., PLoS ONE 7: e51392, 11 2012.

Thelotrema laceratulum Müll.Arg., Flora 70: 399. 1887.

Distribution: Karnataka (Belagavi, Chikkamagaluru), Kerala, Maharashtra, Tamil Nadu; Australia, Sri Lanka.

Habitat: Corticolous.

Chemistry: No lichen substances.

Pycnotrema Rivas Plata & Lücking

Pycnotrema pycnoporellum Nyl. Fungal Diversity 52: 120 (2012).

Thelotrema pycnoporellum Nyl., Flora 59: 562. 1876.

Distribution: Karnataka (Chikkamagaluru); Cuba, Panama.

Habitat: Corticolous.

Chemistry: No lichen substances.

Sarcographa Fée

Sarcographa labyrinthica (Ach.) Müll.Arg., Mem. Soc. Phys. Genève 29(8): 62. 1887.

Glyphis labyrinthica Ach., Syn. Meth. Lich.: 107. 1814.

Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Arunanchal Pradesh, Assam, Kerala; Pantropical.

Habitat: Corticolous.

Chemistry: Stictic, constictic and norstictic acids.

Stegobolus Mont.

Stegobolus berkeleyanus Mont. in Hook., London J. Bot. 4: 4. 1845.

Ocellularia berkeleyana (Mont.) Zahlbr. in Engl. & Prantl, Nat. Pflanzenfam. Teil 1, Abt 1: 118. 1905.

Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Kerala; Australasia S America, Indonesia, Papua New Guinea, Philippines.

Habitat: Corticolous.

Chemistry: Psoromic acid (major), subpsoromic acid (minor), 2-O-demethylpsoromic acid (minor), and an unknown substance.

Thecaria Fée

Thecaria austroindica (D.D.Awasthi & Upreti) Kr.P.Singh & G.P.Sinha, Indian Lich. Annot. Check List: 424. 2010.

Lopadium austroindicum D.D.Awasthi & Upreti, Curr. Sci. 50(18): 822. 1981.

Phaeographina austroindica (D.D.Awasthi & Upreti) Kr.P. Singh, Curr. Sci. 52(4): 165. 1983.

Distribution: Karnataka (Bengaluru UD, Shivamogga), Arunachal Pradesh, Assam; endemic.
Habitat: Corticolous.

Thecaria quassiicola Fée, Meth. Lichenogr. Gen. : 92, tab. 1, fig. 16. 1824.

Fissurina quassiaecola Fée, Essai Crypt. Ecorc. : 92. 1824.

Phaeographina quassiaecola (Fée.) Müll.Arg., Mem. Soc. Phys. Genève 29(8): 47. 1887.

Distribution: Karnataka (Belagavi, Chamarajnagar, Chikkamagaluru, Hassan, Kodagu, Shivamogga, Uttara Kannada), Assam, Kerala, Tamil Nadu, West Bengal; Australia, Brazil, Indonesia, Japan, Madagascar, Philippines, Sri Lanka, Thailand.

Habitat: Corticolous.

Chemistry: No lichen substances.

Thelotrema Ach.

Thelotrema adjectum Nyl. Flora 49: 290 (1866).

Distribution: Karnataka (Chikkamagaluru)

Habitat: Corticolous.

Chemistry. No lichen substances detected.

Thelotrema albo-olivaceum Vain., Mycologia 21: 38. 1929.

Distribution: Karnataka (Shivamogga); Pantropical.

Habitat: Corticolous.

Chemistry: Stictic and constictic acids; constictic and stictic (majors), α -acetylconstictic and cryptostictic (traces) acids.

Thelotrema albidopallens Nyl., Bull. Soc. Linn. Normandie, ser. 2, 7: 168. 1873.

Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands and Western Ghats; endemic

Habitat: Corticolous.

Thelotrema armellense Patw., Sethy & Nagarkar, Biovigyanam 11(2): 136. 1985.

Distribution: Karnataka (Uttara Kannada), endemic.

Habitat: Corticolous.

Chemistry: No lichen substances.

Thelotrema bicinctulum Nyl., Ann. Sci. Nat. Bot., ser. 4, 15: 46. 1861.

Thelotrema terebrans Nyl., Bull. Soc. Linn. Normandie, ser. 2, 7: 166. 1873.

Ocellularia terebrans (Nyl.) Zahlbr., Cat. Lich. Univ. 2: 602. 1923.

Myriotrema terebrans (Nyl.) Hale, Mycotaxon 11: 135. 1980.

Distribution: Karnataka*, Andaman & Nicobar Islands, Kerala, Maharashtra, Tamil Nadu Africa, Australia, New Caledonia, Sri Lanka.

Habitat: Corticolous.

Chemistry: Stictic and constictic acids; stictic (major), constictic, hypostictic (minor to trace), α -acetylconstictic, hypoconstictic, cryptostictic and α -acetylhypoconstictic (traces) acids.

Thelotrema canarense Patw. & C.R.Kulk., Norweg. J. Bot. 24: 128. 1977.

Distribution: Karnataka (Dakshina Kannada); Tanzania.

Habitat: Corticolous.

Chemistry: Norstictic acid (trace).

Thelotrema kamatii (Patw. & Kulkarni) Hale, Mycotaxon 6: 8. 1980.

Ocellularia kamatii Patw. & C.R.Kulk., Norweg. J. Bot. 24: 130. 1977.

Distribution: Karnataka (Chikkamagaluru, Dakshina Kannada, Shivamogga, Uttara Kannada), Andaman & Nicobar Islands, Kerala; Sri Lanka.

Habitat: Corticolous.

Chemistry: No lichen substances.

Thelotrema lepademersum Nagarkar, Sethy & Patw., Kavaka 12(2): 59. 1985.

Distribution: Karnataka (Shivamogga), endemic.

Habitat: Corticolous.

Thelotrema lepadinum (Ach.) Ach., Methodus: 132. 1803.

Lichen lepadinus Ach., Lichenogr. Suec. Prodr. : 30. 1798.

Distribution: Karnataka (Uttara Kannada), Kerala, Tamil Nadu; Cosmopolitan.

Habitat: Corticolous.

Chemistry: No lichen substances. Sometimes a yellow pigment present.

Thelotrema monosporum Nyl., Ann. Sci. Nat., Bot., ser. 4, 15: 46. 1860.

Leptotrema monosporum (Nyl.) Müll. Arg., Bull. Soc. Roy. Bot. Belgique 31: 35. 1892.

Thelotrema disciforme Leight., Trans. Linn. Soc. London 27: 170. t. 36, f.8. 1869.

Phaeotrema disciforme (Leight) Hale, Smithsonian Contr. Bot. 16: 29. 1974.

Distribution: Karnataka (Belagavi, Shivamogga), Andaman & Nicobar Islands, Kerala, Maharashtra, Tamil Nadu; Palaeotropical.

Habitat: Corticolous.

Chemistry: No lichen substances.

Thelotrema porinoides Mont. & Bosch, Pl. Jungh. 4: 484. 1855.

Lecidea stictidea Nyl., Flora 49: 290. 1866.

Ocellularia albidiformis (Leight.) Zahlbr., Ann. Mycol. 14: 50. 1916.

Ocellularia porinoides (Mont. & Bosch) Zahlbr., Cat. Lich. Univ. 2: 599. 1923.

Ocellularia stictidea (Nyl.) Vězda in Gilenstar, Ark. Bot., ser. 2, 7: 177. 1969.

Habitat: Corticolous.

Distribution: Karnataka (Chikkamagaluru, Shivamogga), Kerala, Tamil Nadu; Palaeotropical.

Chemistry: Stictic acid (major) and hypostictic acid (minor to trace); constictic, stictic (majors), hypostictic (minor), hypoconstictic, cryptostictic and α -acetyl hypoconstictic (traces) acids.

Thelotrema pachysporum Nyl. Bull. Soc. Linn. Normandie, sér. 2 2: 72 (1868).

Thelotrema subtile Tuck., Amer. J. Sci. Arts, ser. 2, 25: 426. 1858.

Ocellularia subtilis (Tuck.) Riddle, Mycologia 15: 79. 1923.

Distribution: Karnataka (Chikkamagaluru), Maharashtra; Cosmopolitan.

Habitat: Corticolous.

Chemistry: No lichen substances.

Thelotrema patwardhanii (Hale) Rivas Plata & Mangold, Lichenologist 42: 184. 2010.

Ocellularia patwardhanii Hale, Mycotaxon 7(2): 379. 1978.

Distribution: Karnataka (Chikkamagaluru, Shivamogga), Kerala; endemic.

Habitat: Corticolous or saxicolous.

Chemistry: Norstictic acid and an unidentified pigment.

Thelotrema rugatulum Nyl. Bull. Soc. Linn. Normandie, sér. 2 7: 168 (1873)

Thelotrema verrucorugosum Nagarkar & al., Kavaka 13: 60.(1987) ["1985"]

Distribution: Karnataka, South Canara

Habitat: Corticolous

Chemistry: No lichen substances.

Topeliopsis Kantvilas & Vězda

Topeliopsis tuberculifera (Vain.) Rivas Plata & Mangold, Lichenologist 42: 185 2010.

Thelotrema tuberculiferum Vain., Ann. Acad. Sci. Fenn., ser. A, 6(7): 136. 1915.

Distribution: Karnataka (Uttara Kannada), Kerala, Tamil Nadu; Antilles.

Habitat: Corticolous.

Chemistry: No lichen substances.

Wirthiotrema Rivas Plata & al.

Wirthiotrema glaucopallens (Nyl.) Rivas Plata & Kalb, Lichenologist 42: 201 (2010)

Thelotrema glaucopallesens Nyl., Ann. Sci. Nat., Bot. ser. 4, 19: 327. 1863. 1923; Patw. & C.R. Kulk., Kavaka 5: 12. 1977.

Distribution: Karnataka (Uttara Kannada), Andaman & Nicobar Islands; Philippines, S America, tropical Africa.

Habitat: Corticolous.

Chemistry: Stictic acid (major), α -acetylconstictic acid (minor), constictic acid (minor), \pm consalazinic acid (minor), \pm additional traces in the stictic acid chemosyndrome.

Wirthiotrema trypaneoides (Nyl.) Rivas Plata & Lücking, Lichenologist 42: 201 2010.

Myriotrema trypaneoides (Nyl.) Hale, Mycotaxon 11: 135. 1980.

Thelotrema trypaneoids Nyl., Ann. Sci. Nat., Bot., ser. 4, 19: 335. 1863.

Leptotrema trypaneoids (Nyl.) Riddle, Bull. Torrey Bot. Club 43: 151. 1916.

Distribution: Karnataka*, Kerala, Tamil Nadu; Cuba, Philippines, West Indies.

Habitat: Corticolous.

Chemistry: Constictic and stictic acids (majors), cryptostictic, hypoconstictic and hypostictic (minors) acids.

Haematommaceae**Haematomma** A. Massal.

Haematomma puniceum (Sw.) A. Massal., Atti Reale Ist. Veneto Sci. Lett. Arti, ser. 3, 5: 253. 1860.

Lichen punicens Sw. in Acharius, Methodus: 167. 1803.

Distribution: Karnataka (Bangaluru UD, Kodagu), Madhya Pradesh, Manipur, Sikkim, Tamil Nadu, West Bengal; Pantropical.

Habitat: Corticolous.

Lecanographaceae**Heterocyphelium** Vain.

Heterocyphelium leucampyx (Tuck.) Vain., Acta Soc. Fauna Fl. Fenn. 57(1): 16. 1927.

Trachylia leucampyx Tuck., Proc. Amer. Acad. Arts 5: 390. 1862.

Distribution: Karnataka (Belagavi, Shivamogga); Australia, Africa, S America, Thailand.

Habitat: Corticolous.

Zwackhia Körb.

Zwackhia bonplandii (Fée) Ertz, Bull. Soc. Naturalistes Luxemb. 113: 106. 2012.

Opegrapha bonplandii Fée, Essai Crypt. Exot. (Paris): 25. 1825 (1824).

Distribution: Karnataka (Bangaluru Rural), Andaman & Nicobar Islands, West Bengal; Africa, Bermuda, Malaysia, New Zealand and Thailand.

Habitat: Corticolous

Chemistry: No lichen substances reported.

Zwackhia robusta (Vain.) Ertz, in Diederich, Ertz, Eichler, Cezanne, Boom, Fischer, Killmann, Van den Broeck & Sérusiaux, Bull. Soc. Nat. luxemb. 113: 106 (2012)

Opegrapha robusta Vain., Bot. Tidsskr. 29:137 1909.

Distribution: Karnataka(Uttara Kannada), Andaman & Nicobar Islands; AustraliaIndonesia,Malaysia, Papua new guinea,Thailand, Philippines, Solomon islands.

Habitat: Corticolous.

Chemistry: Confluent acid (major).

Zwackhia viridis (Ach.) Poetsch & Schied., Syst. Aufzä. samenlos. Pflanzen(Krypt.): 186 .1872.

Opegrapha viridis (Ach.) Behlen& Desberger, Naturgesch. Und Beschreib.Deutsch.Forst.-Kryptog.: 110. 1835.

Opegrapha rubella var. *viridis* Ach., Methodus: 22. 1803.

Distribution: Karnataka(Shivamogga), Andaman & Nicobar Islands and Uttarakhand; Europe.

Habitat: Corticolous

Chemistry: No lichen substances.

Lecanoraceae

Lecanora Ach.

Lecanora albella (Pers.) Ach., Lichenogr. Universalis : 369. 1810.

Lichen albellus Pers., Ann. Bot. (Usteri) 5: 18. 1794.

Lichen pallidus Schreb., Spic. Fl. Lips.: 133. 1771.

Lecanora pallida (Schreb.) Rabenh., Deutschl. Krypt. -Fl. 2: 34. 1845.

Distribution: Karnataka (Bengaluru UD), Himachal Pradesh, Kerala, Tamil Nadu, Uttarakhand; temperate regions of the world.

Habitat: Corticolous.

Chemistry: Atranorin (major), chloroatranorin (minor), connorstictic acid (minor or absent), conprotocetraric acid (minor), consalazinic acid (minor or absent), constictic acid (minor or absent), norstictic acid (major or absent), protocetraric acid (major), salazinic acid (major or absent), stictic acid (major), virensic acid (major or absent).

Lecanora argentata (Ach.) Degel., Ark. Bot. 24 A: 78. 1931.

Parmelia subfusca f. ("η") *argentata* Ach., Methodus: 169. 1803

Lecanora subfusca var. *argentata* (Ach.) Ach., Lichenogr. Universalis: 393. 1810;

Distribution: Karnataka (Kodagu), Andaman & Nicobar Islands, Andhra Pradesh, Jammu & Kashmir, Maharashtra, Manipur, Orissa, Uttarakhand and West Bengal; Africa, Asia, Australasia, Europe, North America. Cosmopolitan.

Habitat: Corticolous.

Chemistry: Atranorin (major), chloroatranorin (minor), gangaleoidin (major), 4-dechlorogangaleoidin (minor), norgangalaeoidin (minor).

Lecanora carpinea (L.) Vain., Meddeland. Soc. Fauna Fl. Fenn. 14: 23. 1888.

Lichen carpineus L., Sp. Pl. : 1141. 1753.

Distribution: Karnataka (Kodagu), Jammu & Kashmir, Kerala, Tamil Nadu, Uttarakhand and West Bengal; New Zealand; temperate areas of Africa, Asia, Europe and North America. Cosmopolitan.

Habitat: Corticolous.

Chemistry: Atranorin (major), chloroatranorin (minor), eugenitol (minor) and sordidone (major).

Lecanora chlarotera Nyl., Bull. Soc. Linn. Normandie, ser. 2, 6: 274. 1872.

Distribution: Karnataka (Bengaluru UD, Kodagu), Jammu & Kashmir, Maharashtra, Manipur, Nagaland, Rajasthan, Tamil Nadu, Uttarakhand, West Bengal; Americas, Asia, Europe.

Habitat: Corticolous.

Chemistry: Atranorin.

Lecanora cinereofusca H. Magn., Acta Horti Gothob. 7: 86. 1932.

var. **cinereofusca**

Distribution: Karnataka (Bengaluru UD), Bihar, Himachal Pradesh, Jammu & Kashmir, Kerala, Madhya Pradesh, Rajasthan, Tamil Nadu, Uttar Pradesh, Uttarakhand; America.

Habitat: Corticolous.

Chemistry: Atranorin; pannarin, placodialic and roccellic acids.

var. **himalayensis** Upreti, Bryologist 101(2): 258. 1998.

Distribution: Karnataka (), Himachal Pradesh, Tamil Nadu, Uttarakhand; endemic.

Habitat: Saxicolous.

Chemistry: Atranorin, pannarin and unknown substances.

Lecanora fimbriatula Stirt., Proc. Roy. Soc. Glasgow 11: 311. 1879. Upreti & Chatterjee, Feddes Repert. 108: 578. 1997.

Distribution: Karnataka*, Arunachal Pradesh, Goa, Himachal Pradesh, Maharashtra, Sikkim, Tamil Nadu, Uttarakhand; Bhutan, Nepal.

Habitat: Corticolous.

Chemistry: Atranorin and 2'-O-methylperlatolic acid.

Lecanora flavidomarginata de Lesd., Lich. Mexicque: 14. 1914. Upreti, Feddes Repert. 108: 190. 1997.

Distribution: Karnataka*, Andaman & Nicobar Islands, Himachal Pradesh, Jammu & Kashmir, Kerala, Madhya Pradesh, Tamil Nadu, Uttarakhand; Americas, Asia, Australia, Mexico, New Zealand.

Habitat: Corticolous.

Chemistry: Atranorin and zeorin.

Lecanora indica Zahlbr., Cat. Lich. Univ. 5: 626. 1928. Upreti & Chatterjee, Feddes Repert. 109: 285. 1998.

Placodium demissum Stirt., Proc. Roy. Soc. Glasgow 11: 311. 1897.

Distribution: Karnataka (Bengaluru UD, Chikkamagaluru, Shivamogga) Himachal Pradesh, Jammu & Kashmir, Jharkhand, Madhya Pradesh, Rajasthan, Tamil Nadu, Uttarakhand, West Bengal; Nepal.

Habitat: Saxicolous.

Chemistry: Usnic acid and zeorin.

Lecanora iseana Räsänen, J. Jap. Bot. 16: 91. 1940.

Distribution: Karnataka (Bengaluru UD, Dakshina Kannada), Himachal Pradesh, Jammu & Kashmir, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Rajasthan, Sikkim, Tamil Nadu, Uttarakhand, West Bengal; Japan, Nepal.

Habitat: Corticolous.

Chemistry: Atranorin and zeorin.

Lecanora leprosa Fée, Essai Crypt. Ecorc.: 118. 1824. Upreti, Feddes Repert. 108: 193. 1997.

Distribution: Karnataka (Bengaluru UD, Tumkur), Himachal Pradesh, Kerala, Madhya Pradesh, Manipur, Tamil Nadu, Uttar Pradesh, Uttarakhand; Bhutan; Africa, Americas, Asia, Australasia, Pacific Islands.

Habitat: Corticolous.

Chemistry: Atranorin and gangaleoidin.

Lecanora perplexa Brodo, Beih. Nova Hedwigia 79: 148-150. 1984.

Distribution: Karnataka (Bengaluru UD ,Shivamogga)), Arunachal Pradesh, Assam, Jammu & Kashmir, Kerala, Madhya Pradesh, Odisha, Rajasthan, Tamil Nadu, Uttar Pradesh and Uttarakhand; Nepal.

Habitat: Corticolous.

Chemistry: Atranorin and zeorin.

Lecanora pseudistera Nyl., Flora 55: 354. 1872; Upreti, Bryologist 101(2): 259. 1998.

Distribution: Karnataka (Bengaluru UD), Himachal Pradesh, Madhya Pradesh, Rajasthan, Tamil Nadu, Uttarakhand; cosmopolitan.

Chemistry: Atranorin (major), chloroatranorin (minor), 2-O-methylperlatolic acid (major), 2-O-methylisohyperlatolic acid (minor), 2-O-methylsuperlatolic acid (minor).

Habitat: Saxicolous.

Lecanora pulicaris (Pers.) Ach., Syn. Meth. Lich.: 336. 1814.

Patellaria pulicaris Pers., Ann. Wetterauischen Ges. Gesamnte Naturk 2(1): 13. 1810.

Distribution: Karnataka (Bengaluru UD), Madhya Pradesh, Manipur, Nagaland, Tamil Nadu, Odisha, West Bengal; temperate regions of the world.

Habitat: Corticolous.

Chemistry: Atranorin, fumarprotocetraric acid and an unknown substance.

Lecanora subimmersa (Fée) Vain., Acta Soc. Fauna Fl. Fenn. 74: 98. 1890; Upreti, Bryologist 101(2): 261. 1998.

Lecidea subimmersa Fée, Bull. Soc. Bot. France 20: 315. 1873.

Distribution: Karnataka (Mandya), Himachal Pradesh, Madhya Pradesh, Odisha, Tamil Nadu, Uttarakhand; Australia, C & S America, Nepal, Thailand.

Habitat: Saxicolous

Chemistry : Atranorin, zeorin, chloroatranorin and an unknown substance.

Lecanora subrugosa Nyl., Flora 58: 15. 1875.

Distribution: Karnataka (Bengaluru UD) , Himachal Pradesh, Jammu & Kashmir, Tamil Nadu, Uttarakhand, West Bengal; Nepal, Sweden.

Habitat: Corticolous.

Chemistry: Atranorin and gangaleoidin.

Lecanora sulphurescens Fée, Bull. Soc. Bot. France 20: 313. 1873.

Distribution: Karnataka (Mandya) Himachal Pradesh, Madhya Pradesh, Uttarakhand, West Bengal; Pantropical.

Habitat: Saxicolous.

Chemistry: Atranorin, chloroatranorin and gangaleoidin.

Lecanora tropica Zahlbr., Cat. Lich. Univ. 5: 589. 1928.

Distribution: Karnataka (Bengaluru UD), Himachal Pradesh, Madhya Pradesh, Odisha, Sikkim, Tamil Nadu, Uttar Pradesh, Uttarakhand, West Bengal; Australia, Japan, Nepal, Papua New Guinea, Thailand, tropical America.

Habitat: Saxicolous.

Chemistry: Atranorin, chodatol, demethylchodatol, chloroatranorin, thiophanic acid and Zeorin.

Letrouitiaceae

Letrouitia Hafellner & Bellem.

Letrouitia domingensis (Pers.) Hafellner & Bellem., Nova Hedwigia 35: 281. 1982.

Patellaria domingensis Pers., Ann. Wetterauisch Gesammte Ges. Naturk. 2: 12. 1810.

Bombyliospora domingensis (Pers.) Zahlbr. in Wawra & Beck, Itin. Princ. S. Coburgi 2: 153. 1888.

Distribution: Karnataka (Shivamogga district, Mattikoppa), Andhra Pradesh, Arunachal Pradesh, Jharkhand, Madhya Pradesh, Odisha, Tamil Nadu and West Bengal; tropical region of the world.

Habitat: Corticolous.

Chemistry: Unidentified substances.

Letrouitia muralis Hafellner, Nova Hedwigia 35: 695. 1983.

Distribution: Karnataka and Tamil Nadu; Australia, Philippines; Africa.

Habitat: Corticolous.

Chemistry: Zeorin and an unidentified substance.

Letrouitia transgressa (Malme) Hafellner & Bellem. in Hafellner, Nova Hedwigia 35: 710. 1983.

Bombyliospora domingensis f. *transgressa* Malme, Ark. Bot. 18(12): 5. 1923.

Distribution: Karnataka (Shivamogga), Andhra Pradesh, Arunachal Pradesh, Madhya Pradesh, Nagaland, Uttar Pradesh, West Bengal; Australia, Nepal; S America, SE Asia.

Habitat: Corticolous.

Letrouitia vulpina (Tuck.) Hafellner & Bellem., Nova Hedwigia 35: 281. 1982.

Lecidea vulpina Tuck. in Nylander, Ann. Sci. Nat., Bot., ser. 4, 19: 354. 1863.

Lopadium vulpinum (Tuck.) Zahlbr., Cat. Lich. Univ. 4: 316. 1926.

Distribution: Karnataka (Chikkamagaluru, Dakshina Kannada, Kodagu, Uttara Kannada), Andaman & Nicobar Islands, Manipur, Nagaland, Tamil Nadu; Pantropical.

Habitat: Corticolous.

Lichinaceae

Phylliscum Nyl.

Phylliscum indicum Upreti, Curr. Sci. 57: (16): 906. 1988.

Distribution: Karnataka (Hassan, Mandya, Mysuru, Tumkur), Jammu & Kashmir, Madhya Pradesh, Uttar Pradesh; endemic.

Habitat: Calcicolous.

Phylliscum tenue Henssen, Svensk Bot. Tidskr. 57: 152. 1963.

Distribution: Karnataka (Belagavi); Western N America.

Habitat: Saxicolous.

Phylliscum testudineum Henssen, Svensk Bot. Tidskr. 57(2): 153. 1963.

Distribution: Karnataka (Bellari), Madhya Pradesh, Tamil Nadu; Brazil.

Habitat: Saxicolous.

Lobariaceae

Lobaria (Schreb.) Hoffm.
Lichen sect. *Lobaria* Schreb.

Lobaria quercizans Michx., Fl. Bor.-Amer., ed. 2: 324. 1803.
Distribution: Karnataka (Shivamogga), Kerala, Uttarakhand; Bhutan; E Asia, Eastern N America.
Habitat: Corticolous.
Chemistry: Gyrophoric acid.

Pseudocyphellaria Vain., nom. cons.

Pseudocyphellaria aurata (Ach.) Vain., Acta Soc. Fauna Fl. Fenn. 7: 183. 1890.
Sticta aurata Ach., Methodus: 277. 1803.
Distribution: Karnataka (Chikkamagaluru, Kodagu, Shivamogga), Arunachal Pradesh, Kerala, Manipur, Nagaland, Sikkim, Tamil Nadu, Uttarakhand; Cosmopolitan.
Habitat: Corticolous.
Chemistry: Calycin and triterpenoids.

Lopadiaceae

Lopadium Körb., nom. cons.

Lopadium coorgianum Patw. & Makhija, Indian J. Bot. 4(1): 22. 1981.
Distribution: Karnataka (Kodagu); endemic.
Habitat: Corticolous.

Malmideaceae

Malmidea Kalb, Rivas Plata & Lumbsch.

Malmidea granifera (Ach.) Kalb, Rivas Plata & Lumbsch Biblioth. Lichenol. 106: 165. 2011.
Lecanora granifera Ach., Syn. Lich.: 163. 1814.
Lecidea granifera (Ach.) Vain. In Hiern & al., Cat. Afr. Pl. 2(2): 424. 1901.
Distribution: Karnataka (Uttara Kannada), Arunachal Pradesh, Goa, Jammu & Kashmir, Madhya Pradesh, Manipur, Tamil Nadu, Uttarakhand, West Bengal; Pantropical.
Habitat: Corticolous.

Megalosporaceae

Megalospora Meyen

Megalospora sulphurata Meyen in Meyen & Flotow, Nov. Actorum Acad. Caes. Leop. –Carol. Nat. Cur. 19 (Suppl.): 228. 1843.
Distribution: Karnataka*, Kerala; tropical and subtropical regions.
Habitat: Corticolous
Chemistry: Usnic acid and zeorin.

Megalospora tuberculosa (Fée) Sipman, Biblioth. Lichenol. 18: 156. 1983.
Lecidea tuberculosa Fée, Essai Crypt. Ecorc.: 107, tab. 27, fig. 1. 1824.
Bombyliospora tuberculosa (Fée) A. Massal., Ric. Auton. Lich. Crost.: 116. 1852;
Bombyliospora laevigata D.D. Awasthi & M.R. Agarwal, Canad. J. Bot. 46: 1029. 1968.
Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Kerala, Tamil Nadu, West Bengal; Pantropical
Habitat: Corticolous.
Chemistry: Usnic acid and zeorin.

Megasporaceae

Aspicilia A.Massal., nom. cons.

Aspicilia cinerea (L.) Korb., Syst. Lich. Germ.: 164. 1855.

Lichen cinereus L., Mantissa Pl. 1: 132. 1767.

Distribution: Karnataka (Bengaluru UD), Andhra Pradesh, Himachal Pradesh, Tamil Nadu, Uttarakhand, tropics and subtropics.

Habitat: Saxicolous.

Chemistry: Norstictic, stictic, constictic acids.

Monoblastiaceae

Anisomeridium (Müll.Arg.) M.Choisy, nom. cons

Anisomeridium biforme (Borrer) R.C.Harris in Vězda, Lich. Sel. Exicc. Fasc. 61, 1503. 1978

Verrucaria biformis Borrer in Hooker & Sowerby, Engl. Bot. Suppl. 1, t.2617, f. 4. 1831.

Verrucaria alboatra Kremp. in Nylander, Flora 50: 8. 1867.

Arthopyrenia alboatra (Kremp.) Müll.Arg., Flora 66: 306. 1883.

Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Nagaland, West Bengal; Australia, Europe, N America, Papua New Guinea SE Asia.

Habitat: Corticolous.

Anisomeridium complanatum (Makhija & Patw.) R.C.Harris, More Florida Lichens : 145. 1995.

Ditremis complanata Makhija & Patw., Biovigyanam 16: 15. 1990.

Pleurotrema complantum (Makhija & Patw.) D.D.Awasthi, Lichenol. Indian Subcontinent: 16. 2000.

Ditremis muelleri Makhija & Patw., Biovigyanam 16: 20. 1990.

Pleurotrema muelleri (Makhija & Patw.) D.D.Awasthi, Lichenol. Indian Subcontinent: 16. 2000.

Ditremis harrisii Makhija & Patw., Biovigyanam 16: 17. 1990.

Pleurotrema harrisii (Makhija & Patw.) D.D.Awasthi, Lichenol. Indian Subcontinent: 16. 2000.

Ditremis karnatakensis Makhija & Patw., Biovigyanam 16: 18. 1990.

Pleurotrema karnatakense (Makhija & Patw.) D.D.Awasthi, Lichenol. Indian Subcontinent: 16. 2000.

Distribution: Karnataka (Hassn, Kodagu, Koppal, Shivamogga, Bengaluru RD, Uttara Kannada), Andaman & Nicobar Islands, Kerala and Tamil Nadu; endemic.

Habitat: Corticolous.

Anisomeridium concameratum (Stirt.) Aptroot, Lichenologist 38(6): 546. 2006.

Verrucaria concamerata Stirt., Proc. Roy. Soc. Glasgow 13: 192. 1881.

Distribution: Karnataka (Kodagu), Madhya Pradesh and Tamil Nadu; Sri Lanka, Thailand and tropical regions.

Habitat: Corticolous

Anisomeridium immersum (Makhija & Patw.) R.C.Harris, More Florida Lichens: 147. 1995.

Ditremis immersa Makhija & Patw., Biovigyanam 16: 17. 1990.

Pleurotrema immersum (Makhija & Patw.) D.D.Awasthi, Lichenol. Indian Subcontinent: 16.

2000. Distribution: Karnataka (Shivamogga, Udupi), Andaman & Nicobar Islands, Kerala; endemic.

Habitat: Corticolous.

Anisomeridium indicum (Makhija & Patw.) R.C.Harris, More Florida Lichens: 147. 1995

Ditremis indica Makhija & Patw., Biovigyanam 16: 18. 1990.

Pleurotrema indicum (Makhija & Patw.) D.D.Awasthi, Lichenol. Indian Subcontinent: 16. 2000.

Distribution: Karnataka (Shivamogga), Maharashtra; endemic.

Habitat: Corticolous.

Anisomeridium monosporum (Makhija & Patw.) R.C.Harris, More Florida Lichens : 148. 1995.
Ditremis monospora Makhija & Patw., Biovigyanam 16: 20. 1990.
Pleurotrema monosporum (Makhija & Patw.) D.D.Awasthi, Lichenol. Indian Subcontinent: 16. 2000.
 Distribution: Karnataka (Chikkamaguluru); endemic.
 Habitat: Corticolous.

Anisomeridium subnexum (Nyl.) R.C.Harris, More Florida Lich.: 150. 1995.
Verrucaria subnexa Nyl., Bull. Soc. Linn. Normandie, ser. 2, 7: 181. 1873.
Arthopyrenia subnexa (Nyl.) Müll.Arg., Hedwigia 30: 188. 1891.
 Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Madhya Pradesh; endemic.
 Habitat: Corticolous.

Anisomeridium terminatum (Nyl.) R.C.Harris, More Florida Lichens: 130. 1995.
Verrucaria terminata Nyl., Bull. Soc. Linn. Normandie, ser. 2, 7: 180. 1873.
Verrucaria interspersa Nyl., Bull. Soc. Linn. Normandie, ser. 2, 7: 181. 1873.
Arthopyrenia terminata (Nyl.) Müll.Arg., Flora 73: 345. 1890.
Porina interspersa (Nyl.) Zahlbr., Cat. Lich. Univ. 1: 387. 1922.
Anisomeridium interspersum (Nyl.) Makhija, Adaw. & Patw., J. Econ. Taxon. Bot. 18(3): 544. 1994.
 Distribution: Karnataka (Dakshin Kannada, Shivamogga, Uttara Kannada), Andaman & Nicobar Islands, Goa, Kerala, Tamil Nadu; Australia, Caribbean islands, Cuba, USA.
 Habitat: Corticolous.

Mycosphaerelliaceae

Stigmidium Trevis

Stigmidium allogenum (Nyl.) D. Hawksw., Kew Bull. 30(1): 201. 1975.
Verrucaria innata Nyl., Expos. Syn. Pyrenocarp. : 39. 1858.
Verrucaria allogena Nyl., Flora, Regensburg 48: 357. 1865.
Sphaerella psorae Anzi, Atti Soc. Ital. Sci. Nat. (Modena) 11: 27. 1868.
Arthopyrenia allogena (Nyl.) Arnold, Flora 53 : 484. 1870.
Sphaerella innata (Nyl.) Arnold, Flora, Regensburg 53: 488. 1870.
Arthopyrenia innata (Nyl.) Arnold, Flora, Regensburg 57: 139. 1874.
Porina innata (Nyl.) Müll.Arg., Flora 65: 517. 1882.
Metasphaeria psorae (Anzi) Sacc., Syll. fung. (Abellini) 2: 183. 1883.
Arthopyrenia psorae (Anzi) Müll. Arg., Revue mycol., Toulouse 6(no.21): 15. 1884.
Pharcidia psorae (Anzi) G. Winter, Rabenh. Krypt.-Fl., Edn 2 (Leipzig) 1.2: 345. 1885.
Pharcidia allogena (Nyl.) Sacc. & D. Sacc., Syll. fung. (Abellini) 17: 648. 1905.
Pharcidia innata (Nyl.) Sacc. & D. Sacc., Syll. fung. (Abellini) 17: 647. 1905.
Endococcus psorae (Anzi) H. Olivier, Bull. Acad. Intern. Géogr. Bot. 17: 127. 1907.
Pharcidia allogena f. *innata* (Nyl.) Keissl., Rabenh. Krypt.-Fl., Edn 2 (Leipzig) 8: 363. 1930.
Stigmidium psorae (Anzi) Hafellner in Vězda, Lichenes Selecti Exsiccati, Fascicle 79 (Průhonice): 7, no. 1975. 1984.
 Distribution: Karnataka (Bangaluru UD, Chikkamangulur, Shivamogga, Udupi), Andaman & Nicobar Islands, Arunachal Pradesh, Kerala, Tamil Nadu; Mauritius, Sri Lanka.
 Habitat: Corticolous.

Naetrocymbaceae

Naetrocymbe Körb.

Naetrocymbe fraxini (A.Massal.) R.C.Harris, More Florida Lichens : 62. 1995.

Arthopyrenia fraxini A.Massal., Ric. Auton. Lich. Crost. : 167, f. 333. 1852.

Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Kerala; Europe, N America.

Habitat: Corticolous.

Note: The occurrence of this species in India is doubtful (Harris, l.c.).

Naetrocymbe punctiformis (Pers.) R.C.Harris, More Florida Lichens : 63. 1995.

Verrucaria punctiformis Pers., Ann. Bot. (Usteri) 11: 19. 1794.

Arthopyrenia punctiformis auct., non A.Massal., 1852.

Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Kerala, Tamil Nadu; Cosmopolitan.

Habitat: Corticolous.

Ochrolechiaceae

Ochrolechia A.Massal.

Ochrolechia africana Zahlbr. in Engler, Bot. Jahrb. Syst. 60: 504. 1926.

Distribution: Karnataka (Bengaluru UD, Chikkamagaluru, Tumkur), Madhya Pradesh, Tamil Nadu; tropical and subtropical areas.

Habitat: Corticolous.

Chemistry: Cortex with lichexanthone (major), atranorin (\pm trace); apothecia with gyrophoric acid (major), lecanoric acid (trace).

Ochrolechia androgyna (Hoffm.) Arnold, Flora 68: 236. 1855.

Lichen androgynus Hoffm., Enum. Lich.: 56. 1784.

Distribution: Karnataka (Shivamogga), Madhya Pradesh; boreal to arctic circumpolar with a notable disjunct south western population especially along the Sierra Nevada mountains.

Habitat: Corticolous.

Chemistry: Gyrophoric acid.

Ochrolechia pallescens (L.) A.Massal., Nuovi Ann. Sci. Nat. Rendiconto Sess. Soc. Agrar., ser. 3, 7: 212. 1853.

Lichen pallescens L., Sp. Pl.: 1142. 1753.

Distribution: Karnataka (Kodagu), Jammu & Kashmir, Manipur, Sikkim and Tamil Nadu; Australia, Chile, Great Britain, Hawaii, Mexico, New Caledonia, New Zealand.. Cosmopolitan.

Habitat: Corticolous, saxicolous.

Chemistry: Gyrophoric acid.

Ochrolechia subpallescens Verseghy, Beih. Nova Hedwigia 1: 118. 1962.

Distribution: Karnataka (Bengaluru UD, Chikkamagaluru), Tamil Nadu; Australia, Brazil; Asia, N America.

Habitat: Corticolous.

Chemistry: Gyrophoric acid, lecanoric acid along with other compounds.

Ochrolechia subviridis (Hoeg) Erichsen, Verh. Bot. Vereins Prov. Brandenburg 72: 3. 1930; Nayaka & Upreti, J. Econ. Taxon. Bot. 26(3): 635. 2002.

Pertusaria subviridis Hoeg, Nyt Mag. Naturvidensk. 61: 150. 1924.

Distribution: Karnataka (Shivamogga), Central European mountains extending south to Corisca and Maderia.

Habitat: Corticolous.

Chemistry: Gyrophoric and lecanoric acids.

Varicellaria Nyl.

Varicellaria velata (Turner) Schmitt & Lumbsch, Myco Keys, 4:31. 2012.

Pertusaria velata (Turner) Nyl., Lich. Scand.: 179. 1861.

Parmelia velata Turner, Trans. Linn. Soc. London 9: 143. 1806.

Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Himachal Pradesh, Manipur, Nagaland and Tamil Nadu; Cosmopolitan.

Habitat: Corticolous.

Chemistry: Lecanoric acid; lecanoric acid (major), gyrophoric acid (trace), orsellinic acid (trace), \pm lichexanthone (trace to major) by Archer (1997, p. 216).

Opergraphaceae

Opergrapha Ach., nom. cons.

Opergrapha subrimulosa Nyl. Flora 49: 293. 1866.

Opergrapha leptoterodes Nyl., Acta Soc. Sci. Fenn. 26(10): 18. 1900.

Distribution: Karnataka (Western Ghats), Tamil Nadu, West Bengal; Ascension, Papua New Guinea, Singapore, Sri Lanka, The Philippines and Seychelles.

Habitat: Corticolous.

Chemistry: An unidentified UV+ yellow spot with Rf value 72, observed before treatment of the plate in TLC.

Opergrapha subvulgata Nyl., Flora 52: 71. 1869.

Distribution: Karnataka (Shivamogga), Lakshadweep Islands, West Bengal; Africa, Australia, New Caledonia, Papua New Guinea, Singapore, Sri Lanka, The Philippines and The Seychelles

Habitat: Corticolous.

Chemistry: No lichen substances.

Opergrapha vulgata (Ach.) Ach., Methodus: 20. 1803; 21. 1798.

Lichen vulgatus Ach. Lichenogr. Suec. Prodr.: 21. 1798.

Opergrapha cinerea Chevall., J. Phys. Chim. Hist. Nat. Arts 96: 41. 1822; Upreti & Ajay Singh, Cryptog. Bryol. Lichénol. 8(4): 294. 1987.

Opergrapha longula Nyl., Bull. Soc. Linn. Normandie, ser. 2, 7: 171. 1873.

Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Arunachal Pradesh, Assam, Bihar, Himachal Pradesh, Kerala, Tamil Nadu, Uttarakhand, Uttar Pradesh and West Bengal; Papua New Guinea, Singapore; Africa, Bermuda, Germany and North America.

Chemistry: No lichen substances or yellow to orange unidentified substance.

Habitat: Corticolous.

Pannariaceae

Lepidocollema Vain.

Lepidocollema fuscatum (P.M. Jørg.) P.M. Jørg., in Ekman, Wedin, Lindblom & Jørgensen, Lichenologist 46(5): 650 (2014)

Parmeliella fuscata P.M. Jørg., Bryologist 106(1): 123. 2003.

Distribution: Karnataka (Shivamogga), Peninsular India; endemic.

Habitat: Corticolous.

Chemistry: No lichen substances.

Lepidocollema stylophorum (Vain.) P.M. Jørg., in Ekman, Wedin, Lindblom & Jørgensen, *Lichenologist* 46(5): 651 (2014)

Parmeliella stylophora (Vain.) P.M. Jørg., *Bryologist* 103(4): 698. 2002.

Pannaria stylophora Vain., *Ann. Acad. Sci. Fenn., ser. A*, 6(7): 102. 1915.

Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Kerala, Tamil Nadu; Mexico, Philippines, USA (Florida), West Indies.

Habitat: Corticolous.

Chemistry: No lichen substances.

Parmeliella Müll.Arg.

Parmeliella triptophylla (Ach.) Müll.Arg., *Mem. Soc. Phys. Genève* 16: 376. 1861.

Lecidea triptophylla Ach., *Kongl. Vetensk. Acad. Nya Handl.* 1808: 272. 1808.

Distribution: Karnataka (Kodagu), Manipur and Tamil Nadu; boreal and arctic regions of northern Europe, Greenland and Canada.

Habitat: Corticolous.

Parmeliaceae

Bulbothrix Hale

Bulbothrix isidiza (Nyl.) Hale, *Phytologia* 28 : 480. 1974.

Parmelia isidiza Nyl. in Henriques, *Bol. Soc. Brot.* 3 : 130. 1884.

Distribution: Karnataka (Bengaluru UD, Chikkabullapura, Chikkamagaluru, Kodagu, Koppa, Shivamogga), Arunachal Pradesh, Kerala, Madhya Pradesh, Manipur, Meghalaya, Maharashtra, Nagaland, Sikkim, Tamil Nadu, Uttar Pradesh, Uttarakhand, West Bengal; Africa, Australia, C and S America China, Japan, Nepal, Papua New Guinea, SE Asia.

Habitat: Corticolous, saxicolous and terricolous.

Chemistry: Atranorin and salazinic acid.

Bulbothrix setschwanensis (Zahlbr.) Hale, *Phytologia* 28: 480. 1974 & *Smithsonian Contr. Bot.* 32: 22. 1976.

Parmelia setchwanensis Zahlbr. in Handel-Mazzetti, *Symb. Sin.* 3: 182 & 189. 1930.

Distribution: Karnataka (Shivamogga, Kodagu), Arunachal Pradesh, Himachal Pradesh, Kerala, Manipur, Nagaland, Sikkim, Uttarakhand, West Bengal; China, Nepal.

Habitat: Corticolous and saxicolous.

Chemistry: Atranorin and salazinic acid.

Bulbothrix tabacina (Mont. & Bosch) Hale, *Phytologia* 28: 481. 1974 & *Smithsonian Contr. Bot.* 32: 24. 1976.

Parmelia tabacina Mont. & Bosch, *Syll. Gen. Sp. Crypt.*: 327. 1856.

Distribution: Karnataka (Shivamogga), Nagaland; pantropical.

Habitat: Corticolous, rarely saxicolous.

Chemistry: Atranorin; salazinic and consalazinic acids.

Canoparmelia Elix & Hale

Canoparmelia aptata (Kremp.) Elix & Hale in Elix, Johnston & Verdon, *Mycotaxon* 27 : 278. 1986.

Parmelia aptata Kremp. in Nylander, *Flora* 52 : 291. 1869.

Pseudoparmelia aptata (Kremp.) Hale, *Phytologia* 29: 189. 1974.

Distribution: Karnataka (Belagavi), Himachal Pradesh, Madhya Pradesh, Sikkim, Tamil Nadu, Uttarakhand, West Bengal; Africa, Australia, Indonesia, Japan, Nepal, Philippines.

Habitat: Corticolous and saxicolous.

Chemistry: Atranorin; perlatolic, stenoporic acids and an unidentified pigment.

Canoparmelia texana (Tuck.) Elix & Hale, Mycotaxon 27: 279. 1986.

Parmelia texana Tuck., Amer. J. Sci. Arts, ser. 2, 25: 424. 1858.

Pseudoparmelia texana (Tuck.) Hale, Phytologia, 28: 191. 1974.

Distribution: Karnataka (Belagavi, Kodagu), Chhattisgarh, Himachal Pradesh, Jammu & Kashmir, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Nagaland, Sikkim, Tamil Nadu, Uttarakhand; pantropical and subtemperate regions of the world

Habitat: Corticolous, rarely saxicolous, in open forests.

Chemistry: Atranorin; divaricatic, nordivaricatic and stenoporic acids.

Eumitria Stirt.

Eumitria baileyi Stirt., Scott. Naturalist (Perth) 6: 100. 1881.

Usnea baileyi (Stirt.) Zahlbr., Denkschr. Kaiserl. Akad. Wiss., Wien. Math.-Naturwiss. Kl. 83: 182. 1909.

Distribution: Karnataka (Kodagu), Arunachal Pradesh, Assam, Kerala, Manipur, Meghalaya, Nagaland, Sikkim, Tamil Nadu and West Bengal; Australia, China, Indonesia, Japan, Malaysia, Papua New Guinea, Philippines, Taiwan, Thailand; Africa, Central and South America. Pantropical.

Habitat: Corticolous, sometimes saxicolous.

Chemistry: Strain (1) usnic acid, norstictic, salazinic and an unknown; strain (2) usnic, norstictic and an unknown; usnic acid, eumitrin A, ± eumitrin B, norstictic acid (major), ± salazinic acid (minor), connorstictic acid (trace), galbinic acid (trace) and hyposalazinic acid (trace)

Flavoparmelia Karnefelt & Thell

Flavoparmelia caperata (L.) Hale, Mycotaxon 25 : 604. 1986.

Lichen caperatus L., Sp. Pl.: 1147. 1753.

Parmelia caperata (L.) Ach., Methodus : 216. 1803.

Distribution: Karnataka (Kodagu), Andhra Pradesh, Assam, Himachal Pradesh, Jammu & Kashmir, Manipur, Meghalaya, Nagaland, Sikkim, Tamil Nadu, Uttarakhand and West Bengal; Bhutan, China, Japan, Nepal; widely distributed in lower temperate regions of the world.

Habitat: Corticolous, saxicolous and terricolous.

Chemistry: Atranorin; caperatic, protocetraric, usnic acids and an unknown substance.

Hypotrachyna (Vain.) Hale

Hypotrachyna awasthii Hale & Patw., Bryologist 77: 637. 1974.

Parmelia awasthii (Hale & Patw.) D.D. Awasthi, Biol. Mem. 1: 165. 1976.

Distribution: Karnataka (Chikkamagaluru, Shivamogga), Kerala, Maharashtra, Manipur, Nagaland, Tamil Nadu; endemic.

Habitat: Corticolous, in open moist places.

Chemistry: Atranorin, salazinic and norstictic acids.

Hypotrachyna cirrhata (Fr.) Divakar & al., Phytotaxa 132(1): 31. 2013.

Parmelia cirrhata Fr., Syst. Orb. Veg. 1: 383. 1825.

Everniastrum cirrhatum (Fr.) Hale, Mycotaxon 3 : 347. 1976.

Cetrariastrum cirrhatum (Fr.) W.L. Culb., Bryologist 84 : 283. 1981.

Everniastrum cirrhatum (Fr.) Hale ex Sipman, Mycotaxon 26 : 239. 1986.

Distribution: Karnataka (Chikkamagaluru), Arunachal Pradesh, Assam, Himachal Pradesh, Jammu & Kashmir, Kerala, Manipur, Meghalaya, Nagaland, Sikkim, Tamil Nadu, Uttarakhand and West Bengal; Bhutan, China, Japan, Nepal, Sri Lanka, Taiwan, C & S America.

Habitat: Corticolous, saxicolous and terricolous, in open and dense forest-hills.

Chemistry: Atranorin; protolichesterinic and salazinic acids.

Hypotrachyna coorgiana Patw. & A.V.Prabhu, Bryologist 80(2): 348. 1977.

Distribution: Karnataka (Kodagu), Arunachal Pradesh, Tamil Nadu, West Bengal; Thailand.

Habitat: Corticolous.

Chemistry: Atranorin and salazinic acid.

Hypotrachyna crenata (Kurok.) Hale, Phytologia 28: 341. 1974.

Parmelia crenata Kurok. in Hale & Kurokawa, Contr. U.S. Natl. Herb. 36: 168. 1964.

Distribution: Karnataka (Chikkamagaluru, Kodagu, Shivamogga), Himachal Pradesh, Kerala, Maharashtra, Meghalaya, Sikkim, Tamil Nadu, Uttarakhand, West Bengal; Japan, Nepal, Taiwan, Thailand.

Habitat: Corticolous, muscicolous over rocks.

Chemistry: Atranorin; constictic, stictic and norstictic acids.

Hypotrachyna nepalensis (Taylor) Divakar & al., Phytotaxa 132(1): 32.2013.

Parmelia nepalensis Taylor, London J. Bot. 6: 172. 1847.

Cetrariastrum nepalense (Taylor) W.L.Culb., Bryologist 84: 301.1981.

Everniastrum nepalense (Taylor) Hale ex Sipman, Mycotaxon 26: 241. 1986.

Distribution: Karnataka (Chikmagaluru), Arunachal Pradesh, Assam, Chhattisgarh, Himachal Pradesh, Kerala, Madhya Pradesh, Manipur, Nagaland, Sikkim, Tamil Nadu, Uttarakhand, West Bengal; Bhutan, Nepal; pantropical to temperate parts of Asia.

Habitat: Corticolous, rarely saxicolous and terricolous usually in alpine regions.

Chemistry: Atranorin; salazinic and protolichesterinic acids.

Hypotrachyna dodapetta Hale & Patw., Bryologist 77: 637. 1974.

Parmelia dodapetta (Hale & Patw.) D.D.Awasthi, Biol. Mem. 1: 171. 1976.

Distribution: Karnataka (Kodagu), Tamil Nadu; endemic.

Habitat: Corticolous.

Chemistry: Atranorin; salazinic acid and trace of norstictic acid.

Hypotrachyna expallida (Kurok.) Divakar & al., Phytotaxa 132(1): 33.2013.

Parmelia expallida Kurok., Bull. Natl. Sci. Mus. (Tokyo) 11: 191. 1968.

Parmelina expallida (Kurok.) Hale, Phytologia 28: 482. 1974.

Parmelinopsis expallida (Kurok.) Elix & Hale, Mycotaxon 29: 242. 1987.

Distribution: Karnataka (Kodagu), Himachal Pradesh, Kerala, Nagaland, Sikkim, Tamil Nadu, Uttarakhand and West Bengal-hills; Japan, Nepal, Philippines, Taiwan and Thailand.

Habitat: Corticolous.

Chemistry: Atranorin and protolichesterinic acid.

Hypotrachyna imbricatula (Zahlbr.) Hale, Smithsonian Contr. Bot. 25: 41. 1975.

Parmelia imbricatula Zahlbr., Denkschr. Kaiserl. Akad. Wiss., Wien Math.-Naturwiss. Kl. 83: 168. 1909.

Parmelia orientalis Hale, Phytologia 22: 435. 1972.

Hypotrachyna orientalis (Hale) Hale, Phytologia 28: 341. 1974.

Distribution: Karnataka (Kodagu), Arunachal Pradesh, Manipur, Meghalaya, Nagaland, Sikkim and Tamil Nadu; Australia, Nepal, Southern U. S. A.; Central and South America.

Habitat: Corticolous, saxicolous.

Chemistry: Strain (1) Atranorin, barbatic acid and obtusatic acid; strain (2) Atranorin, barbatic acid, obtusatic acid and fumarprotocetraric acid; strain (3) Atranorin, barbatic acid, obtusatic acid and echinocarpic acid

Hypotrachyna infirma (Kurok.) Hale, Phytologia. 28: 341. 1974.

Parmelia infirma Kurok., Contr. U.S. Natl. Herb. 36: 179. 1964.

Distribution: Karnataka (Chikkamagaluru, Shivamogga), Arunachal Pradesh, Kerala, Madhya Pradesh, Manipur, Meghalaya, Nagaland, Sikkim, Tamil Nadu, Uttarakhand, West Bengal; Japan, Indonesia, Nepal, Taiwan, Thailand.

Habitat: Corticolous and saxicolous.

Chemistry: Atranorin; caperatic and protolichesterinic acids.

Hypotrachyna masonhalei Patw. & A.V.Prabhu, Bryologist 80(2): 348. 1977.

Distribution: Karnataka (Uttara Kannada, Shivamogga), Arunachal Pradesh and Maharashtra; Thailand.

Habitat: Corticolous.

Chemistry: Atranorin; salazinic and norstictic acids.

Hypotrachyna thryptica (Hale) Hale, Phytologia 28: 342. 1974.

Parmelia thryptica Hale, Bryologist 75: 99. 1972.

Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Kerala, Tamil Nadu; endemic.

Habitat: Corticolous, rarely saxicolous.

Chemistry: Atranorin; stictic and constictic acids

Myelochroa (Asahina) Elix & Hale

Parmelia sect. *Hypotrachyna* subsect. *Myelochroa* Asahina

Myelochroa perisidians (Nyl.) Elix & Hale, Mycotaxon 29 : 241. 1987.

Parmelia perisidians Nyl., Acta Soc. Sci. Fenn. 26 : 6, 1900.

Parmelina perisidians (Nyl.) Hale, Phytologia 28: 483. 1974. Distribution: Karnataka (), Himachal Pradesh, Manipur, Nagaland, Sikkim, Tamil Nadu; Japan, Sri Lank, Thailand. Habitat: Corticolous.

Chemistry: Atranorin, leucotylin and Zeorin.

Myelochroa xantholepis (Mont. & Bosch) Elix & Hale, Mycotaxon 29 : 241. 1987.

Parmelia xantholepis Mont. & Bosch, Pl. Jungh.: 428. 1855.

Parmelina xantholepis (Mont. & Bosch) Hale, Phytologia 28 : 483. 1974.

Distribution: Karnataka*, Arunachal Pradesh, Kerala, Manipur, Nagaland, Sikkim, Tamil Nadu, Uttarakhand, West Bengal; tropical and temperate regions.

Habitat: Corticolous and saxicolous.

Chemistry: Atranorin, zeorin, leucotylin, leucotylic acid and secalonic acid A.

Parmelinella Elix & Hale

Parmelinella simplicior (Hale) Elix & Hale, Mycotaxon 29: 242. 1987.

Parmelia simplicior Hale, Bryologist 75: 99. 1972.

Parmelina simplicior (Hale) Hale, Phytologia 28: 483. 1974; Smithsonian Contr. Bot. 33: 44. 1976.

Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Himachal Pradesh, Kerala, Maharashtra, Tamil Nadu; E Africa.

Habitat: Corticolous.

Chemistry: Atranorin; salazinic acid.

Parmelinella wallichiana (Taylor) Elix & Hale, Mycotaxon 29: 242. 1987.

Parmelia wallichiana Taylor, London J. Bot. 6: 176. 1847.

Parmelina wallichiana (Taylor) Hale, Phytologia 28: 483. 1974.

Pseudoparmelia wallichiana (Taylor) Krog & Swinsow, Lichenologist 19: 424. 1987.

Distribution: Karnataka (Chikkamagaluru, Kodagu, Shivamogga), Arunachal Pradesh, Assam, Himachal Pradesh, Kerala, Madhya Pradesh, Manipur, Maharashtra, Meghalaya, Nagaland, Sikkim, Tamil Nadu, Uttarakhand, West Bengal; Australia; Africa, SE Asia.

Habitat: Corticolous, saxicolous and terricolous.

Chemistry: Atranorin, consalazinic acid and salazinic acid.

Parmotrema A.Massal.

Parmotrema andinum (Müll.Arg.) Hale, Phytologia 28 : 334, 1974.

Parmelia andina Müll.Arg., Rev. Mycol. (Toulouse) 1: 169.1869.

Distribution: Karnataka (Bengaluru UD, Hassan), Andhra Pradesh, Himachal Pradesh, Jharkhand, Madhya Pradesh, Odisha, Tamil Nadu, Uttarakhand; Thailand; Africa, Asia, S America.

Habitat: Corticolous.

Chemistry: Atranorin, chloroatranorin, lecanoric acid and orsellinic acid (trace).

Parmotrema austrosinense (Zahlbr.) Hale, Phytologia 28 : 335. 1974.

Parmelia austrosinensis Zahlbr., Symb. Sin. 3: 192. 1930.

Distribution: Karnataka (Bengaluru UD, Chikkamagaluru, Kodagu, Shivamogga, Dharwad), Assam, Himachal Pradesh, Jammu & Kashmir, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Nagaland, Tamil Nadu, Uttarakhand; Americas, Australia, Bhutan, China, Indonesia, Japan, Nepal, Sri Lanka.

Habitat: Corticolous, rarely saxicolous.

Chemistry: Atranorin and lecanoric acid.

Parmotrema awasthii Divakar & Upreti, Lichenologist 35(1): 21. 2003.

Distribution: Karnataka (Chikkamagaluru), endemic.

Habitat: Saxicolous.

Chemistry: Atranorin, alectoronic acid and - collatolic acid.

Parmotrema crinitum (Ach.) M.Choisy, Bull. Mens. Soc. Linn. Soc. Bot. Lyon 21: 175. 1952.

Parmelia crinita Ach., Syn. Meth. Lich.: 196. 1814.

Distribution: Karnataka (Chamrajanagar, Kodagu, Shivamogga), Andhra Pradesh, Himachal Pradesh, Jammu & Kashmir, Kerala, Tamil Nadu, Uttarakhand; Cosmopolitan.

Habitat: Corticolous, rarely terricolous.

Chemistry: Atranorin; stictic, constictic and norstictic acids.

Parmotrema cristiferum (Taylor) Hale, Phytologia 28 : 335. 1974.

Parmelia cristifera Taylor, London J. Bot. 6: 165. 1847.

Distribution: Karnataka (Chikkamagaluru, Shivamogga), Arunachal Pradesh, Assam, Bihar, Jammu & Kashmir, Jharkhand, Kerala, Manipur, Meghalaya, Nagaland, Odisha, West Bengal; Pantropical.

Habitat: Corticolous and saxicolous.

Chemistry: Atranorin; consalazinic and salazinic acids.

Parmotrema grayanum (Hue) Hale, Phytologia 28 : 336. 1974.

Parmelia grayana Hue, Nouv. Arch. Mus. Hist., ser. 4, 1: 184.1899.

Distribution: Karnataka (Bengaluru UD, Chikkamagaluru, Kodagu, Shivamogga), Kerala, Madhya Pradesh, Tamil Nadu, Uttarakhand; Pantropical.

Habitat: Saxicolous, rarely terricolous.

Chemistry: Atranorin, protolichesterinic acid and unknown fatty acids.

Parmotrema hababianum (Gyeln.) Hale, Phytologia 28 : 336. 1974.

Parmelia hababiana Gyeln., Repert. Spec. Nov. Regni Veg. 29: 288. 1931.

Distribution: Karnataka (Chikkamagaluru, Kodagu, Shivamogga districts, Bhadra Wildlife Sanctuary and Hubse), Andhra Pradesh, Himachal Pradesh, Jammu & Kashmir, Kerala, Manipur, Nagaland, Odisha, Sikkim, Tamil Nadu, Uttarakhand and West Bengal; Africa, Americas, China, Nepal, Sri Lanka, Thailand.

Habitat: Corticolous.

Chemistry: Atranorin and protolichesterinic acid.

Parmotrema kamatii Patw. & A.V.Prabhu, Bryologist 80(2): 350. 1977.

Distribution: Karnataka*, Maharashtra, Odisha, Tamil Nadu; endemic.

Habitat: Corticolous.

Chemistry: Atranorin; alectoronic and -collatolic acids.

Parmotrema margaritatum (Hue) Hale, Phytologia 28: 337. 1974.

Parmelia margaritata Hue, Nuov. Arch. Mus. Nat. Hist., ser. 4, 1: 193. 1899;

Distribution: Karnataka (Dharwad,Kodagu); USA.

Habitat: Corticolous.

Chemistry: Atranorin and salazinic acid.

Parmotrema mellissii (C.W.Dodge) Hale, Phytologia, 28 : 337. 1974.

Parmelia mellissii C.W.Dodge, Ann. Missouri Bot. Gard. 46: 134. 1959.

Distribution: Karnataka (Kodagu,Shivamogga), Kerala, Manipur, Nagaland, Sikkim, Tamil Nadu, West Bengal; Pantropical.

Habitat: Corticolous, saxicolous or terricolous.

Chemistry: Atranorin; alectoronic and -collatolic acids.

Parmotrema mesotropum (Müll.Arg.) Hale, Phytologia 28: 337. 1974.

Parmelia mesotropa Müll.Arg., Rev. Mycol. (Toulouse) 10: 55. 1888.

Distribution: Karnataka (), Arunachal Pradesh, Himachal Pradesh, Kerala, Madhya Pradesh, Uttarakhand; Americas.

Habitat: Corticolous and saxicolous.

Chemistry: Atranorin and caperatic acid.

Parmotrema planatilobatum (Hale) Hale, Phytologia 28: 338. 1974.

Parmelia planatilobatum Hale, J. Jap. Bot. 40: 200. 1965.

Distribution: Karnataka (Hassan), Kerala, Tamil Nadu; Indonesia, Malaysia, Sri Lanka, Thailand; E Africa.

Habitat: Corticolous or saxicolous.

Chemistry: Atranorin, gyrophoric acid and skyrin.

Parmotrema praesorediosum (Nyl.) Hale, Phytologia 28: 338. 1974; D. Awasthi, Comp. Macrolich. India, Nepal & Sri Lanka : 347. 2007.

Parmelia praesorediosa Nyl., Sert. Lich. Trop.: 18. 1891.

Distribution: Karnataka (Belagavi, Chikkamagaluru district and Shivamogga district, Bhadra Wildlife Sanctuary and Moolagadde), Andhra Pradesh, Assam, Himachal Pradesh, Jammu & Kashmir, Kerala, Madhya Pradesh, Maharashtra, Manipur, Nagaland, Odisha, Rajasthan, Tamil Nadu, Uttarakhand, Uttar Pradesh, West Bengal; Pantropical.

Habitat: Corticolous or saxicolous.

Chemistry: Atranorin (minor), chloroatranorin (minor), protopraesorediosic acid. (major), praesorediosic acid (minor).

Parmotrema pseudonilgherrense (Asahina) Hale, Mycotaxon 5: 441. 1977.

Parmelia pseudonilgherrensis Asahina, J. Jap. Bot. 29: 370. 1954.

Distribution: Karnataka (Chikkamagaluru), Himachal Pradesh, Kerala, Maharashtra, Sikkim, Tamil Nadu and Uttarakhand; ; Africa, Australia, China, Korea, Malaysia, Nepal, Sri Lanka, Thailand

Habitat: Corticolous, rarely terricolous.

Chemistry: Atranorin, alectoronic and -collatolic acid.

Parmotrema rampoddense (Nyl.) Hale, *Phytologia* 28 : 338. 1974.

Parmelia rampoddensis Nyl., *Acta Soc. Sci. Fenn.* 26 (10): 7. 1900.

Distribution: Karnataka (Belagavi, Chamrajanagar, Chikkamagaluru, Hassan), Kerala, Madhya Pradesh, Maharashtra, Manipur, Nagaland, Sikkim, Tamil Nadu, Uttarakhand, West Bengal; Bhutan, Nepal, Sri Lanka; Pantropical.

Habitat: Corticolous.

Chemistry: Atranorin and alectoronic acid.

Parmotrema reticulatum (Taylor) M.Choisy, *Bull. Mens. Soc. Linn. Soc. Bot.Lyon.* 21: 175. 1952.

Parmelia reticulata Taylor, *Fl. Hibern.* 2: 148. 1836.

Rimelia reticulata (Taylor) Hale & A.Fletcher, *Bryologist* 93: 28. 1990.

Parmelia ghattensis Hue, *Nouv. Arch. Mus. Nat. Hist. Paris, ser. 4, 1:* 198. 1899.

Distribution: Karnataka (Chikkamagaluru), Arunachal Pradesh, Assam, Himachal Pradesh, Jammu & Kashmir, Kerala, Madhya Pradesh, Manipur, Maharashtra, Meghalaya, Nagaland, Sikkim, Tamil Nadu, Uttarakhand, West Bengal; Pantropical to subtemperate regions of the world.

Habitat: Corticolous, saxicolous or terricolous.

Chemistry: Atranorin; salazinic and consalazinic acids.

Parmotrema saccatilobum (Taylor) Hale, *Phytologia* 28 : 339, 1974.

Parmelia saccatiloba Taylor in Hooker, *London J. Bot.* 6: 174. 1847.

Distribution: Karnataka (Kodagu), Andaman & Nicobar Islands, Assam, Goa, Kerala, Maharashtra, Nagaland, Sikkim, Tamil Nadu, Uttarakhand and West Bengal; Australia, China, Fiji, Singapore, Taiwan; Pacific Islands.

Habitat: Corticolous.

Chemistry: Atranorin and protocetraric acid.

Parmotrema sancti-angelii (Lynge) Hale, *Phytologia* 28 : 339. 1974.

Parmelia sancti-angelii Lynge, *Ark. Bot.* 13: 35. 1914; D. Awasthi, *Biol. Mem.* 1: 220. 1976.

Distribution: Karnataka (Shivamogga), Andhra Pradesh, Arunachal Pradesh, Assam, Jammu & Kashmir, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Nagaland, Rajasthan, Sikkim, Tamil Nadu, Uttarakhand, West Bengal; Africa, Australia, China, Indonesia, Laos, Nepal, Papua New Guinea, S America. Sri Lanka, Taiwan, Thailand.

Habitat: Corticolous and saxicolous.

Chemistry: Atranorin and gyrophoric acid.

Parmotrema subarnoldii (Abbayes) Hale, *Phytologia* 28: 339. 1974.

Parmelia subarnoldii Abbayes, *Man. Inst. Sci. Madagascar, ser. B, 10:* 113, 1961; Hale, *Contr. U. S. Natl. Herb.* 36: 309. 1965; D. Awasthi, *Biol. Mem.* 1: 221. 1976.

Distribution: Karnataka (Kodagu), Manipur, Nagaland and Tamil Nadu; Australia, Madagascar, Indonesia, Papua New Guinea; Africa, Central and South America.

Habitat: Corticolous.

Chemistry: Atranorin; protocetraric and protolichesterinic acids and skyrin in pigmented part.

Parmotrema subtinctorum (Zahlbr.) Hale, *Phytologia* 28: 339. 1974.

Parmelia subtinctoria Zahlbr., *Symb. Sin* 3: 193. 1930; D. Awasthi, *Biol. Mem.* 1: 222. 1976.

Canomaculina subtinctoria (Zahlbr.) Elix, *Mycotaxon* 55 : 477. 1997.

Distribution: Karnataka (Kodagu), Arunachal Pradesh, Himanchal Pradesh, Jammu & Kashmir, Manipur, Nagaland, Sikkim, Tamil Nadu, Uttarakhand and West Bengal; Australia, Bhutan, China, Indonesia, Japan, Nepal; Africa, North and Central America.

Habitat: Corticolous, terricolous and saxicolous.

Chemistry: Atranorin, salazinic acid, norlobaridone and loxodin.

Parmotrema tinctorum (Despr. ex Nyl.) Hale, *Phytologia* 28: 339. 1974.

Parmelia tinctoria Despr. ex Nyl., *Flora* 55: 547. 1872.

Distribution: Karnataka (Belagavi, Bengaluru UD, Chamrajanagar, Chikkamagaluru, Kodagu, Shivamogga, Dharwad), Andhra Pradesh, Arunachal Pradesh, Assam, Chhattisgarh, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Nagaland, Odisha, Rajasthan, Sikkim, Tamil Nadu, Uttarakhand, West Bengal; Pantropical.

Habitat: Corticolous or saxicolous.

Chemistry: Atranorin; lecanoric and orsellinic (trace) acids.

Parmotrema vartakii Hale, *Mycotaxon* 5(2): 436. 1977.

Distribution: Karnataka (Chamrajanagar, Chikkamagaluru, Shivamogga), Maharashtra; Philippines.

Habitat: Corticolous.

Chemistry: Atranorin; -collatolic and alectoronic (trace) acids.

Relicina (Hale & Kurok.) Hale

Parmelia sect. *imbricaria* subsect. *bicornutae* ser. *relicinae* Hale & Kurok.

Relicina abstrusa (Vain.) Hale, *Phytologia* 28: 484. 1974.

Parmelia abstrusa Vain., *Acta Soc. Faun. Fl. Fenn.* 7(7): 64. 1890.

Distribution: Karnataka (Western Ghats), Kerala; Americas, Indonesia, Japan, Malaysia, Philippines, Taiwan.

Habitat: Corticolous, saxicolous.

Chemistry: Norstictic acid, usnic acid and hyposalazinic acid.

Remotrachyna Divakar & A. Crespo

Remotrachyna adducta (Nyl.) Divakar & A. Crespo, *Am. J. Bot.* 97: 586. 2010.

Hypotrachyna adducta (Nyl.) Hale, *Phytologia* 28: 340. 1974.

Parmelia adducta (Nyl.) Hale, *Flora* 68: 610. 1885

Distribution: Karnataka (Kodagu), Arunachal Pradesh, Assam, Manipur, Nagaland, Sikkim, Uttarakhand and West Bengal; China, Japan, Nepal, Papua New Guinea, Philippines, Taiwan and Thailand.

Habitat: Corticolous, saxicolous.

Chemistry: Atranorin, protocetraric acid and an unknown substance.

Usnea Dill. ex Adans.

Usnea aciculifera Vain., *Bot. Mag. (Tokyo)* 35: 45. 1921.

Distribution: Karnataka (Chikkamagaluru, Shivamogga), Arunachal Pradesh, Assam, Himachal Pradesh, Manipur, Nagaland, Sikkim, Tamil Nadu, Uttarakhand, West Bengal; China, Japan, Nepal.

Habitat: Corticolous.

Chemistry: Usnic, constictic and stictic acids.

Usnea albopunctata Nyl. in Crombie, *J. Linn. Soc., Bot.* 17: 554. 1880.

Distribution: Karnataka (Western Ghats), Kerala, Tamil Nadu; Sri Lanka.

Habitat: Corticolous.

Chemistry: Unknown substances.

Usnea eumitrioides Motyka, *Lich. Gen. Usnea Monogr.* 2(1): 322. 1937.

Distribution: Karnataka (Chikkamagaluru, Kodagu, Shivamogga), Himachal Pradesh, Nagaland, Sikkim, Tamil Nadu, Uttarakhand, West Bengal; Bhutan, China, Philippines, Taiwan.

Habitat: Corticolous.

Chemistry: Usnic acid and stictic acid complex.

Usnea galbinifera Asahina, J. Jap. Bot. 38: 257. 1963.

Distribution: Karnataka (Chikkamagaluru, Shivamogga), Meghalaya, Sikkim, West Bengal; China, Indonesia, Nepal.

Habitat: Corticolous.

Chemistry: Galbinic

Usnea ghattensis G. Awasthi, J. Hattori Bot. Lab. 61: 373. 1986.

Distribution: Karnataka (Chikkamagaluru, Shivamogga), Maharashtra; endemic.

Habitat: Corticolous.

Chemistry: Usnic acid, sometimes with an unknown substance.

Usnea leucospilodea Nyl., J. Linn. Soc., Bot. 20: 30. 1883.

Distribution: Karnataka (Shivamogga), Sikkim, West Bengal; Nepal, China, Japan, Madagascar, Sri Lanka, SE Asia.

Habitat: Ramicolous and pendulous

Chemistry: Usnic and stictic acids.

Usnea picta (J. Steiner) Motyka, Lich. Gen. Usnea Monogr. 2(1): 325. 1937.

Usnea ceratina var. *picta* J. Steiner, Sitzungsber. Kaiserl. Akad. Wiss., Wien, Math. -Naturwiss. Cl., Abt. 1, 106(1): 210. 1897.

Distribution: Karnataka (Chikkamagaluru, Shivamogga), Nagaland, Tamil Nadu; Bhutan, E Africa, Madagascar.

Habitat: Corticolous.

Chemistry: Strain (1) usnic acid (trace), salazinic acid; strain (2) usnic acid and stictic acid complex.

Usnea pictoides G. Awasthi, J. Hattori Bot. Lab. 61: 380. 1986.

Distribution: Karnataka (Chikkamagaluru, Shivamogga), Kerala, Tamil Nadu; endemic.

Habitat: Corticolous.

Chemistry: Usnic acid and two unknown substances.

Usnea sinensis Motyka, Lich. Gen. Usnea Monogr. 1: 248. 1936.

Distribution: Karnataka (Chikkamagaluru), Sikkim; China.

Habitat: Corticolous.

Chemistry: No lichen substances

Usnea stigmatoides G. Awasthi, J. Hattori Bot. Lab. 61: 354. 1986.

Distribution: Karnataka (Chikkamagaluru, Shivamogga), Tamil Nadu; endemic.

Habitat: Corticolous.

Chemistry: Usnic and stictic acid complex.

Usnea subflorida (Zahlbr.) Motyka, Lich. Gen. Usnea Monogr. 2(1): 335. 1937.

Usnea steineri var. *subflorida* Zahlbr. in Engler, Bot. Jahrb. Syst. 60: 541. 1926.

Distribution: Karnataka (Kodagu), Kerala, Tamil Nadu and Uttarakhand; Madagascar; East Africa.

Habitat: Corticolous.

Chemistry: Usnic, protocetraric acids; barbatic acid present or absent.

Usnea vegae Motyka, Lich. Gen. Usnea Stud. Monogr. 2(2): 636. 1938.

Distribution: Karnataka (Chikkamagaluru, Shivamogga), Kerala, Tamil Nadu; Sri Lanka.

Habitat: Corticolous.

Chemistry: Usnic and norstictic acids.

Usnea undulata Stirt., Scott. Naturalist (Perth) 6: 104. 1881.

Distribution: Karnataka (Western Ghats), Arunachal Pradesh, Kerala, Meghalaya, Nagaland, Sikkim, Tamil Nadu, Uttarakhand West Bengal; Bhutan, Madeira, S & E Africa.

Habitat: Corticolous.

Chemistry: Strain (1) Salazzinic acid; strain (2) Galbinic, norstictic and salazinic acids strain (3) Stictic acid complex; strain (4) Protocetraric acid, and strain (5) No lichen substance in medulla.

Xanthoparmelia (Vain.) Hale, nom. cons.

Parmelia sect. *Xanthoparmelia* Vain.

Xanthoparmelia congensis (B.Stein) Hale, Phytologia 28: 486, 1974.

Parmelia congensis B.Stein, Jahresber. Schles. Ges. Vaterl. Cult. 66: 140. 1889.

Distribution: Karnataka (Chikkamagaluru, Shivamogga), Himachal Pradesh, Madhya Pradesh, Rajasthan, Tamil Nadu, Uttarakhand; Australia, China, S Africa, S America.

Habitat: Saxicolous.

Chemistry: Usnic, stictic, constictic and norstictic acids.

Peltulaceae

Peltula Nyl.,

Peltula impressa (Vain.) Swinscow & Krog, Norweg. J. Bot. 26: 219. 1979.

Heppia impressa Vain., Beibl. Hedwigia 37: 43. 1898.

Distribution: Karnataka (Bellari, Raichur); Australasia, Africa, S W North America.

Habitat: Saxicolous.

Pertusariaceae

Lepra Scop.

Lepra albescens (Huds.) Hafellner, Stapfia, 104:171.2016.

Pertusaria albescens var. *albescens* (Huds.) M.Choisy & Werner in Werner, Cavanillesia 5: 165. 1932.

Lichen albescens Huds., Fl. Angl., ed. 1 : 445. 1762.

Distribution: Karnataka (Kodagu, Shivamogga), Himachal Pradesh, Jammu & Kashmir, Uttarakhand; temperate parts of the world.

Habitat: Corticolous.

Chemistry: Fatty acids.

Lepra amara (Ach.) Hafellner, Stapfia, 104:171.2016.

Pertusaria amara (Ach.) Nyl., Bull. Soc. Linn. Normandie, ser. 2, 6: 288. 1872;

Variolaria amara Ach., Kongl. Vetensk. Acad. Nya Handl. 30: 163. 1809.

Distribution: Karnataka (Chikkamagaluru), Himachal Pradesh, E. & N. W. Himalaya, Tamil Nadu; temperate regions of the world.

Habitat: Corticolous.

Chemistry: Strains of picrolichenic, hypothamnolic acids and an unknown substance.

Lepra corallina (L.) Hafellner, Stapfia, 104:172.2016.

Pertusaria corallina (L.) Arnold, Flora, Regensburg 44: 658. 1861.

Lichen corallinus L., Mant. Pl. 1: 131 (1767)

Distribution: Karnataka (Chikkamagaluru), Maharashtra; Japan.

Habitat: Saxicolous.

Lepra leucosora (Nyl.) Hafellner, Stapfia, 104:172.2016.

Pertusaria leucosora Nyl., Flora 60: 223. 1877.

Distribution: Karnataka*, NW Himalaya, Kerala, Madhya Pradesh, Sikkim, Tamil Nadu; Europe.

Habitat: Saxicolous.

Chemistry: Atranorin and unknown substances.

Lepra leucosorodes (Nyl.) I. Schmitt., Hodkinson & Lumbsch, PLoS ONE, 12(7): 8. 2017

Pertusaria leucosorodes Nyl., Lich. Jap.: 56. 1890.

Distribution: Karnataka (Bengaluru UD, Kodagu, Shivamogga), Kerala, Madhya Pradesh, Nagaland, Himalayas, Tamil Nadu, Nepal, Sri Lanka.

Habitat: Corticolous.

Chemistry: Thamnic, protocetraric and stictic acids.

Lepra multipuncta (Turn.) Hafellner, Stapfia, 104:173.2016.

Pertusaria multipuncta (Turn.) Nyl., Lich. Scand.: 179. 1861.

Variolaria multipuncta Turn., Trans. Linn. Soc. London 9: 137. t.10, f.1. 1806.

Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Himachal Pradesh, Manipur, Madhya Pradesh, Nagaland, Sikkim, Tamil Nadu, West Bengal; Northern hemisphere.

Habitat: Corticolous.

Chemistry: Atranorin.

Pertusaria DC., nom. cons.

Pertusaria coccodes (Ach.) Nyl. Mem. Soc. Imp. Nat. Sci. Cherbourg 5: 116 1857.

Lichen coccodes Ach. Lichenogr. Suec. Prod.: 10, 1798.

Distribution: Karnataka (Uttar Kannada), Arunachal Pradesh, Madhya Pradesh; Europe and North-America.

Habitat: Corticolous

Chemistry: Atranorin, norstictic and Connorstictic acids.

Pertusaria colorata D.D. Awasthi & Preeti Srivast., Bryologist 96(2): 210. 1993.

Distribution: Karnataka (Shivamogga), Tamil Nadu; endemic.

Habitat: Corticolous.

Chemistry: Norstictic acid.

Pertusaria concinna Erichsen, Repert. Spec. Nov. Regni Veg. 41: 79. 1936.

Distribution: Karnataka (Bengaluru, Kodagu, Shivamogga), Chhattisgarh, Himachal Pradesh, Madhya Pradesh, Tamil Nadu; endemic.

Habitat: Corticolous.

Chemistry: Unknown substances.

Pertusaria coronata (Ach.) Th. Fr., Lichenogr. Scand. 1: 321. 1871.

Porina coronata Ach., Syn. Meth. Lich.: 111. 1814.

Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Sikkim; Europe.

Habitat: Corticolous.

Chemistry: Stictic, norstictic and constictic acids.

Pertusaria granulata (Ach.) Müll. Arg., Flora 68: 354. 1884.

Porina granulata Ach., Syn. Meth. Lich.: 112. 1814.

Distribution: Karnataka (Dakshina Kannada), Kerala, Tamil Nadu; Sri Lanka.

Habitat: Corticolous

Chemistry: Perlatolic acid and atranorin.

Pertusaria indica Preeti Srivast. & D.D.Awasthi in D. Awasthi & Srivastava, *Bryologist* 96(2): 212. 1993. Distribution: Karnataka (Bengaluru UD), Arunachal Pradesh, Madhya Pradesh, Sikkim; endemic. Habitat: Saxicolous. Chemistry: 2'-O-methylperlatolic acid.

Pertusaria leioplacella Nyl., *Bull. Soc. Linn. Normandie*, ser. 2, 2: 71. 1868. Distribution: Karnataka (Bengaluru UD, Dakashina Kannada), Andhra Pradesh, Bihar, Kerala, Odisha, Tamil Nadu, Uttarakhand; Pantropical. Habitat: Corticolous. Chemistry: Stictic, constictic and salazinic acids and an unknown substance.

Pertusaria punctata Nyl., *Bull. Soc. Linn. Normandie*, ser. 2, 2: 71. 1868. Distribution: Karnataka (Shivamogga), Himachal Pradesh, Madhya Pradesh, Tamil Nadu; endemic. Habitat: Corticolous. Chemistry: No lichen substances.

Pertusaria mesotropa Müll. *Arg. Flora*. 19: 350. 1884. Distribution: Karnataka (Uttar Kannada); Sri Lanka, North-West Mexico and Kenya. Habitat: Corticolous. Chemistry: 2-O-Methylperlatolic acid and 4, 5-dichloroxanthone.

Pertusaria pustulata (Ach.) Duby, *Bot. Gall.* 2(2): 673. 1830.
Porina pustulata Ach., *Lichenogr. Universalis*: 309. 1810.
Lichen melaleucus Turner & Borrer in Smith & Sowerby, *Eng. Bot.* 35: t. 2461. 1813.
Pertusaria melaleuca (Turner & Borrer) Duby, *Bot. Gall.* 2(2): 673. 1928. Distribution: Karnataka (Shivamogga), Madhya Pradesh, Manipur, Sikkim, Tamil Nadu; Cosmopolitan. Habitat: Corticolous. Chemistry: Norstictic, stictic and constictic acids.

Pertusaria quassiae (Fée) Nyl., *Ann. Sci. Nat., Bot.*, ser. 4, 15: 45. 1861..
Porina quassiae Fée, *Essai Crypt. Ecorc.*: 81. 1824. Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Andaman & Nicobar Islands, Andhra Pradesh, Himachal Pradesh, Jammu & Kashmir, Madhya Pradesh, Maharashtra, Nagaland and Sikkim; Nepal, Sri Lanka; Pantropical. Habitat: Corticolous. Chemistry: Norstictic, stictic and constictic acids.

Pertusaria tetrathalamia (Fée) Nyl., *Acta Soc. Sci. Fenn.* 7: 448. 1863.
Trypethelium tetrathalmium Fée, *Essai Crypt. Ecorc.*: 69. 1824.
Pertusaria tuberculifera Nyl., *Acta. Soc. Sci. Fenn.* 7: 448. 1863; D. Awasthi, *Biblioth. Lichenol.* 40: 220. 1991. Distribution: Karnataka*, Kerala, Tamil Nadu; Sri Lanka. Habitat: Corticolous. Chemistry: Perlatolic acid, 4,5 dichlorolichexanthone, stictic acid (both major), constictic, cryptostictic, menegazziaic and norstictic acids (all minor).

Phlyctidaceae

Phlyctis (Wallr.) Flot, *nom. cons.*
Peltigera Sect. *Phlyctis* Wallr.

Phlyctis karnatakana S. Joshi & Upreti, *Bryologist*. 113(4): 725. 2011. (Plate, 2F)

Distribution: Karnataka (Shivamogga), Goa; endemic.

Habitat: Corticolous.

Chemistry: Norstictic acid.

Physciaceae

Heterodermia Trevis. em. Poelt

Heterodermia albidiflava (Kurock.) D.D. Awasthi, *Geophytology* 3: 113.

Anaptychia albidiflava Kurock. *Beih. Nova Hedwigia* 6: 42. 1962.

Distribution: Karnataka (Chikkamagaluru, Shivamogga), Himachal Pradesh, Madhya Pradesh, Sikkim, West Bengal; endemic.

Habitat: Corticolous.

Heterodermia dendritica (Pers.) Poelt. *Nova Hedwigia* 9: 31. 1965.

Borrera dendritica Pers. In Gaudich., *Voy. Uraine*: 207. 1827.

Anaptychia dendritica (Pers.) Vain., *Acta Soc. Fauna Fl. Finn.* 7: 134. 1890.

Distribution: Karnataka (Chikkamagaluru, Shivamogga), Arunachal Pradesh, Jammu & Kashmir, Manipur, Nagaland, Tamil Nadu, West Bengal; China, Japan, Nepal, Taiwan, Thailand.

Habitat: Corticolous.

Chemistry: Atranorin, norstictic and Salazinic and an unknown substances.

Heterodermia angustiloba (Müll.Arg.) D.D. Awasthi, *Geophytology* 3: 113. 1973.

Anaptychia speciosa var. *angustiloba* Müll.Arg., *Flora* 66: 78. 1883.

Anaptychia angustiloba (Müll.Arg.) Kurock., *Beih. Nova Hedwigia* 6: 39. 1962.

Distribution: Karnataka (Chikkamagaluru, Shivamogga), Arunachal Pradesh, Himachal Pradesh, Maharashtra, Sikkim, Uttarakhand; Australia, China, Japan, Nepal, Taiwan.

Habitat: Corticolous.

Chemistry: Atranorin, zeorin, norstictic acid, salazinic acid and an unknown substance.

Heterodermia antillarum (Vain.) Swinscow & Krog, *Lichenologist* 8: 114. 1976.

Anaptychia granulifera var. *antillarum* Vain., *Ann. Acad. Sci. Fenn.*, ser. A, 6: 63. 1914.

Anaptychia antillarum (Vain.) Kurock., *J. Hattori Bot. Lab.* 37: 596. 1973.

Distribution: Karnataka (Kodagu), Maharashtra; Australia, Mexico, New Guinea, S Africa, Thailand, West Indies.

Habitat: Corticolous.

Chemistry: Atranorin, zeorin, salazinic acid and an unknown substance.

Heterodermia comosa (Eschw.) Follmann & Redón, *Willdenovia* 6: 446. 1972.

Parmelia comosa Eschw. in Martius, *Icon. Fl. Crypt.* 2: 26. 1828.

Anaptychia comosa (Eschw.) A. Massal., *Mem. Lichenogr.*: 39. 1853.

Distribution: Karnataka (Kodagu, Shivamogga), Kerala, Manipur, Nagaland, Sikkim, Tamil Nadu, Uttarakhand and West Bengal ; America, Asia, E Africa.

Habitat: Corticolous and foliicolous.

Chemistry: Atranorin, zeorin and an unknown substance.

Heterodermia diademata (Taylor) D.D. Awasthi, Geophytology 3: 113. 1973.

Parmelia diademata Taylor, London J. Bot. 6: 165. 1847.

Anaptychia diademata (Taylor) Kurok., Beih. Nova Hedwigia 6: 28. 1962.

Distribution: Karnataka (Bangaluru UD, Chamarajanagar, Chikkamagaluru, Shivamogga), Arunachal Pradesh, Assam, Himachal Pradesh, Jammu & Kashmir, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Nagaland, Rajasthan, Sikkim, Tamil Nadu, Uttarakhand, West Bengal; Africa, Asia, C & S America.

Habitat: Corticolous, terricolous or saxicolous.

Chemistry: Atranorin and zeorin.

Heterodermia dissecta (Kurok.) D.D. Awasthi, Geophytology 3: 113. 1973.

Anaptychia dissecta Kurok., J. Jap. Bot. 34: 182. 1959.

Distribution: Karnataka (Bangaluru UD, Chikkamagaluru, Shivamogga), Himachal Pradesh, Kerala, Madhya Pradesh, Manipur, Nagaland, Sikkim, Tamil Nadu, Uttarakhand West Bengal; China, Japan, Nepal, Taiwan, C America.

Habitat: Corticolous and saxicolous.

Chemistry: Atranorin, zeorin, norstictic and salazinic acids and an unknown substance.

Heterodermia firmula (Nyl.) Trevis., Atti. Soc. Ital. Sci. Nat. 11: 615. 1868.

Physcia firmula Nyl. Syn. Lich. 1(2): 418. 1860.

Anaptychia firmula (Nyl.) C.W. Dodge & D.D. Awasthi in D.D. Awasthi, J. Indian Bot. Soc. 39: 423. 1960.

Distribution: Karnataka (Chikkamagaluru, Shivamogga), Arunachal Pradesh, Himachal Pradesh, Madhya Pradesh, Manipur, Meghalaya, Nagaland, Sikkim, Uttarakhand and West Bengal; China, Nepal.

Habitat: Terricolous or corticolous.

Chemistry: Atranorin, zeorin and an unknown substances.

Heterodermia flabellata (Fée) D.D. Awasthi, Geophytology 3: 113. 1973.

Parmelia flabellata Fée, Essai Crypt. Ecorc. Suppl.: 122. 1837.

Anaptychia flabellata (Fée) A. Massal., Mem. Lichenogr.: 41. 1853.

Distribution: Karnataka (Chamarajanagar, Shivamogga, Uttara Kannad), Arunachal Pradesh, Kerala, Maharashtra, Manipur, Nagaland, Tamil Nadu, Uttarakhand; Africa, Brazil, China, Japan, Nepal, Sri Lanka, Thailand.

Habitat: Saxicolous and corticolous.

Chemistry: Atranorin, zeorin and an unknown yellow pigment.

Heterodermia hypocaesia (Yasuda) D.D. Awasthi, Geph. 3: 113. 1973.

Anaptychia hypocaesia Yasuda in Räsänen, J. Jap. Bot. 16: 139. 1940.

Distribution: Karnataka (Kodagu, Shivamogga), Himachal Pradesh, Kerala, Madhya Pradesh, Manipur, Nagaland, Sikkim, Tamil Nadu, Uttara Kannada, West Bengal; Africa, Australia, China, Hawaii, Japan, Indonesia, Philippines.

Habitat: Corticolous.

Chemistry: Atranorin, zeorin and Salazinic acid.

Heterodermia hypochraea (Vain.) Swinscow & Krog, Lichenologist 8: 119. 1976.

Anaptychia hypochraea Vain., Bot. Mag. Tokyo 35: 59. 1921; Kurokawa, Beih. Nova Hedwigia 6: 94. 1962.

Distribution: Karnataka (Shivamogga), Nagaland; China, E Africa, Japan, S America, Taiwan.

Habitat: Corticolous.

Chemistry: Atranorin, zeorin and an unidentified yellow substance.

Heterodermia incana (Stirt.) D.D.Awasthi, *Geophytology* 3: 114. 1973.

Physcia incana Stirt., *Proc. Roy. Soc. Glasgow* 11: 322. 1879.

Anaptychia incana (Stirt.) Zahlbr., *Cat. Lich. Univ.* 7: 727. 1931.

Distribution: Karnataka (Belagavi, Chikkamagaluru, Shivamogga), Himachal Pradesh, Jammu & Kashmir, Kerala, Maharashtra, Manipur, Meghalaya, Nagaland, Sikkim, Tamil Nadu, Uttarakhand, West Bengal; Indonesia, Nepal, Sri Lanka, Taiwan, Thailand.

Habitat: Corticolous, rarely saxicolous.

Chemistry: Atranorin and zeorin.

Heterodermia japonica (M.Satô) Swinscow & Krog, *Lichenologist* 8(2): 122. 1976.

Anaptychia dendritica var. *japonica* M.Satô, *J. Jap. Bot.* 12: 427. 1936.

Anaptychia japonica (M.Satô) Kurok., *J. Jap. Bot.* 35: 353. 1960.

Distribution: Karnataka (Shivamogga), Madhya Pradesh, Manipur, Sikkim, Tamil Nadu, Uttarakhand, West Bengal; Cosmopolitan.

Habitat: Corticolous or terricolous.

Chemistry: Atranorin, zeorin, norstictic and salazinic acids.

Heterodermia leucomelos (L.) Poelt, *Nova Hedwigia* 9: 31. 1965.

Lichen leucomelos L., *Sp. Pl.*, ed. 2, 2: 1613. 1763.

Anaptychia leucomelos (L.) A.Massal., *Mem. Lich.*: 35. 1853.

Distribution: Karnataka (Kodagu, Shivamogga), Arunachal Pradesh, Himachal Pradesh, Kerala, Nagaland, Sikkim, Tamil Nadu, West Bengal; Cosmopolitan.

Habitat: Corticolous or terricolous.

Chemistry: Atranorin, zeorin, norstictic and salazinic acids and unknown pigment and triterpenoids.

Heterodermia microphylla (Kurok.) Skorepa, *Bryologist* 75: 490. 1972.

Anaptychia hypoleuca var. *microphylla* Kurok., *J. Jap. Bot.* 34: 123. 1959.

Anaptychia microphylla (Kurok.) Kurok., *Beih. Nova Hedwigia* 6: 44. 1962.

Distribution: Karnataka (Chikkamagaluru), Sikkim, Uttarakhand; Africa, Australia, Bhutan, China, Japan, New Zealand, N America, Papua New Guinea, Taiwan, Thailand, Zimbabwe.

Habitat: Saxicolous.

Chemistry: Atranorin, zeorin; norstictic and salazinic acids occasionally present.

Heterodermia obscurata (Nyl.) Trevis., *Nouvo Giorn Bot. Ital* 1: 114. 1869.

Physcia obscurata Nyl., *Ann. Sci. Nat., Bot.*, ser. 4, 19: 310. 1863.

Anaptychia obscurata (Nyl.) Vain., *Acta Soc. Faun. Fl. Fenn.* 7: 137. 1890.

Distribution: Karnataka (Chikkamagaluru, Kodagu, Shivamogga), Arunachal Pradesh, Himachal Pradesh, Jammu & Kashmir, Kerala, Maharashtra, Manipur, Nagaland, Sikkim, Tamil Nadu, Uttarakhand, West Bengal; Cosmopolitan.

Habitat: Corticolous and foliicolous.

Chemistry: Atranorin, zeorin and an unidentified pigment.

Heterodermia podocarpa (Bél.) D.D.Awasthi, *Geophytology* 3: 114. 1973.

Parmelia podocarpa Bél. in C. Bélanger & M. Bory de Saint-Vincent, *Voy. Indes Orient. Bot. II, Crypt.*: 122, Pl. 13, fig 2. 1840.

Distribution: Karnataka (Kodagu), Arunachal Pradesh, Kerala, Maharashtra, Manipur, Nagaland, Sikkim, Tamil Nadu, Uttarakhand and West Bengal; Australia, Bhutan, China, Cuba, East and South Africa, Hawaii, Jamaica, Nepal, New Zealand, Taiwan, Thailand; North, Central and South America. Cosmopolitan.

Habitat: Corticolous.

Chemistry: Atranorin, zeorin, salazinic acid and norstictic acid.

Heterodermia pseudospeciosa (Kurok.) W.L.Culb., Bryologist 69: 484. 1966.

Anoptychia pseudospeciosa Kurok., J. Jap.Bot. 34: 176. 1959.

Distribution: Karnataka (Chikkamagaluru, Kodagu, Shivamogga), Arunachal Pradesh, Himachal Pradesh, Kerala, Madhya Pradesh, Maharashtra, Manipur, Nagaland, Sikkim, Tamil Nadu, Uttarakhand, West Bengal; Africa, C & S America, China, Hawaii Islands, Japan, Nepal, Taiwan.

Habitat: Corticolous or terricolous or saxicolous.

Chemistry: Atranorin, zeorin; norstictic acid and salazinic acid.

Heterodermia tremulans (Müll.Arg.) W.L.Culb., Bryologist 69: 485. 1966.

Physcia hypoleuca var. *tremulans* Müll.Arg., Flora 63: 277. 1880.

Anoptychia speciosa var. *tremulans* (Müll.Arg.) Müll.Arg., Bot. Jahrb. Syst. 15: 505. 1893.

Distribution: Karnataka (Chikkamagaluru, Shivamogga), Madhya Pradesh, Nagaland, Rajasthan, Sikkim, Tamil Nadu, Uttarakhand, West Bengal; Americas, China, Hawaii, Japan.

Habitat: Corticolous.

Chemistry: Atranorin and zeorin.

Phaeophyscia Moberg

Phaeophyscia hispidula (Ach.) Moberg, Bot. Not. 131: 260. 1978 & Nordic J. Bot. 3 : 515. 1983.

Parmelia hispidula Ach., Lichenogr. Universalis: 468. 1810.

var. **hispidula**

Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Himachal Pradesh, Jammu & Kashmir, Madhya Pradesh, Maharashtra, Manipur, Nagaland, Rajasthan, Sikkim, Tamil Nadu, Uttarakhand; cosmopolitan.

Habitat : Corticolous, saxicolous, terricolous or muscicolous.

Chemistry: No lichen substances.

Phaeophyscia orbicularis (Neck.) Moberg, Symb. Bot. Upsal. 22(1): 44. 1977.

Lichen orbicularis Neck., Delic. Gallo-Belg.: 509. 1768.

Physcia orbicularis Poetsch in Poetsch & Schiedermayr, Syst. Aufz. Krypt. : 247. 1872.

Distribution: Karnataka (Chikkamagaluru, Shivamogga), Himachal Pradesh, Jammu & Kashmir, Madhya Pradesh, Maharashtra, Manipur, Nagaland, Sikkim, Tamil Nadu, Uttar Pradesh, Uttarakhand; Cosmopolitan.

Habitat: Corticolous or saxicolous.

Chemistry: No lichen substances, rarely skyrin present.

Phaeophyscia sciastra (Ach.) Moberg, Symb. Bot. Upsal. 22(1): 47. 1977.

Parmelia sciastra Ach., Methodus Suppl.: 49. 1803.

Physcia sciastra (Ach.) Du Rietz, Svensk Bot. Tidskr. 15: 168. 1921.

Distribution: Karnataka (), Kerala, Tamil Nadu, Uttarakhand; Cosmopolitan.

Habitat: Saxicolous or ramulicolous (over rocks, rarely lignicolous).

Chemistry: No lichen substances.

Physcia (Schreb.) Michx.

Lichen sect. *Physcia* Schreb.

Physcia aipolia (Ehrh. ex Humb.) Fürnr., Naturh. Topogr. Regensburg 2: 249. 1839.

Lichen aipolius Ehrh. ex Humb., Flor. Friburg. Spec.: 19. 1793.

Distribution: Karnataka (Kogagu, Shivamogga), Himachal Pradesh, Jammu & Kashmir, Tamil Nadu; Bhutan, Japan, Nepal; temperate regions.

Habitat: Corticolous, rarely on rocks.

Chemistry: Zeorin.

Physcia dimidiata (Arn.) Nyl., Flora 64: 537. 1881..

Parmelia pulverulenta var. *dimidiata* Arn., Flora 48: 594. 1864.

Distribution: Karnataka (Shivamogga), Himachal Pradesh, Madhya Pradesh, Sikkim; Europe, Southern hemisphere.

Habitat: Corticolous.

Physcia stellaris (L.) Nyl., Actes Soc. Linn. Bordeaux 21: 307. 1856

Lichen stellaris L., Sp. Pl.: 1144. 1753.

Distribution: Karnataka (Bengaluru UD), Himachal Pradesh, Jammu & Kashmir, Uttarakhand; Africa, Americas, Europe, Japan, Nepal, New Zealand, Sri Lanka.

Habitat: Corticolous.

Physcia tribacia (Ach.) Nyl., Flora 57: 307. 1874.

Lecanora tribacia Ach., Lichenogr. Universalis : 415. 1810.

Distribution: Karnataka (Bengaluru UD, Shivamogga), Himachal Pradesh, Madhya Pradesh, Maharashtra, Sikkim, Tamil Nadu, Uttarakhand; Africa, Australia, Europe, Japan, Nepal, N America.

Habitat: Saxicolous, corticolous.

Chemistry: Atranorin, zeorin, leucotylin and unknowns.

Physcia tribacoides Nyl., Flora 57: 307. 1874.

Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Himachal Pradesh, Madhya Pradesh, Maharashtra, Manipur, Nagaland, Sikkim, Tamil Nadu; Australia, Bhutan, Europe, Japan, Nepal, New Zealand.

Habitat : Corticolous, terricolous or saxicolous.

Chemistry: Atranorin, zeorin and an unidentified substance.

Pilocarpaceae

Byssoloma Trevis.

Byssoloma subdiscordans (Nyl.) P. James, Lichenologist 5(1-2): 126. 1971.

Choidecton subdiscordans Nyl., Flora 62: 221. 1879.

Patellaria rotuliformis Müll. Arg., Flora 64: 228. 1881.

Byssoloma rotuliforme (Müll. Arg.) R. Sant. in Thorold, J. Ecol. 40: 129. 1952.

Distribution: Karnataka (Kodagu), Arunachal Pradesh, Manipur, Nagaland, Sikkim, Tamil Nadu; cosmopolitan.

Habitat : Foliicolous.

Chemistry: no lichen substances.

Calopadia Vězda

Calopadia fusca (Müll. Arg.) Vězda, Folia Geobot. Phytotax. 21: 215. 1986.

Lopadium fuscum Müll. Arg., Flora 64: 108. 1881.

Distribution: Karnataka (Uttara Kannada), Andaman & Nicobar Islands, Arunachal Pradesh, Kerala, Nagaland, Tamil Nadu; Pantropical.

Habitat: Foliicolous.

Chemistry: No lichen substances.

Calopadia phyllogena (Müll. Arg.) Vězda, Folia Geobot. Phytotax. 21: 215. 1986.

Heterothecium phyllogenum Müll. Arg., Flora 64: 106. 1881.

Lopadium phyllogenum (Müll. Arg.) Zahlbr., Denkschr. Math.-Nat. Kl. Akad. Wiss. Wien 81: 251. 1907.

Distribution: Karnataka (Kodagu), Andaman & Nicobar Islands; pantropical.

Habitat: Foliicolous.

Chemistry: No lichen substances.

Sporopodium Mont.

Sporopodium xantholeucum (Müll.Arg.) Zahlbr., Cat. Lich. Univ. 2: 681. 1924.

Gyalectidium xantholeucum Müll.Arg., Flora 64: 101. 1881.

Distribution: Karnataka (Kodagu), Andaman & Nicobar Islands, Arunachal Pradesh, Meghalaya, Nagaland, Tamil Nadu; pantropical.

Habitat : Foliicolous.

Chemistry: Pannarin, zeorin, 2,7-dichlorolichexanthone, 5,7-dichlorolichexanthone, 5,7-dichloro-3-O-methylnorlichexanthone, 2,5,7-trichlorolichexanthone, arthothelin, isoarthothelin, asemone, 2,5,7-trichloro-3-O-methylnorlichexanthone, thiophanic acid

Porinaceae

Porina Ach., nom. cons.

Porina africana Müll. Arg., Linnaea 63: 41. 1880.

Verrucaria africana (Müll. Arg.) Stizenb., Ber. Tätigk. St. Gallisch. Naturw. Ges. 1889–90: 452. 1891.

Porina platystoma Müll.Arg., Bull. Herb. Boissier 3: 326. 1895.

Distribution: Karnataka (Uttara Kannada), Maharashtra, Meghalaya; Angola, Australia, Brazil, Christmas Island, Costa Rica, Ecuador, Guatemala, Mexico, Nicaragua, Taiwan, Tanzania.

Habitat: Corticolous.

Porina andamanica Makhija, Adaw. & Patw., J. Econ. Taxon. Bot. 18(3): 528. 1994.

Distribution: Karnataka (Dakshina Kannada) Andaman & Nicobar Islands, Arunachal Pradesh, Tamil Nadu; endemic.

Habitat: Corticolous. 430

Porina angusta Makhija, Adaw. & Patw., J. Econ. Taxon. Bot. 18(3): 530. 1994.

Distribution: Karnataka (Uttara Kannada), Andaman & Nicobar Islands, Kerala, Maharashtra, Meghalaya; endemic.

Habitat: Corticolous.

Porina atroperiostiola Makhija, Adaw. & Patw., J. Econ. Taxon. Bot. 18(3): 530. 1994.

Distribution: Karnataka (Uttara Kannada), Arunachal Pradesh, Maharashtra, Tamil Nadu; endemic.

Habitat: Corticolous.

Porina decamera Vain., Ann. Acad. Sci. Fenn., ser. A, 15(6): 359. 1921.

Distribution: Karnataka (Bengaluru RD), Kerala; Philippines.

Habitat: Corticolous.

Porina dolichophora (Nyl.) Müll. Arg., Bot. Jahrb. Syst. 6: 400. 1885.

Verrucaria dolichophora Nyl., Ann. Sci. Nat., Bot., ser.4, 20: 245. 1863.

Distribution: Karnataka (Belagavi), Maharashtra, Sikkim; Colombia, Costa Rica, Ecuador, Nicaragua.

Habitat: Corticolous.

Porina elliptica Makhija, Adaw. & Patw., J. Econ. Taxon. Bot. 18(3): 533. 1994.

Distribution: Karnataka (Belagavi); endemic.

Habitat: Corticolous.

Porina epiphylla (Fée) Fée, Essai Crypt. Ecorc.: 76. 1837.

Porina americana Fée var. *epiphylla* Fée, Dict. Class. Hist. Nat.: 26. 1831.

Phylloporina epiphylla (Fée) Müll.Arg., Lich. Epiph. Novi: 21. 1890.

Distribution: Karnataka (Uttara Kannada), Andaman & Nicobar Islands, Arunachal Pradesh, Goa, Meghalaya, Nagaland, Tamil Nadu; Pantropical.

Habitat: Foliicolous.

Porina glaucoflava Makhija, Adaw. & Patw., J. Econ. Taxon. Bot. 18(3): 534. 1994.

Habitat: Corticolous.

Distribution: Karnataka (Uttara Kannada), Andaman & Nicobar Islands, Tamil Nadu; endemic..

Porina internigrans (Nyl.) Müll.Arg., Rep. Australas. Assoc. Advancem. Sci. 1895: 452. 1895.

Verrucaria mastoidea var. *internigrans* Nyl., Bull. Soc. Linn. Normandie, ser. 2, 2: 123. 1868.

Distribution: Karnataka (Shivamogga, Uttara Kannada), Andaman & Nicobar Islands, Arunachal Pradesh, Assam, Goa, Kerala, Meghalaya, Nagaland, Tamil Nadu, West Bengal; Australia, New Caledonia, Papua New Guinea, Solomon Islands, Thailand, Vanuatu, Vietnam.

Habitat: Corticolous.

Porina karnatakensis Makhija, Adaw. & Patw., J. Econ. Taxon. Bot. 18(3): 538. 1994.(Plate, 2G)

Porina santesonii Makhija, Adaw. & Patw., J. Econ. Taxon. Bot. 18(3): 542. 1994.

Distribution: Karnataka, (Uttara Kannada), Arunachal Pradesh, Kerala, Tamil Nadu; Pantropical.

Habitat: Foliicolous.

Chemistry: No lichen substances.

Porina lucida R.Sant., Symb. Bot. Upsal. 12(1): 240. 1952.

Porina multiloculata Makhija, Adaw. & Patw., J. Econ. Taxon. Bot. 18(3): 540. 1994.

Distribution: Karnataka (Uttara Kannada, Shivamogga), Andaman & Nicobar Islands, Arunachal Pradesh, Kerala, Tamil Nadu; Pantropical.

Habitat: Foliicolous.

Chemistry: No lichen substances.

Porina microcarpa Makhija, Adaw. & Patwardhan, J. Econ. Taxon. Bot. 18(3): 540. 1994.

Distribution: Karnataka (Chamarajanagara), endemic.

Habitat: Corticolous.

Porina monocarpa (Kremp.) F.Schill., Hedwigia 67: 274. 1927.

Verrucaria monocarpa Kremp., Nuovo Giorn. Bot. Ital. 7: 63. 1875.

Phylloporina monocarpa (Kremp.) Müll.Arg., Lich. Epiph. Novi: 21. 1890.

Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Kerala, Meghalaya, Nagaland, Tamil Nadu; Indonesia, Philippines, Singapore.

Habitat: Foliicolous.

Porina ochrostoma Makhija, Adaw. & Patw., J. Econ. Taxon. Bot. 18(3): 541. 1994.

Distribution: Karnataka, (Udupi), endemic.

Habitat: Corticolous.

Porina platystoma Müll.Arg., Bull. Herb. Boissier 3: 326. 1895.

Distribution: Karnataka (Uttara Kannada), Maharashtra, Meghalaya; Angola, Australia, Brazil, Christmas Island, Costa Rica, Ecuador, Guatemala, Mexico, Nicaragua, Taiwan, Tanzania.

Habitat: Corticolous.

Porina subcutanea Ach., Syn. Meth. Lich.: 113. 1814.

Sphaeromphale anceps Trevis., Conspect. Verruc.: 7. 1860.

Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Arunachal Pradesh, Goa, Kerala, Manipur, Sikkim, Tamil Nadu, West Bengal; tropical regions.

Habitat: Corticolous.

Porina subgigantospora Makhija, Adaw. & Patw., J. Econ. Taxon. Bot. 18(3): 542. 1994.

Distribution: Karnataka (Kodagu, Uttara Kannada), Andaman & Nicobar Islands, Meghalaya, Tamil Nadu; endemic.

Habitat: Corticolous.

Porina subhibernica Upreti, Bryologist 97(1): 76. 1994.

Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Goa, Kerala, Madhya Pradesh, Sikkim, Tamil Nadu; endemic.

Habitat: Corticolous.

Porina subinterestes (Nyl.) Müll.Arg., Nuovo Giorn. Bot. Ital. 21: 364. 1889.

Verrucaria subinterestes Nyl., Bull. Soc. Linn. Normandie, ser. 2, 7: 178. 1873.

Porina curtula Malme, Ark. Bot. 23(A): 20. 1929.

Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Arunachal Pradesh, Madhya Pradesh, Maharashtra, Nagaland; Brazil, Colombia, Costa Rica, French Guiana, Guyana, Mexico, Paraguay.

Habitat: Corticolous and Saxicolous.

Chemistry: No lichen substances.

Porina subsanctirosae Makhija, Adaw. & Patw., J. Econ. Taxon. Bot. 18(3): 543. 1994.

Distribution: Karnataka (Shivamogga), Maharashtra; endemic.

Habitat: Corticolous.

Porina tetracerae (Afz.) Müll. Arg. in Engler, Bot. Jahrb. Syst. 6: 401. 1885.

Verrucaria tetracerae Afz. in Acharius, Methodus: 121. 1803.

Verrucaria interestes Nyl., Bull. Soc. Linn. Normandie, ser. 2: 123. 1868.

Porina interestes (Nyl.) Harm., Bull. Séances. Soc. Sci. Nancy, ser. 3, 12: 126, t. 1, f. 3, 1911.

Distribution: Karnataka (Shivamogga, Uttara Kannada), Andaman & Nicobar Islands, Arunachal Pradesh, Goa, Madhya Pradesh, Nagaland, Odisha, Sikkim, Tamil Nadu, West Bengal; Pantropical.

Habitat: Corticolous; foliicolous as well.

Chemistry: No lichen substances.

Pyrenulaceae

Anthracothecium Hampe ex A.Massal.

Anthracothecium macrosporum (Hepp) Müll.Arg., Linnaea 63: 44. 1880.

Verrucaria macrospora Hepp in Zollinger, Syst. Verz.: 9. 1854.

Distribution: Karnataka (Chikkamagaluru, Kodagu, Shivamogga, Uttara Kannada), Andaman & Nicobar Islands, Arunachal Pradesh, Kerala, Manipur, Tamil Nadu; Africa, Indonesia, Philippines, Sri Lanka, N.America.

Habitat: Corticolous.

Lithothelium Müll.Arg.

Lithothelium filisporum (Patw., Makhija & D.Rane) Kr.P.Singh & G.P.Sinha, Indian Lich. Anno T. Checklist: 273. 2010.

Pleurotrema filisporum Patw., Makhija & D.Rane, Curr. Sci. 49 (23): 917. 1980.

Trichotrema filisporum (Patw., Makhija & D.Rane) Makhija & Patw., Biovigyanam 16(1): 25. 1990.

Distribution: Karnataka (Udupi), Maharashtra; endemic.

Habitat: Corticolous.

Lithothelium obtectum (Müll.Arg.) Aptroot, Biblioth. Lichenol. 44: 62. 1991.

Sagedia obtecta Müll.Arg., Linnaea 43: 42. 1880.

Lithothelium indicum Patw., Makhija & Rane, Curr. Sci. 49 (23) : 918. 1980, non Ajay Singh, 1986.

Distribution: Karnataka (Shivamogga, Udupi, Uttara Kannada), Andaman & Nicobar Islands, Arunachal Pradesh, Maharashtra; Pantropical.

Habitat: Corticolous.

Chemistry: Lichexanthone absent.

Pyrenula Ach., nom. cons.

Pyrenula astroidea (Fée) R.C.Harris, Mem. New York Bot. Gard. 49: 87. 1989.

Parmentaria astroidea Fée, Essai Crypt. Ecorc. : 70. Pl. 1, f. 14, Pl. 20 f, i. 1824.

Parmentaria mamillata Ajay Singh, Feddes Repert. 96: 266. 1986.

Parmentaria immersa (Patw. & Makhija) Ajay Singh, Nova Hedwigia. 44(3-4): 373. 1987.

Parmentaria maculata Makhija & Patw., Biovigyanam 15(2): 74. 1989.

Parmentaria verrucosareolata Makhija & Patw., Biovigyanam 15(2); 78. 1989.

Pyrenula karnatakensis Upreti, Nova Hedwigia 66(3-4): 569. 1998.

Pyrenula mamillata (Ajay Singh) Upreti, Nova Hedwigia 66(3-4): 571. 1998.

Distribution: Karnataka (Chamarajanagara, Chikkaballapura, Kodagu, Shivamogga), Andaman & Nicobar Islands, Arunachal Pradesh, Kerala, Manipur Sikkim, Tamil Nadu; Africa, Philippines, Sri Lanka.

Habitat: Corticolous.

Pyrenula cayennensis Mull., Arg., Flora 67: 662. 1884.

Distribution: Karnataka (Shivamogga), Andaman & Nicobar Island, Arunachal Pradesh, Kerala, Sikkim, Tamil Nadu, West Bengal; French Guiana.

Habitat: Corticolous.

Pyrenula confinis (Nyl.) R.C.Harris, More Florida Lichens: 109. 1995.

Verrucaria confinis Nyl., Ann. Sci. Nat., Bot., ser. 4, 3: 174. 1855.

Distribution: Karnataka (), Andaman & Nicobar Islands, Kerala, Tamil Nadu, West Bengal; tropical regions.

Habitat: Corticolous.

Pyrenula globifera (Eschw.) Aptroot, Biblioth. Lichenol. 97: 103. 2008.

Verrucaria globifera Eschw. in Martius, Fl. Bras. Enum. Pl. 1(1): 131. 1833.

Anthracotheceium globiferum (Eschw.) Müll.Arg., Flora 67: 666. 1884.

Distribution: Karnataka*, Andhra Pradesh, Arunachal Pradesh, Assam, Kerala, Manipur, Sikkim, Tamil Nadu, West Bengal; Africa, Costa Rica, South America, Sri Lanka, Thailand.

Habitat: Corticolous.

Pyrenula immersa Müll.Arg., Flora 70: 429. 1887.

Pyrenula subumbilicata (C.Knight) Aptroot, Australas. Lichenol. 60: 39. 2007.

Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Goa, Himachal Pradesh, Kerala, Manipur, Sikkim, Uttarakhand, West Bengal; Australia.

Habitat: Corticolous.

Pyrenula immissa (Stirt.) Zahlbr., Cat. Lich. Univ. 1: 433. 1922.

Verrucaria immissa Stirt., Proc. Roy.Soc. Glasgow 13: 191.1881.

Distribution: Karnataka (Shivamogga), Assam, Arunachal Pradesh, Goa, Himachal Pradesh, Kerala, Sikkim, Uttar Pradesh, West Bengal; Australia, Japan, Nova Granata; S America.

Habitat: Corticolous.

Pyrenula interducta (Nyl.) Zahlbr., Cat. Lich. Univ. 1: 433. 1922.

Verrucaria interducta Nyl., Flora 49: 134. 1866.

Distribution: Karnataka (Western Ghats), Arunachal Pradesh, Kerala, Sikkim; Sri Lanka.

Habitat: Corticolous.

Pyrenula maravalensis Vain., Proc. Amer. Acad. Arts & Sci. 58: 132 (1923)

Pyrenula subacutalis Upreti, Feddes Repert 102: 429. 1991.

Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Goa, Odisha; endemic.

Habitat: Corticolous.

Pyrenula mamillana (Ach.) Trevis., Consp. Verruc. : 13. 1860.

Verrucaria mamillana Ach., Methodus: 120. 1803.

Pyrenula subglabriuscula Vain., Ann. Acad. Sci. Fenn., ser. A, 15: 244. 1920.

Pyrenula elegans Ajay Singh & Upreti, Geophytology 17: 80. 1987.

Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Arunachal Pradesh, Himachal Pradesh; Australia, Costa Rica, New Guinea, Philippines, Sri Lanka, Thailand.

Habitat: Corticolous.

Pyrenula mastophoriza (Nyl.) Zahlbr., Cat. Lich. Univ. 1: 439. 1922.

Verrucaria mastophoriza Nyl., Bull. Soc. Linn. Normandie, ser. 1, 7: 180. 1873

Pyrenula glabrescens Vain., Ann. Acad. Sci. Fenn., Ser.A, 6: 191. 1915.

Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Kerala; Insula Antillanae.

Habitat: Corticolous.

Pyrenula ochraceoflava (Nyl.) R.C.Harris, Mem. New York Bot. Gard. 49: 96. 1989.

Verrucaria ochraceoflava Nyl., Expos. Syn. Pyrenocarp : 50. 1858.

Anthracotheций ochraceoflavum (Nyl.) Müll.Arg., Linnaea 63: 44. 1880.

Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Kerala, Lakhadweep, Islands, Tamil Nadu, West Bengal; America, Australia.

Habitat: Corticolous.

Pyrenula ochraceoflavens (Nyl.) R.C.Harris, Mem. New York Bot. Gard. 49: 97. 1989.

Verrucaria ochraceoflavens Nyl., Acta Soc. Sci. Fenn. 7: 491. 1863.

Anthracotheций ochraceoflavens (Nyl.) Zahlbr., Cat. Lich. Univ. 1: 464. 1922.

Distribution: Karnataka (Shivamogga), Andaman Islands, Andhra Pradesh, Kerala, Sikkim, Tamil Nadu, West Bengal; Equador, West Indies.

Habitat: Corticolous.

Pyrenula pyrenuloides (Mont.) R.C.Harris, Mem. New York Bot. Gard. 49: 99. 1989.

Trypethelium pyrenuloides Mont., Ann. Sci. Nat., Bot., ser. 2, 19: 69. 1843.

Anthracotheций pyrenuloides (Mont.) Müll.Arg., Linnaea 63: 44. 1880.

Distribution: Karnataka (Western Ghats), Andaman & Nicobar Islands, Arunachal Pradesh, Meghalaya, Kerala, Tamil Nadu; tropical regions.

Habitat: Corticolous.

Pyrenula quassiaecola Fée, Essai Crypt. Ecorc., Suppl.: 79. 1837.

Pyrenula pinguis Fée, Essai Crypt. Ecorc.: 75. 1824.

Pyrenula mastophorizans Müll.Arg., Flora 68: 515. 1885.

Distribution: Karnataka (Bengaluru UD), Andhra Pradesh, Arunachal Pradesh, Assam, Goa, Manipur, Sikkim, Uttar Pradesh; tropical regions.

Habitat: Corticolous.

Pyrenula sublaevigata (Patw. & Makhija) Upreti, Nova Hedwigia 66(3-4): 574. 1998.

Anthracothecium sublaevigatum Patw. & Makhija, Kavaka 8: 25. 1980.

Distribution: Karnataka (Shivamogga, Kodagu), Arunachal Pradesh; endemic.

Habitat: Corticolous.

Pyrgillus Nyl.

Pyrgillus idukkiensis Kr. P. Singh and Pushpi Singh Taiwania, 57(4): 392. 2012.

Distribution: Karnataka (Shivamogga), Kerala; Australia, Indonesia, French Guinea, Tasmania.

Habitat: Corticolous.

Ramalinaceae

Bacidia De Not.

Bacidia nigrofusca (Müll.Arg.) Zahlbr., Cat. Lich. Univ. 4: 230. 1926.

Patellaria nigrofusca Müll.Arg., Flora 65: 330. 1882.

Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Sikkim, Uttarakhand; Indonesia.

Habitat : Corticolous.

Bacidia subannexa (Nyl.) Zahlbr., Cat. Lich. Univ. 4: 242. 1926.

Lecidea subannexa Nyl., Acta Soc. Sci. Fenn. 26(10): 15. 1900.

Distribution: Karnataka (Uttara Kannada) and West Bengal; Sri Lanka.

Habitat : Corticolous.

Bacidia incongruens (Stirt.) Zahlbr., Cat. Lich. Univ. 4: 208. 1926.

Lecidea incongruens Stirt., Proc. Roy. Soc. Glasgow 2: 314. 1879.

Distribution: Karnataka (Shivamogga), Tamil Nadu, West Bengal; endemic.

Habitat: Corticolous.

Bacidia medialis (Tuck. ex Nyl.) Zahlbr., Denschr. Kaiserl. Akad. Wiss., Wien, Math. -Naturwiss. Kl. 83: 127. 1909

Lecidea medialis Tuck. ex Nyl., Ann. Sci. Nat., Bot., ser. 4, 19: 346. 1863.

Distribution: Karnataka (Kodagu), Himachal Pradesh, Kerala, Lakshadweep, Orissa, Tamil Nadu and West Bengal –plains; Brazil and Thailand.

Habitat: Corticolous

Bacidia sabuletorum (Schreb.) Lettau, Hedwigia 52: 132. 1912.

Lichen sabuletorum Schreb., Spic. Fl. Lips.: 134. 1771.

Distribution: Karnataka (Shivamogga); Australia, Europe, N America, New Zealand.

Habitat: Corticolous.

Bacidia submedialis (Nyl.) Zahlbr., Cat. Lich. Univ. 4: 243. 1926.

Lecidea submedialis Nyl., Acta Soc. Sci. Fenn. 26(10): 14. 1900.

Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Goa, Maharashtra, Tamil Nadu, Uttar Pradesh, West Bengal; Sri Lanka.

Habitat: Corticolous.

Bacidina Vězda, nom. cons.

Bacidina apiahica (Müll.Arg.) Vězda, Folia Geobot. Phytotax. 25(4): 432. 1990.

Patellaria apiahica Müll.Arg., Lich. Epiph. Novi : 9. 1890.

Bacidia apiahica (Müll.Arg.) Zahlbr., Cat. Lich. Univ. 4: 174. 1926; D. Awasthi & K. Singh, Proc. Indian Acad. Sci., B, 76(3): 127. 1972.

Distribution: Karnataka (Kodagu), Arunachal Pradesh, Tamil Nadu; Argentina, Brazil, Costa Rica, Ecuador, Guatemala, Guyana, Mexico, New Zealand, Panama, Paraguay, Peru, Venezuela.

Habitat : Foliicolous.

Chemistry: No lichen substances.

Phyllopsora Müll.Arg.

Phyllopsora buettneri (Müll.Arg.) Zahlbr., Cat. Lich. Univ. 4:396. 1926.

Psora buettneri Müll.Arg., Bot. Jaarb. 15: 506. 1893.

Distribution: Karnataka (Shivamogga), Tamil Nadu, Uttarakhand; Pantropical.

Habitat: Corticolous.

Chemistry: Pannarin and zeorin.

Phyllopsora chlorophaea (Müll. Arg.) Zahlbr. Denkschr. Akad. Wiss. Wein 83: 133. 1909; G.K. Misra & al. Mycotaxon 115: 33. 2011.

Psora chlorophaea Müll. Arg., Flora, Regensburg 70: 320. 1887.

Distribution: Karnataka (Shivamogga), Odisha; Kenya, Peru; Mauritius, Tanzania.

Habitat: Corticolous.

Chemistry: Atranorin.

Phyllopsora confusa Swinscow & Krog, Lichenologist 13: 229. 1981.

Distribution: Karnataka (Shivamogga), Assam, Himachal Pradesh, Kerala, Uttarakhand; Kenya, Mauritius, Reunion, Tanzania.

Habitat: Corticolous.

Chemistry: No lichen substances.

Phyllopsora corallina (Eschw.) Müll.Arg., Bot. Jahrb. Syst. 20: 264. 1894.

Lecidea corallina Eschw. in Martius, Fl. Bras. Enum. Pl. 1(1): 256. 1833.

Distribution: Karnataka (Shivamogga) Arunachal Pradesh, Goa, Himachal Pradesh, Madhya Pradesh, Maharashtra, Sikkim, Tamil Nadu, Uttarakhand; Pantropical.

Habitat: Corticolous.

Chemistry: Atranorin (in traces or absent).

Phyllopsora furfuracea (Pers.) Zahlbr. in Engler & Prantl, Nat. Pflanzenfam. 1(1): 138. 1905.

Lecidea furfuracea Pers., in Gaudichaud, Voy. Uran.: 192. 1827.

Phyllopsora haemophaea (Nyl.) Müll. Arg., Hedwigia 34: 141. 1895.

Lecidea haemophaea Nyl., Flora 52: 122. 1869.

Distribution: Karnataka (Shivamogga), Kerala Uttarakhand; Brazil, Japan, Kenya, Tanzania.

Habitat: Corticolous.

Chemistry: Furfuracein.

Phyllopsora isidiotyla (Vain.) Riddle, Mycologia 15: 81. 1923.

Lecidea isidiota Vain., Etud. Lich. Bresil 2: 49. 1890.

Distribution: Karnataka (Shivamogga) Assam, Himachal Pradesh, Kerala, Sikkim, Tamil Nadu, Uttarakhand; Brazil, Costa Rica, USA, Venezuela.

Habitat: Corticolous.

Chemistry: Atranorin.

Phyllopsora manipurensis (Müll.Arg.) Gotth.Schneid., Biblioth. Lichenol. 13: 177. 1980.

Psora manipurensis Müll.Arg., J. Linn. Soc., Bot. 29: 219. 1892.

Distribution: Karnataka (Shivamogga), Maharashtra, Madhya Pradesh, Manipur, Meghalaya, Sikkim, Uttarakhand; endemic.

Habitat: Corticolous.

Chemistry: Atranorin and unknown triterpenes.

Phyllopsora parvifolia (Pers.) Müll.Arg., Bull. Herb. Boissier 2: 90. 1894.

Lecidea parvifolia Pers. in Gaudich., Voy. Uraie : 192. 1827.

var. **parvifolia**

Distribution: Karnataka (Shivamogga), Goa, Himachal Pradesh, Kerala, Manipur, Tamil Nadu, Uttarakhand; Brazil, Indonesia, New Caledonia, S Africa.

Habitat: Corticolous.

Phyllopsora subcrustacea (Malme) Brako, Mycotaxon 35(1): 15. 1989.

Lecidea corallina var. *subcrustacea* Malme, Ark. Bot. 28A(7): 47. 1936.

Distribution: Karnataka (Shivamogga), Kerala; Paraguay.

Habitat: Corticolous.

Chemistry: No lichen substances.

Phyllopsora swinscowii Timdal & Krog, Mycotaxon 77: 88. 2001.

Distribution: Karnataka (Shivamogga), Kerala; E Africa, Kenya, Mauritius, Tanzania.

Habitat: Corticolous.

Ramalina Ach., nom. cons.

Ramalina conduplicans Vain., Ann. Soc. Zool. Bot. Fenn 1 (3): 35. 1921.

Distribution: Karnataka (Chikkamagaluru, Shivamogga) Andaman & Nicobar Islands, Andhra Pradesh, Arunachal Pradesh, Himachal Pradesh, Jammu & Kashmir, Kerala, Meghalaya, Sikkim, Tamil Nadu, Uttarakhand, West Bengal; Nepal, E Asia.

Habitat: Corticolous.

Chemistry: Strain (1) Usnic acid and salazinic acid; strain (2) Usnic, sekikaic acid aggregate and salazinic acid; strain (3) Usnic acid and sekikaic acid aggregate.

Ramalina farinacea (L.) Ach., Lichenogr. Universalis: 606. 1810.

Lichen farinaceous L., Sp. Pl.: 1146. 1753.

Distribution: Karnataka (Kodagu), Manipur, Tamil Nadu and Uttarakhand; Bhutan and Sri Lanka.

Habitat: Corticolous.

Chemistry: Protocetraric acid.

Ramalina hossei Vain., Ann. Soc. Zool. Bot. Fenn. 1(3): 36. 1921.

var. **divaricata** H.Magn. & G.Awasthi in Pant & D. Awasthi, Indian J. Forest. 26(3): 307. 2003.

Distribution: Karnataka (Chikkamagaluru, Shivamogga), Tamil Nadu; endemic.

Habitat: Corticolous.

Ramalina inflata (Hook.f. & Taylor) Hook.f. & Taylor in Hooker, Fl. Antarct.1: 194, tab. 79, fig. 1. 1844.

Cetraria inflata Hook.f. & Taylor, London J. Bot. 3: 646. 1844.

Distribution: Karnataka (Kodagu), Kerala and Tamil Nadu; Australia, Bhutan, Brazil, Japan, New Guinea, New Zealand, South Africa, Venezuela. Palaeotropical.

Habitat: Corticolous.

Chemistry: Divaricatic and sekikaic acids; Usnic, divaricatic and \pm sekikaic acids .

Ramalina nervulosa (Müll.Arg.) Abbayes, Bull. Inst. Franç. Afriue Noire 14: 25. 1952.

Ramalina farinacea var. *nervulosa* Müll.Arg., Flora 66: 21. 1883.

Distribution: Karnataka (Western Ghats), Kerala, Tamil Nadu; Australia, China, Indonesia, Japan, Fiji, Pacific Islands, Philippines, Sri Lanka.

Habitat: Corticolous.

Chemistry: Strain I: Usnic, divaritic and stenosporic acids; Strain II: Usnic acid, sekikaic acid with or without ramalinolic and salazinic acids.

Ramalina pollinaria (Westr.) Ach., Lichenogr. Universalis: 608. 1810.

Lichen pollinarius Westr., Kongl. Vetensk. Acad. Nya Handl. 16: 56. 1795.

Distribution: Karnataka (Chikkamagaluru, Shivamogga), Andhra Pradesh, Himachal Pradesh, Jammu & Kashmir, Uttarakhand; Cosmopolitan.

Habitat: Corticolous.

Chemistry: Cortex with usnic acid; medulla with evernic (major) and obtusatic (major) acids.

Ramalina pacifica Asahina, J. Jap. Bot. 15: 213. 1939.

Distribution: Karnataka (Shivamogga), Kerala, Nagaland, Tamil Nadu; Palaeotropical.

Habitat: Corticolous.

Chemistry: Salazinic and usnic acids.

Ramalina taitensis Nyl, Bull. Soc. Linn. Normandie, ser. 2, 4: 119. 1870.

Distribution: Karnataka (Shivamogga), Sikkim, West Bengal; Tahiti Island.

Habitat: Terricolous, saxicolous and lignicolous

Chemistry: Sekikaic acid aggregate.

Rolfidum Moberg

Rolfidum peltatum Moberg, Lichenologist 18(4): 305. 1986.

Distribution: Karnataka (Bengaluru); Sri Lanka

Habitat: Saxicolous.

Ramboldiaceae

Ramboldia Kantvilas & Elix

Ramboldia russula (Ach.) Kalb, Lumbsch & Elix in Kalb *et al.*, Nova Hedwigia 86: 37. 2008.

Lecidea russula Ach., Methodus: 61. 1803.

Protoblastenia russula (Ach.) Räsänen, Revista Sudamer. Bot. 5: 67. 1938.

Distribution: Karnataka (Bengaluru UD, Dakshina Kannada), Madhya Pradesh, Meghalaya, Nagaland, Tamil Nadu, West Bengal; tropical, subtropical to temperate regions.

Habitat: Corticolous.

Chemistry: Strain (1) fumarprotocetraric acid and atranorin; strain (2) norstictic, fumarprotocetraric, protocetraric acids and atranorin.

Roccellaceae

Chiodecton Ach.

Chiodecton congestulum Nyl., Bull. Soc. Linn. Normandie, ser. 2, 2: 106. 1868.

Distribution: Karnataka (Udupi); Australia, Indonesia, Japan, Malaysia, New Caledonia, New Guinea, Sri Lanka.

Habitat: Corticolous, occasionally saxicolous.

Chemistry: Roccellic acid

Chiodecton leptosporum Müll.Arg., Flora 65: 332. 1882.

Chiodecton flavicans Müll.Arg., J. Linn. Soc., Bot. 29: 229. 1892.

Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Manipur, Tamil Nadu, West Bengal; Australia, Indonesia, Malaysia, Papua New Guinea, Philippines, Sri Lanka, Thailand.

Habitat: Corticolous.

Enterographa Fée

Enterographa pallidella (Nyl.) Redg., Repert. Spec. Nov. Regni Veg. Beih. 43: 61. 1939.

Platygrapha pallidella Nyl., Flora 50: 6. 1867.

Distribution: Karnataka (Shivamogga), West Bengal; pantropical.

Habitat: Corticolous.

Dichosporidium Pat.

Dichosporidium boschianum (Mont.) G.Thor, Opera Bot. 103: 64. 1990.

Chiodecton boschianum Mont., Syll. Gen. Sp. Crypt. : 356. 1856.

Distribution: Karnataka (Uttara Kannada), Kerala; America, Australia, Samoa, SE Asia, Sri Lanka,

Habitat: Corticolous, occasionally saxicolous.

Chemistry: Protocetraric acid or salazinic acid.

Roccella DC., nom. cons.

Roccella montagnei Bél. in Bélanger & Bory, Voy. Ind. Or. 2: 117. 1838.

Roccella belangeriana D.D.Awasthi, Bryologist 84 (2): 219. 1981.

Distribution: Karnataka (Bengaluru UD, Chikkamagaluru, Kodagu, Shivamogga), Gujarat, Kerala, Odisha, Pondicherry, Tamil Nadu; Africa, N Australia.

Habitat: Corticolous, rarely saxicolous.

Chemistry: Erythrin.

Syncesia Taylor

Syncesia indica S. Joshi & Upreti in S. Joshi, Upreti & Divakar, Bryologist 114(1): 216. 2011.

Distribution: Karnataka (Hassan), endemic. Habitat: Corticolous.

Chemistry: Protocetraric acid and traces of roccellic acid and Unknown substances.

Sphaerophoraceae

Bunodophoron A.Massal.

Bunodophoron diplotypum (Vain.) Wedin, Pl. Syst. Evol. 187: 232. 1993.

Sphaerophorus diplotypus Vain., Hedwigia 37: 36. 1898.

Distribution: Karnataka (Western Ghats), Kerala; Australia, E. Africa, Japan, Indonesia, Madagascar, Sri Lanka, Taiwan.

Habitat: Corticolous.

Chemistry: Stictic, constictic acids and sphaerophorin.

Sphinctrinaceae

Sphinctrina Fr.

Sphinctrina anglica Nyl., Mem. Soc. Imp. Sci. Nat. Cherbourg 5: 334. 1857 (nom. nud.) .

Distribution: Karnataka (Kodagu), Tamil Nadu and Uttar Pradesh; Europe, North America.

Habitat: Parasymbiotic on *Pertusaria* thallus.

Stereocaulaceae

Lepraria Ach., nom. cons.

Lepraria coriensis (Hue) Sipman, Herzogia 17: 28. 2004.

Crocynia coriensis Hue, Bull. Soc. Bot. France 71: 386. 1924.

Distribution: Karnataka (Tumakuru); Australia, Korea, Hong Kong, Taiwan.

Habitat: Terricolous and saxicolous.

Chemistry: Three chemotypes with usnic acid, zeorin (major) and a number of minor and trace lichen substance reported.

Lepraria lobificans Nyl., Flora 56: 196. 1873.

Distribution: Karnataka, Himachal Pradesh, Madhya Pradesh, Tamil Nadu, Uttarakhand; Cosmopolitan.

Habitat: Muscicolous, saxicolous or corticolous.

Chemistry: Atranorin, zeorin, stictic acid, ± constictic acid, cryptostictic acid, connorstictic acid, constictic acid and an unidentified fatty acid.

Stictidaceae

Conotrema Tuck.

Conotrema indicum Makhija & Patw., J. Econ. Taxon. Bot. 10(2): 498. 1987.

Distribution: Karnataka (Kodagu) and Tamil Nadu; endemic.

Habitat: Corticolous

Chemistry: No lichen substances.

Note: *Conotrema* is a small genus and its some species have been transferred to other genera. Finally, the genus is synonymised with *Stictis* Pers. on the basis of phylogenetic studies. The status of present species needs to be decided only after the examination of type material and till then the same status is followed for the present species listing instead proposing a new status

Strigulaceae

Flavobathelium Lücking, Aptroot & Thor

Flavobathelium epiphyllum Lücking, Aptroot & Thor, Lichenologist 29: 221.1927.

Karnataka (Kodagu); Colombia, Costa Rica, Ecuador, French Guiana, Guatamala, Guyana, Panama, and Peru; neotropical regions.

Habitat : Foliicolous.

Chemistry: Unknown yellow pigment.

Note: The identity of the taxon is doubtful.

Strigula Fr.

Strigula melanobapha (Kremp.) R. Sant., Symb. Bot. Upsal. 12(1): 188. 1952.

Verrucaria melanobapha Kremp., Lich. Foliicol. : 18. 1874.

Distribution: Karnataka (Chikmagalur), Arunachal Pradesh, Meghalaya; pantropical.

Habitat : Foliicolous.

Chemistry: No lichen substances .

Strigula nemathora Mont. in Sagra, Hist. Phys. Cuba Bot. Pl. Cell. 42: 143. 1838.

f. **nemathora**

Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Arunachal Pradesh, Tamil Nadu; pantropical.

Habitat : Foliicolous.

Chemistry: No lichen substances .

f. **hypothelia** (Nyl.) Lücking, Foliicolous Lichenized Fungi, Fl. Neotrop. Monogr. 103: 248. 2008
Strigula hypothelia Nyl., Bull. Soc. Linn. Normandie, ser. 2, 2: 520. 1868.
Strigula nemathora var. *hypothelia* (Nyl.) R.Sant., Symb. Bot. Upsal. 12(1): 156. 1952.
Strigula complanata f. *major* Nyl. in Triana & Planchon, Ann. Sci. Nat., Bot., ser. 5, 7: 346. 1867, nom. inval.
 Distribution: Karnataka (Chikkamagaluru), Arunachal Pradesh, Meghalaya; pantropical.
 Habitat : Foliicolous.
 Chemistry: No lichen substances.

Strigula nitidula Mont. in Sagra, Hist. Phys. Cuba Bot. Pl. Cell. 42: 139. 1838.
 Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Arunachal Pradesh, Kerala, Meghalaya, Tamil Nadu, West Bengal; Pantropical.
 Habitat: Foliicolous.
 Chemistry: No lichen substances.

Strigula smaragdula Fr., Linnaea 5: 550. 1830.
Phyllocharis elegans Fée, Essai Crypt. Ecorc. : 94, 100. 1824.
Strigula elegans (Fée) Müll. Arg., Flora 63: 41. 1880.
 Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Arunachal Pradesh, Assam, Goa, Kerala, Meghalaya, Nagaland, Tamil Nadu; Pantropical.
 Habitat: Foliicolous.
 Chemistry: No lichen substances

Strigula orbicularis Fr., Linnaea 5: 549. 1830.
Phyllocharis complanata Fée, Essai Crypt. Ecorc.: 94 & 99. 1824.
Strigula complanata (Fée) Mont. in Sagra, Hist. Phys. Cuba Bot. Pl. Cell. 9(2): 140. 1842..
 Distribution: Karnataka (Udupi), Andaman & Nicobar Islands, Arunachal Pradesh, Kerala, Meghalaya; pantropical.
 Habitat : Foliicolous.
 Chemistry: No lichen substances.

Strigula subelegans Vain., Ann. Acad. Sci. Fenn., ser. A, 19: 23. 1923; Zahlbruckner, Cat. Lich. Univ. 8: 144. 1931; D. Awasthi & K. Singh, Proc. Ind. Acad. Sci., B, 76(3): 123. 1972.
 Distribution: Karnataka (Kodagu), Andaman & Nicobar Islands, Arunachal Pradesh, Meghalaya, Nagaland, ITamil Nadu; tropical S & C America, Pacey Islands, tropical Asia.
 Habitat : Foliicolous.
 Chemistry: No lichen substances.

Teloschistaceae

Caloplaca Th.Fr., nom. cons.

Caloplaca atosanguinea (G.Merr.) I.M.Lamb, Natt. Mus. Canada Bull. 132: 305. 1954.
Lecanora atosanguinea G.Merr., Ottawa Naturalist 27: 117. 1913.
 Distribution: Karnataka (Kodagu), Madhya Pradesh ; U.S.A.
 Habitat: Corticolous.

Caloplaca subdulosa (Nyl.) Zahlbr., Cat. Lich. Univ. 7: 184. 1931; Chatterjee & al., Geophytology 24(2): 199. 1995.
Lecanora subdulosa Nyl., Acta Soc. Sci. Fenn. 26(10): 10. 1900.
 Distribution: Karnataka (Raichur); Sri Lanka.
 Habitat: Saxicolous.

Blastenia A. Massal.

Blastenia ferruginea (Huds.) A. Massal., Atti Inst. Veneto Sci. lett., ed Arti, Sér. 2, 3: 102 (1852)

Lichen ferrugineus Huds., Fl. Angl.: 444. 1762.

Caloplaca ferruginea (Huds.) Th. Fr., Nova Acta Regiae Soc. Sci. Upsal., ser. 3, 3: 223. 1861.

Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Himachal Pradesh, Maharashtra, Tamil Nadu, Uttarakhand; Cosmopolitan.

Habitat: Corticolous and Saxicolous.

Chemistry: Emodin, parietin, fallacinal, xanthorin, chloremodin and fragilin.

Brownliella S.Y. Kondr., Kärnefelt, Elix & Hur

Brownliella cinnabarina (Ach.) S.Y. Kondr., Kärnefelt, A. Thell, Elix, J. Kim, A.S. Kondr. & J.-S. Hur, in Kondratyuk et al., Acta bot. hung. 55(3-4): 271. 2013.

Caloplaca cinnabarina (Ach.) Zahlbr. in Engler & Prantl, Nat. Pflanzenfam. 1(1): 228. 1908.

Lecanora cinnabarina Ach., Lichenogr. Universalis: 402. 1810.

Distribution: Karnataka (Belagavi, Kodagu), Himachal Pradesh, Madhya Pradesh, Meghalaya, Odisha, Rajasthan, Tamil Nadu, Uttarakhand; Cosmopolitan.

Habitat: Saxicolous.

Chemistry: Parietin, xanthorin, fallacinal and parietinic acid,

Gyalolechia A. Massal.

Gyalolechia flavorubescens (Huds.) Søchting, Frödén & Arup, Nordic J. Bot. 31(1): 70. 2013

Caloplaca flavorubescens (Huds.) J.R. Laundon, Lichenologist 8: 147. 1976.

Lichen flavorubescens Huds., Fl. Angl.: 443. 1762.

Distribution: Karnataka (Western Ghats), Himachal Pradesh, Manipur, Nagaland, Uttarakhand; Cosmopolitan.

Habitat: Saxicolous and corticolous.

Chemistry: Parietin.

Huneckia S.Y. Kondr., Kärnefelt, Elix & al.

Huneckia pollinii (A. Massal.) S.Y. Kondr., Kärnefelt, A. Thell, Elix, J. Kim, A.S. Kondr. & Hur, in Kondratyuk, Jeong, Yu, Kärnefelt, Thell, Elix, Kim, Kondratiuk & Hur, Acta bot. hung. 56(1-2): 111 (2014)

Caloplaca pollinii (A. Massal.) Jatta, Syll. Lich. Ital. 244. 1900. Joshi & Upreti, Lichenologist 39(6): 507. 2007.

Blastenia pollinii A. Massal., Atti Istit. Veneto, ser. 2, 3: append., p. 111, fig. 27. 1852.

Distribution: Karnataka (Bengaluru, Tumakuru), Odisha; Europe, Mexico, U.S.A.

Habitat: Corticolous.

Teloschistes Norman

Teloschistes flavicans (Sw.) Norm., Nyt Mag. Naturvidensk. 7: 229. 1853.

Lichen flavicans Sw., Prodr.: 147. 1788.

Distribution: Karnataka (Chikkamagaluru, Kodagu, Shivamogga), Kerala, Tamil Nadu; Cosmopolitan.

Habitat: Corticolous, rarely terricolous.

Tephromelaceae

Tephromela M. Choisy

Tephromela atra (Huds.) Hafellner in Kalb, Lich. Neotrop. Fasc. 7: 15, No. 297. 1983.

Lichen ater Huds., Fl. Angl. 1: 445. 1762.

Lecanora atra (Huds.) Ach., Lichenogr. Universalis: 344. 1810.

Distribution: Karnataka (Shivamogga), Himachal Pradesh, Jammu & Kashmir, Madhya Pradesh, Manipur and Tamil Nadu; Cosmopolitan.

Habitat: Saxicolous.

Trapeliaceae

Xylographa (Fr.) Fr.

Stictis subgen. *Xylographa* Fr.

Xylographa vitiligo (Ach.) J.R.Laundon, Lichenologist 2: 147. 1963.

Spiloma vitiligo Ach., Methodus: 10, tab. 1, fig. 4. 1803.

Distribution: Karnataka (Shivamogga); Europe, N America.

Habitat: Corticolous.

Chemistry: Stictic acid complex.

Trypetheliaceae

Astrothelium Eschw.

Astrothelium ochrothelizum Müll.Arg., Bot. Jahrb. Syst. 6: 382. 1885; Makhija & Patwardhan, Biovigyanam 15(2): 63. 1989.

Distribution: Karnataka (Udupi); Cuba, Singapore.

Habitat: Corticolous.

Chemistry: Lichexanthone present.

Bathelium Trevisan, nom. cons.

Bathelium benguelense Müll.Arg., Flora 68: 256. 1885.

Laurera benguelensis (Müll.Arg.) Zahlbr., Cat. Lich. Univ. 1: 503. 1922; Upreti & A. Singh, Bull. Jard. Bot. Natl. Belg. 57(3-4): 371. 1987.

Distribution: Karnataka (Dakshina Kannada), West Bengal; endemic.

Habitat: Corticolous.

Bathelium tuberculosum (Makhija & Patw.) R.C.Harris, More Florida Lichens: 118. 1995.

Laurera tuberculosa Makhija & Patw., Mycotaxon 31: 584. 1988.

Distribution: Karnataka (Uttara Kannada). Endemic.

Habitat: Corticolous.

Mycomicrothelia Keissl.

Mycomicrothelia thelena (Ach.) D. Hawksw., Bull. Br. Mus. (Nat. Hist.), Bot. 14(1): 112. 1985.

Verrucaria thelena Ach., Syn. Meth. Lich.: 92. 1814.

Distribution: Karnataka *, Kerala, Tamil Nadu; Pantropical.

Habitat: Corticolous.

Laurera Rchb.

Laurera aurantiaca Makhija & Patw., Mycotaxon 31: 572. 1988.

Distribution: Karnataka (Shivamogga); Papua New Guinea.

Habitat: Corticolous.

Laurera columellata Makhija & Patw., Mycotaxon 31: 574. 1988.

Distribution: Karnataka (Chikkamagaluru, Shivamogga, Udupi), Andaman & Nicobar Islands, Kerala; endemic.

Habitat: Corticolous.

Laurera fusispora Makhija & Patw., Mycotaxon 31: 576. 1988.

Distribution: Karnataka (Uttara Kannada); endemic.

Habitat: Corticolous.

Laurera subbenguelensis Upreti & Ajay Singh, Bull. Jard. Bot. Natl. Belg. 57(3-4): 380. 1987.

Distribution: Karnataka (Shivamogga), Kerala, Sikkim; endemic.

Habitat: Corticolous.

Laurera subphaeomelodes Upreti & Ajay Singh, Bull. Jard. Bot. Natl. Belg. 57(3-4): 382. 1987.

Distribution: Karnataka (Western Ghats), Kerala, West Bengal; endemic.

Habitat: Corticolous.

Polymeridium (Müll.Arg.) R.C.Harris

Arthopyrenia sect. *Polymeridium* Müll.Arg.

Polymeridium proponens (Nyl.) R.C.Harris, Bol. Mus. Paraense Emilio "Goeldi", n.s. Bot. 7(2): 637. 1991.

Verrucaria proponens Nyl., Bull. Soc. Linn. Normandie, ser. 2, 2: 130. 1868.

Campylothelium nitidum Müll.Arg., Nuovo Giorn. Bot. Ital. 23: 401. 1891.

Polyblastiopsis proponens (Nyl.) Zahlbr., Cat. Lich. Univ. 1: 351. 1922.

Distribution: Karnataka (Kodagu, Udupi), Himachal Pradesh, Meghalaya, West Bengal; Americas, Australia, Papua New Guinea.

Habitat: Corticolous.

Pseudopyrenula Müll.Arg.

Pseudopyrenula pupula (Ach.) Müll.Arg., Flora 68: 331, 338. 1885.

Pyrenula pupula Ach., Syn. Meth. Lich.: 123. 1814.

Pyrenula cartilaginea Fée, Essai Crypt. Ecorc.: 77, tab. 23, fig. 3. 1824.

Distribution: Karnataka (Western Ghats), Arunachal Pradesh, West Bengal; tropical regions.

Habitat: Corticolous.

Trypethelium Spreng., nom. cons.

Trypethelium catervarium (Fée) Tuck., Gen. Lich. : 260. 1872.

Verrucaria catervaria Fée, Essai Crypt. Ecorc.: 190, t. 22, f. 1. 1824.

Distribution: Karnataka (), Sikkim, West Bengal; Pantropical.

Habitat: Corticolous.

Trypethelium eluteriae Spreng., Anleit. Kenntn. Gew. 3: 351. 1804. *Trypethelium sprengelii* Ach., Lichenogr. Universalis : 306, pl. 4, f. 8. 1810.

Distribution: Karnataka (Chikkamagaluru, Kodagu, Shivamogga, Udupi, Uttara Kannada), Andaman & Nicobar Islands, Arunachal Pradesh, Kerala, Maharashtra, Meghalaya, Nagaland, Tamil Nadu; Brazil, China, Cuba, Indonesia, Philippines.

Habitat: Corticolous.

Chemistry: Lichexanthone absent.

Trypethelium karnatakense R.C.Harris, More Florida Lichens : 147. 1995.

Pleurotrema megaspermum Makhija & Patw., Biovigyanam 16(1): 24. 1990.

Distribution: Karnataka (Shivamogga); endemic.

Habitat: Corticolous.

Trypethelium subnitidiusculum Makhija & Patw., J. Hattori Bot. Lab. 73: 207. 1993.

Distribution: Karnataka (Kodagu), Arunachal Pradesh, Assam; endemic.

Habitat: *Habitat*: Corticolous.

Chemistry: Lichexanthone absent.

Trypethelium tropicum (Ach.) Müll.Arg., Bot. Jahrb. Syst. 6: 393. 1885.

Verrucaria tropica Ach., Lichenogr. Universalis : 278. 1810.

Distribution: Karnataka (Dakshina Kannada, Kodagu, Shivamogga), Andaman & Nicobar Islands, Arunachal Pradesh, Assam, Kerala, Maharashtra, Tamil Nadu, West Bengal; Australia, Brazil, China, Cuba, Indonesia, Malaysia, Paraguay Singapore, USA (Florida).

Habitat: Corticolous.

Chemistry: Lichexanthone absent.

Verrucariaceae

Endocarpon Hedw

Endocarpon nanum Ajay Singh & Upreti, Candollea 39: 541. 1984

Distribution: Karnataka (Hassan), Madhya Pradesh, Uttar Pradesh; endemic.

Habitat: On lime plaster of walls

Endocarpon pusillum Hedw., Descr. Adumbr. Muscor. Frond. 2: 56. 1789.

Distribution: Karnataka (Hassan), Madhya Pradesh, Maharashtra, Manipur, Punjab, Tamil Nadu, Uttarakhand, Uttar Pradesh; temperate region of the world.

Habitat: On old walls, brick, lime plaster.

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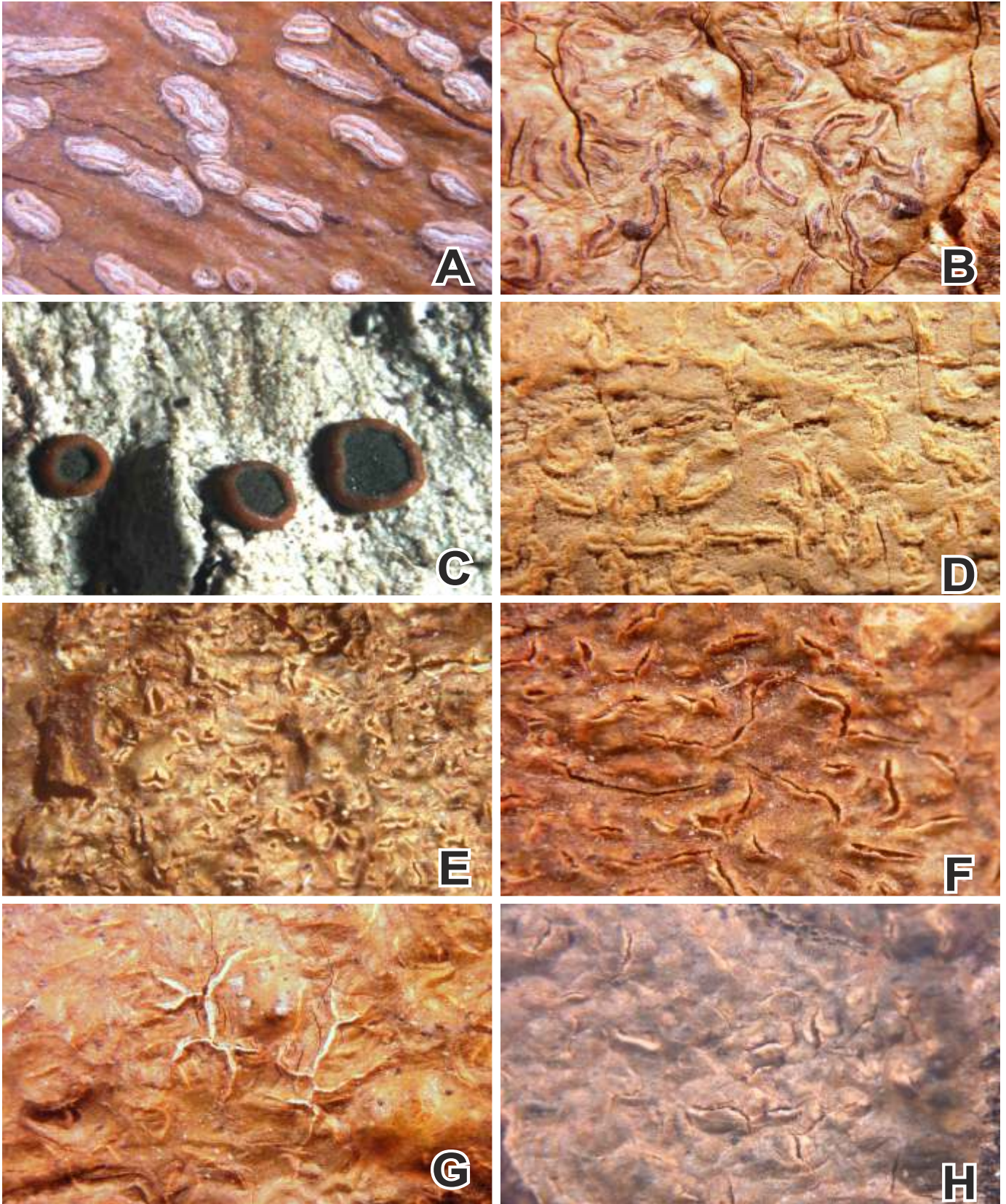


Plate 1 : **A.** *Acanthothecis archeri* B.O. Sharma, Makhija & Khadilkar.; **B.** *Anomomorpha elegans* B.O. Sharma; **C.** *Brigantiaea leucoxantha* (Spreng.) R. Sant. & Hafellner; **D.** *Diorygma subalbatum* (Patw. & Makhija) B.O. Sharma & Makhija; **E.** *Fissurina disposita* B.O. Sharma, Khadilkar & Makhija; **F.** *Fissurina immersa* B.O. Sharma, Khadilkar & Makhija; **G.** *Fissurina karantakensis* Makhija & Adaw.; **H.** *Fissurina microcarpa* B.O. Sharma, Khadilkar & Makhija

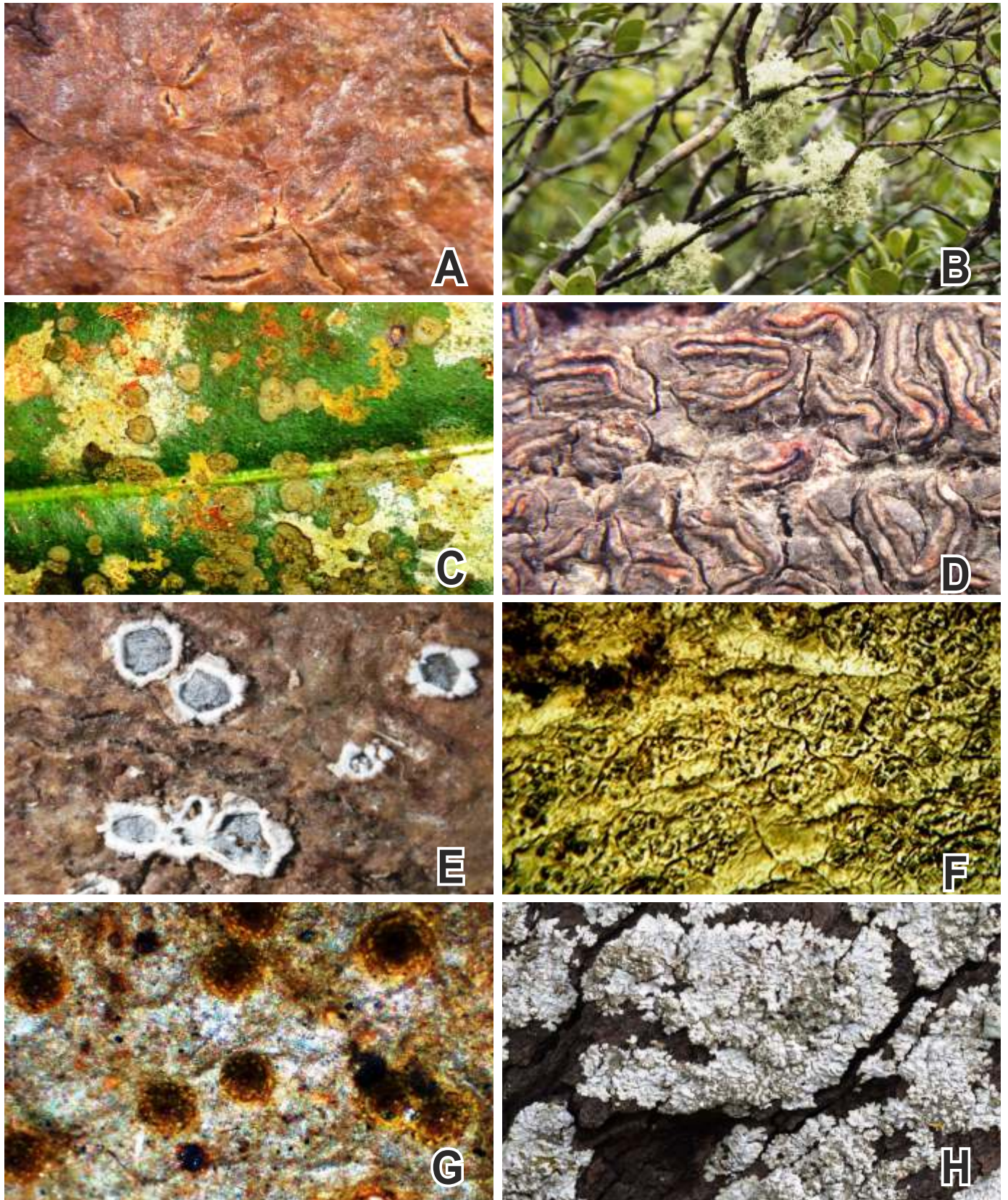


Plate 2 : **A.** *Fissurina simplex* B.O. Sharma, Khadilkar & Makhija; **B.** *Usnea ghattensis* G. Awasth. B.O. Sharma.; **C.** *Foliicolous lichencommunities* - *Mazosia* and *Porina* sp.; **D.** *Graphis parvicarpa* B.O. Sharma & Khadilkar; **E.** *Nitidochapsa leprieurii* (Mont.) Parmen, Lucking & Lumbsch; **F.** *Phlyctis Karnatakana* S. Joshi & Upreti; **G.** *Porina karnatakensis* Makhija, Adaw. & Patw.; **H.** *Pyxine cocoes* (Sw.) Nyl.

Bryophytes of Karnataka

A Checklist

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Introduction

The Bryophytes are the first invaders of the terrestrial habitat, hence represent a 'key' group in our understanding of the early land plant evolution. They display high species diversity and are the second largest group of land plants – the embryophytes, next only to the Angiosperms. With ecologically persistent and photo synthetically independent haploid phase, short life-cycle and easy availability, bryophytes constitute ideal study organisms for various experimental researches. But, the lack of adequate knowledge of their taxonomy/floristics and ecology has been the major impediment in using these plants as experimental material. India, by virtue of its great geographical expanse, vast coastline and varied phyto-climatic conditions, harbours a rich bryophyte flora both in luxuriance and diversity. The Eastern Himalaya, Western Ghats and the Western Himalaya are the major centres of diversity of these plants in the country.

The coastal plain and the Western Ghat portion of Karnataka present very congenial conditions of growth for a rich flora and the bryophytes are no exception. Yet, there had been no concerted effort to systematically explore and document the bryoflora of the State. While the bryological explorations in Karnataka dates as back as 1892, the taxonomical studies on these plants commenced little later with the identification of collections made by Rev. I. Pfeleiderer, G.A. Gammie, A.E. Lowrie, T.L. Walker, S.R. Kashyap, R.M. Maxwell, L.J. Sedgwick, G. Foreau, S.K. Pande, A.R. Rao, H.C. Gangulee, Ram Udar, R.S. Raghvan, B.M. Wadhwa, S.C. Srivastava, Vinod Chandra, Dinesh Kumar, Virendra Nath, Dharendra Kumar, U.S. Awasthi, Adarsh Kumar, Deepak Sharma, U. Schwarz, J.-P. Frahm and others. These explorations, however, were not only sporadic in nature, but largely confined to certain bryologically rich niches alone in the state, and hence lacked both in intensity and the extent. The information available today on the diversity and distribution of these plants in the State is based largely on periodical publications on mosses (Brotherus, 1899; Dixon, 1909, 1911, 1912, 1921; Dixon & Potier de la Varde, 1927; Sundararaghavan & Wadhwa, 1968, 1970; Townsend, 1988; Frahm et al., 2013; Schwarz, 2016), and liverwort and hornworts largely emanating from the school of bryology at the University of Lucknow established by late Prof. S.K. Pande and nurtured by late Prof. Ram Udar and his students, and the taxonomic revisions which cover the taxa from Karnataka as well (Ahmad, 1942; Pande & Misra, 1943; Pande & Srivastava, 1953; Pande et al., 1954; Pande & Udar, 1958; Srivastava, 1965; Srivastava & Udar, 1975a, 1975b, 1976; Awasthi, 1986; Kruijt, 1988; Asthana & Srivastava, 1991; Sharma & Srivastava, 1993; Asthana et al., 1995; Srivastava & Dixit, 1996; Awasthi et al., 2000; Singh, 2002; Srivastava & Srivastava, 2002; Asthana & Srivastava, 2003; Long, 2006; Dey et al., 2013; Schwarz, 2013; Schwarz & Frahm, 2013; see also Singh et al., 2016).

Synopsis of the checklist

The present checklist is based on the literature available to the authors and is divided into three parts, Anthocerotophyta, or the hornworts, Marchantiophyta, or the liverworts, and Bryophyta, or the mosses. The genera of liverworts have been arranged as per the system of classification proposed by Crandall-Stotler et al. (2009), with certain modifications, that of hornworts after Duff et al. (2007), whereas those of mosses are arranged after Goffinet et al. (2008). The families under each group and the genera and species within each family or the genus are arranged alphabetically. Each record has been provided with currently accepted name, its author(s) name and nomenclatural citation, followed by basionyms and synonyms, if any, and their citation.

A total of 268 species, including infraspecific taxa, have been assigned to 129 genera in 58 families, of which eight species under four genera and two families belong to orders Anthocerotales (Anthocerotaceae) and Notothyladales (Notothyladaceae) of hornworts, 107 taxa belonging to 43 genera and 24 families of orders Marchantiales (Aytoniaceae, Cyathodiaceae, Dumortieraceae, Marchantiaceae, Ricciaceae, Targioniaceae), Fossombroniales (Fossombroniaceae), Pallaviciniales (Pallaviciniaceae), Metzgeriales

(Aneuraceae, Metzgeriaceae), Porellales (Frullaniaceae, Jubulaceae, Lejeuneaceae, Porellaceae, Radulaceae) and Jungermanniales (Arnellaceae, Cephaloziellaceae, Geocalycaceae, Herbertaceae, Lepidoziaceae, Lophocoleaceae, Mastigophoraceae, Plagiochilaceae, Solenostomataceae) of liverworts, and the rest to orders Archidiales (Archidiaceae), Bartramiales (Bartramiaceae), Bryales (Bryaceae), Hypnales (Brachytheciaceae, Cryphaeaceae, Entodontaceae, Hypnaceae, Meteoriaceae, Myriniaceae, Neckeraceae, Pterobryaceae, Sematophyllaceae, Stereophyllaceae, Symphyodontaceae, Thuidiaceae), Dicranales (Bruchiaceae, Dicranaceae, Ditrichaceae, Fissidentaceae, Leucobryaceae, Calymperaceae), Hookeriales (Daltoniaceae, Hookeriaceae, Leucomiaceae, Pilotrichaceae), Funariales (Funariaceae), Orthotrichales (Orthotrichaceae), Polytrichales (Polytrichaceae), Pottiales (Pottiaceae), Hypnodendrales (Racopilaceae) and Splachnales (Meesiaceae, Splachnaceae) of mosses (Table 1).

Lejeuneaceae, with 16 genera and 51 species, is the most prolific family in the State, followed by Bryaceae (05 genera, 18 species), Fissidentaceae (18 species), Pottiaceae (08 genera, 13 species), and Meteoriaceae (10 genera, 11 species) (Table 2). Whereas, 19 families (09 liverworts and 10 mosses) are represented by just a single genus and species in the State. Similarly, liverwort *Cololejeunea* with 20 species is the most dominant genus of bryophytes in Karnataka, followed by *Fissidens* (18 species), *Bryum* (10 species), *Lejeunea* (09 species), and *Frullania* (08 species) (Table 2). On the other end of the spectrum, 79 genera (24 liverworts and 55 mosses) are represented by just a single species in the State.

Table 1. Synopsis of the checklist of bryophytes of Karnataka

Phylum	Order	Family	Genus	Species*	Endemics
Anthocerotophyta (Hornworts)	Anthocerotales	1	2	4	<i>Anthoceros bharadwajii</i> <i>Folioceros dixitianus</i> <i>Folioceros mangaloreus</i>
	Notothyladales	1	2	4	<i>Notothylas pfleidereri</i>
Marchantiophyta (Liverworts)	Marchantiales	6	7	15	
	Fossombroniales	1	1	1	<i>Fossombronia indica</i>
	Pallaviciniales	1	1	2	
	Metzgeriales	2	3	6	<i>Metzgeria coorgense</i>
	Porellales	5	20	64	<i>Cololejeunea epiphylla</i> <i>Cololejeunea karnatakensis</i> <i>Cololejeunea kashyapii</i> <i>Cololejeunea mizutaniana</i> <i>Lejeunea kudremukhensis</i> <i>Radula pandei</i>
	Jungermanniales	9	11	19	<i>Phycolepidozia indica</i>
Bryophyta (Mosses)	Archidiales	1	1	1	
	Bartramiales	1	1	4	
	Bryales	1	5	18	<i>Brachymenium bryoides</i> <i>Brachymenium turgidum</i> <i>Brachymenium walkeri</i>
	Hypnales	12	41	59	
	Dicranales	6	12	36	
	Hookeriales	4	5	5	
	Funariales	1	3	8	<i>Physcomitrium schumii</i>
	Orthotrichales	1	1	4	
	Polytrichales	1	2	3	
	Pottiales	1	8	13	<i>Barbula dharvarensis</i>
	Hypnodendrales	1	1	1	
	Splachnales	1	1	1	
	03	18	58	129	267

*Including infra-specific taxa (subspecies and varieties)

Table 2. Prolific families and genera of bryophytes in Karnataka

Families	No. of genera	No. of species	Genera	No. of species
Lejeuneaceae	16	51	<i>Cololejeunea</i>	20
Bryaceae	5	18	<i>Fissidens</i>	18
Fissidentaceae	1	18	<i>Bryum</i>	10
Pottiaceae	9	14	<i>Lejeunea</i>	9
Meteoriaceae	10	11	<i>Frullania</i>	8
Hypnaceae	5	9	<i>Plagiochila</i>	6
Pterobryaceae	3	9	<i>Pterobryopsis</i>	6
Dicranaceae	4	8	<i>Barbula</i>	5
Frullaniaceae	1	8	<i>Riccia</i>	5

Four species of hornworts, viz. *Anthoceros bharadwajii*, *Folioceros dixitianus*, *F. mangaloreus* and *N. pflaidereri*, nine species of liverworts, viz. *Fossombronia indica*, *Cololejeunea epiphylla*, *C. karnatakensis*, *C. kashyapii*, *C. mizutaniana*, *Lejeunea kudremukhensis*, *Metzgeria coorgense*, *Phycolepidozia indica* and *Radula pandei*, and five mosses, *Barbula dharvarensis*, *Brachymerium bryoides*, *B. turgidum*, *B. walker* and *Physcomitrium schumii*, are endemic to the country. While *Cololejeunea epiphylla*, *C. karnatakensis*, *Phycolepidozia indica*, *Barbula dharvarensis* and *Physcomitrium schumii* are narrow endemics confined to Karnataka alone, *Cololejeunea marginata*, *Colura lerati*, *Pallavicinia levieri* and *Sematophyllum tristiculum* are known in Indian bryoflora from the State only. On the other hand, *Notothylas dissecta*, which was originally described from Guatemala and later discovered in Indian bryoflora from Western Ghats of Karnataka, and *Phycolepidozia* (with the only other species, *P. exigua* R.M.Schust. occurring in tropical South America) show trans-oceanic, amph-Pacific disjunct distribution between South-east Asia and the Neotropics of considerable phytogeographical significance.

Notothylas pandei, though recently reported from Thailand (Chantanaorrapint, 2015), is extremely rare in India and is known through its type only collected from Jog falls (Shivamoga District) in the Western Ghat region of the State in 1962.

Enumeration

Anthocerotophyta (Hornworts)

Anthocerotaceae

Anthoceros L.

Anthoceros bharadwajii Udar & A.K. Asthana, Proc. Indian Natl. Sci. Acad., B 51: 484. 1985.

Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Goa, Gujarat, Himachal Pradesh, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Nagaland, Rajasthan, Uttarakhand, Tamil Nadu, West Bengal, endemic (Asthana & Srivastava, 1991; Singh et al., 2016), endemic.

Anthoceros subtilis Steph., Sp. Hepat.5: 1003. 1916.

Anthoceros notothyloides Steph., Sp. Hepat.6: 426. 1923.

Distribution: Karnataka (Dakshina Kannada), Assam, Gujarat, Kerala, Maharashtra, Rajasthan (Stephani, 1916; Udar & Singh, 1979a; Asthana & Srivastava, 1991; Verma et al., 2014; Singh et al., 2016).

Folioceros D.C.Bharadwaj

Folioceros dixitianus (Mahab.) D.C. Bhardwaj, Geophytology 5: 227. 1975.

Aspiromitus dixitianus Mahab., Curr. Sci. 10: 532. 1941.

Anthoceros dixitianus (Mahab.) Prosk., Bull. Torrey Bot. Club 78: 347. 1951.

Aspiromitus fergussoni Apte & Sane, J. Univ. Bombay 10(5): 80-85. 1942.

Anthoceros fergussoni (Apte & Sane) Prosk., Bull. Torrey Bot. Club 78: 347. 1951.

Distribution: Karnataka (Belagavi, Dakshina Kannada, Shivamogga), Andaman & Nicobar, Assam, Maharashtra (Asthana & Srivastava, 1991; Schwartz, 2013; Singh et al., 2016), endemic.

Folioceros mangaloreus (Steph.) D.C. Bharadwaj, Geophytology 3: 216. 1973.

Aspiromitus mangaloreus Steph., Sp. Hepat.5: 967. 1916.

Distribution: Karnataka (Bengaluru, Dakshina Kannada, Shivamogga), Gujarat, endemic (Chopra, 1938; Asthana & Srivastava, 1991; Singh et al., 2016), endemic.

Notothyladaceae

Notothylas Sull. ex A. Gray

Notothylas dissecta Steph. Sp. Hepat.5: 1020. 1917.

Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Gujarat, Maharashtra, Meghalaya (Udar & Singh, 1979a; Singh 2002; Singh et al., 2016).

Notothylas pandei Udar & V.Chandra, Geophytology 7: 142. 1977.

Distribution: Karnataka (Shivamogga) (Udar & Chandra, 1977; Singh, 2002; Singh et al., 2016), endemic.

Notothylas pfliedereri Udar & D.K.Singh, Lindbergia 5: 28. 1979.

Distribution: Karnataka (Dakshina Kannada), Andaman & Nicobar Islands, Gujarat, Maharashtra, endemic (Udar & Singh, 1979b, 1981; Singh 2002; Singh et al., 2016), endemic.

Phaeoceros Prosk.

Phaeoceros laevis (L.) Prosk., Bull. Torrey Bot. Club 78: 347. 1951.

Anthoceros laevis L., Sp. pl. 1139. 1753.

Phaeoceros laevis Prosk. subsp. *laevis*, Rap. & Comm. VIII Congr. Int. Bot. Paris 14-16: 69. 1954.

Anthoceros indicus Steph., Sp. Hepat.5: 1002. 1916.

Anthoceros longii Steph., Sp. Hepat.5: 1003. 1916.

Phaeoceros butlerii (Steph.) Udar & D.K.Singh, Geophytology 11: 257. 1981.

Anthoceros butleri Steph., Sp. Hepat.5: 986. 1916.

Distribution: Karnataka (Kodagu, Mysuru), Arunachal Pradesh, Assam, Gujarat, Himachal Pradesh, Jammu & Kashmir, Kerala, Maharashtra, Meghalaya, Manipur, Madhya Pradesh, Rajasthan, Sikkim, Tamil Nadu, Uttarakhand, West Bengal (Asthana & Srivastava, 1991; Schwartz, 2013; Singh et al., 2016).

Marchantiophyta (Liverworts)

Aneuraceae

Aneura Dumort.

Aneura pinguis (L.) Dumort., Comm. Bot. 115. 1822.

Jungermannia pinguis L., Sp. Pl. 1136. 1753

Riccardia indica (Steph. ex Kashyap) Pande & K.P.Srivast., J. Indian Bot. Soc. 37: 417. 1958.

Aneura indica Steph. ex Kashyap, J. Bombay Nat. Hist. Soc. 25: 280. 1917.

Distribution: Karnataka (Bengaluru), Andhra Pradesh, Assam, Himachal Pradesh, Madhya Pradesh, Maharashtra, Madhya Pradesh, Meghalaya, Punjab, Sikkim, Tamil Nadu, Uttarakhand, West Bengal (Chopra, 1938; Singh et al., 2016).

Riccardia Gray

Riccardia levieri Schiffn., Oesterr. Bot. Z. 49: 130. 1899.

Aneura levieri Schiffn. ex Steph., Sp. Hepat.1: 261. 1900.

Distribution: Karnataka (Bengaluru, Dakshina Kannada), Assam, Chhattisgarh, Himachal Pradesh, Kerala, Madhya Pradesh, Manipur, Meghalaya, Odisha, Tamil Nadu, Uttarakhand, West Bengal (Chopra, 1938; Singh et al., 2016).

Arnelliaceae

Gongylanthus Nees

Gongylanthus himalayensis Grolle, Khumbu Himal. 1(4): 285. 1966.

Gongylanthus indicus S.C.Srivast. & P.K.Verma, Indian J. Forest. 28: 201. 2005; U.Schwarz, Arch. Bryol. 181: 10. 2013.

Distribution: Karnataka (Kodagu), Arunachal Pradesh, Assam, Sikkim, Tamil Nadu, endemic (Schwarz & Frahm, 2013; Verma et al., 2013; Singh et al., 2016).

Aytoniaceae

Asterella P.Beauv.

Asterella khasyana (Griff.) Pande, K.P.Srivast. & Sultan Khan, J. Hattori Bot. Lab. 11: 8. 1954 '*khasiana*'.

Octokepos khasyanus Griff., Not. Pl. Asiat. 2: 343. 1849.

Fimbraria khasyana (Griff.) Mitt., J. Proc. Linn. Soc., Bot. 5: 126. 1861.

Fimbraria butleri Steph., Sp. Hepat.6: 12. 1917.

Asterella butleri (Steph.) Parihar, Annot. Rev. Cen. Indian Hepat. Univ. Allahabad Stud. Bot. Sect. 1961-62: 27. 1962.

Distribution: Karnataka, Chhattisgarh, Himachal Pradesh, Jammu & Kashmir, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Nagaland, Odisha, Rajasthan, Sikkim, Tamil Nadu, Uttarakhand, West Bengal (Singh et al., 2010a; Singh et al., 2016).

Asterella leptophylla (Mont.) Pande, K.P.Srivast. & Sultan Khan ex Grolle, Feddes Repert. 87: 246.1976.
Fimbraria leptophylla Mont., Ann. Sci. Nat. ser. 2, 18: 16.1842.
Fimbraria reticulata Kashyap, J. Bombay Nat. Hist. Soc. 25: 279. 1917.
Asterella reticulata (Kashyap) Pande, K.P.Srivast. & Sultan Khan ex Kachroo, J. Hattori Bot. Lab. 19: 4. 1958
nom. illeg. non A. reticulata A.Evans.
 Distribution: Karnataka (Mysuru), Himachal Pradesh, Jammu & Kashmir, Kerala, Maharashtra, Meghalaya, Sikkim, Tamil Nadu, Uttarakhand, West Bengal (Verma & Srivastava, 2011; Singh et al., 2016).

Asterella wallichiana (Lehm. & Lindenb.) Pande, K.P.Srivast. & Sultan Khan ex Grolle, Khumbu Himal. 1(4): 262.1966. **[Plate 1: A, B]**

Fimbraria wallichiana Lehm. & Lindenb. in Lehm., Nov. Stirp. Pug. 4: 4. 1832.
Fimbraria sanguinea Lehm. & Lindenb. in Lehm., Nov. Stirp. Pug. 4: 5. 1832.
Asterella sanguinea (Lehm. & Lindenb.) Pande, K.P.Srivast. & Sultan Khan ex Kachroo, J. Hattori Bot. Lab. 19: 4. 1958.
Fimbraria nepalensis Taylor, Trans. Linn. Soc. London 17: 387. 1837.
Asterella nepalensis (Taylor) Pande, K.P.Srivast. & Sultan Khan ex Kachroo, J. Hattori Bot. Lab. 19: 3. 1958.
Fimbraria angusta Steph., Sp. Hepat. 1: 104. 1899.
Asterella angusta (Steph.) Mahab. & Bhate, J. Univ. Bombay 13: 5. 1945.
Fimbraria gangetica Kashyap, Liverw. W. Himal. suppl. 1: 5.1932.
Asterella gangetica (Kashyap) Parihar, Annot. Rev. Cen. Indian Hepat.Univ. Allahabad Stud. Bot. Sect. 1961-1962: 27. 1962.
Fimbraria maculata Steph., Sp. Hepat. 1: 104. 1899.
Asterella maculata (Steph.) Parihar, Annot. Rev. Cen. Indian Hepat.Univ. Allahabad Stud. Bot. Sect. 1961-1962: 27. 1962.
Fimbraria gollanii Steph., Sp. Hepat. 6: 13. 1917. 'gollani'
Asterella gollanii (Steph.) Pande, K.P.Srivast. & Sultan Khan ex Parihar, Annot. Rev. Cen. Indian Hepat.Univ. Allahabad Stud. Bot. Sect. 1961-1962: 27.1962.
Fimbraria indica Steph., Sp. Hepat. 6: 14. 1917.
Asterella indica (Steph.) Parihar, Annot. Rev. Cen. Indian Hepat.Univ. Allahabad Stud. Bot. Sect. 1961-1962: 27. 1962.
Fimbraria mescarana Steph., Sp. Hepat. 6: 15. 1917.
Asterella mescarana (Steph.) Parihar, Annot. Rev. Cen. Indian Hepat.Univ. Allahabad Stud. Bot. Sect. 1961-1962: 28. 1962. 'mescarana'.
Fimbraria mysorensis R.S.Chopra, Proc. Indian Acad. Sci. 7 B: 241. 1938.
Asterella mysorensis (R.S.Chopra) Pande, K.P.Srivast. & Sultan Khan ex Kachroo & Bapna, J. Indian Bot. Soc. 56: 75. 1977.
 Distribution: Karnataka (Chikkamagaluru, Hassan, Kodagu, Mysuru, Shivamogga), Andhra Pradesh, Arunachal Pradesh, Goa, Gujarat, Himachal Pradesh, Jammu & Kashmir, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Odisha, Punjab, Rajasthan, Sikkim, Tamil Nadu, Uttar Pradesh, Uttarakhand, West Bengal (Long, 2006; Schwarz & Frahm, 2013; Singh et al., 2016).

Reboulia Raddi

Reboulia hemisphaerica (L.) Raddi, Opusc. Sci. 2(6): 357. 1818.
Marchantia hemisphaerica L., Sp. Pl. 1138. 1753.
Reboulia hemisphaerica var. *pangiensis* Kashyap, Liverw. W. Himal. 1: 74. 1929.
Mindal pangiensis Kashyap, J. Bombay Nat. Hist. Soc. 24: 346. 1916.
 Distribution: Karnataka (Uttara Kannada), Arunachal Pradesh, Chhattisgarh, Himachal Pradesh, Jammu & Kashmir, Kerala, Madhya Pradesh, Manipur, Meghalaya, Odisha, Punjab, Rajasthan, Sikkim, Tamil Nadu, Uttar Pradesh, Uttarakhand, West Bengal (Singh et al., 2010a; Singh et al., 2016).

Cephaloziellaceae

Cylindrocolea R.M.Schust.

Cylindrocolea kiaeri (Austin) Váňa, Phytotaxa 112: 2. 2013.

Cephaloziella kiaeri (Austin) Douin, Mem. Soc. Bot. France 29: 69. 1920.

Jungermannia kiaerii Austin, Bull. Torrey Bot. Club 6: 18. 1875.

Cephalozia andreana Steph., Sp. Hepat. 6: 434. 1924.

Cephalozia willisana Steph., Sp. Hepat. 3: 306. 1906.

Distribution: Karnataka (Kodagu), Kerala, Maharashtra, Meghalaya, Tamil Nadu (Chopra, 1938; Udar & Kumar, 1985; Schwartz, 2013; Singh et al., 2016).

Phycolepidozia R.M.Schust.

Phycolepidozia indica Gradst., J.-P.Frahm & U.Schwarz, Taxon 63: 499. 2014.

Distribution: Karnataka (Kodagu) (Gradstein, et al., 2014), endemic.

Cyathodiaceae

Cyathodium Kunze

Cyathodium cavernarum Kunze ex Lehm., Nov. Stirp. Pug. 6: 18. 1834.

Cyathodium barodae Chav., Bryologist 11: 57. 1937.

Distribution: Karnataka (Dakshina Kannada), Andhra Pradesh, Goa, Gujarat, Jammu & Kashmir, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Odisha, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, Uttarakhand, West Bengal (Srivastava & Dixit, 1996; Singh et al., 2016).

Cyathodium smaragdinum Schiffn., Ann. Jard. Bot. Buitenzorg, Suppl. 3 (2): 480. 1910. **[Plate 1: C]**

Cyathodium aurionitens auct. non (Griff.) Mitt.: Schiffn. in Denkschr. Kaiserl. Akad. Wiss. Wien Math.-Naturwiss. Kl. 67: 154. 1899.

Distribution: Karnataka (Udupi), Andaman & Nicobar Islands, Goa, Maharashtra, Tamil Nadu (Srivastava & Dixit, 1996; Singh et al., 2009; Singh et al., 2016).

Cyathodium tuberosum Kashyap, New Phytol. 13: 210. 1914.

Distribution: Karnataka (Uttara Kannada), Bihar, Goa, Himachal Pradesh, Kerala, Maharashtra, Punjab, Rajasthan, Sikkim, Tamil Nadu, Uttar Pradesh, Uttarakhand, West Bengal (Kashyap, 1929; Srivastava & Dixit, 1996; Singh et al., 2016).

Dumortieraceae

Dumortiera Nees

Dumortiera hirsuta (Sw.) Nees, Nova Acta Phys.-Med Acad. Caes. Leop.-Carol. Nat. Cur. 7: 410. 1825.

Marchantia hirsuta Sw., Prodr. Fl. Ind. Occid. 145. 1788.

[Plate 1: D]

Distribution: Karnataka (Kodagu), Andhra Pradesh, Arunachal Pradesh, Assam, Chhattisgarh, Goa, Himachal Pradesh, Jammu & Kashmir, Kerala, Madhya Pradesh, Manipur, Meghalaya, Nagaland, Odisha, Sikkim, Tamil Nadu, Uttarakhand, West Bengal (Schwarz & Frahm, 2013; Singh et al., 2016).

Fossombroniaceae

Fossombronia Raddi

Fossombronia himalayensis Kashyap, New Phytol. 14: 4. 1915.

Fossombronia levieri Steph., Sp. Hepat.6: 74. 1917.

Distribution: Karnataka (Bengaluru), Gujarat, Himachal Pradesh, Kerala, Madhya Pradesh, Maharashtra, Rajasthan, Tamil Nadu, Uttar Pradesh, Uttarakhand, West Bengal (Chopra, 1938; Srivastava & Udar, 1975; Singh et al., 2016).

Fossombronia indica Steph., Sp. Hepat.6: 73. 1917. [Plate 1: E]

Distribution: Karnataka (Dakshina Kannada), Andhra Pradesh, Kerala, Maharashtra, Tamil Nadu (Srivastava & Udar, 1975a; Verma & Srivastava, 2011; Singh et al., 2016), endemic.

Fossombronia wondraczekii var. **Loitlesbergeri** (Schiffn.) Müll.Frib., Leberm. Eur. 6: 545. 1954.

Fossombronia loitlesbergeri Schiffn., *Hedwigia* 48: 195. 1909.

Distribution: Karnataka (Chikkaballapur), Maharashtra (Srivastava & Sharma, 1995; Singh et al., 2016).

Frullaniaceae

Frullania Raddi

Frullania arecae (Spreng.) Gottsche, Mex. Leverm. 236. 1863.

Jungermannia arecae Spreng., Neue Entdeck. Pflanzenk. 2: 99. 1821.

Frullania indica Steph., Sp. Hepat.4: 347. 1910.

Frullania wallichiana Mitt., J. Proc. Linn. Soc., Bot. 5: 118. 1861.

Distribution: Karnataka (Chikkamagaluru, Shivamogga), Meghalaya, Manipur, Nagaland, Sikkim, Tamil Nadu, West Bengal (Hattori & Thaithong, 1978; Nath & Asthana 1998 as *F. wallichiana*; Singh et al., 2008; Singh et al., 2010a; Singh et al., 2016).

Frullania campanulata Sande Lac., Nederl. Kruidk. Arch. 3: 422. 1854.

Distribution: Karnataka (Shivamogga), Kerala, Tamil Nadu, Uttarakhand (Nath & Asthana, 1998; Daniels, 2010; Alam, 2012; Schwartz, 2013; Singh et al., 2016).

Frullania ericoides (Nees ex Mart.) Mont., Ann. Sci. Nat. Bot. sér. 2 12: 51. 1839.

Jungermannia ericoides Nees ex Mart., Fl. Brasil. 1: 346. 1833.

Jungermannia squarrosa Reinw. et al., Nova Acta Acad. Caes. Leop. Carol. Nat. Cur. 12. 219. 1824.

Frullania squarrosa (Reinw. et al.) Dumort., Recueil Observ. Jungerm. 13. 1835.

Frullania rotundiloba Steph., Sp. Hepat.4: 679. 1911.

Distribution: Karnataka (Chikkamagaluru), Andaman & Nicobar Islands, Arunachal Pradesh, Assam, Chhattisgarh, Himachal Pradesh, Kerala, Madhya Pradesh, Manipur, Meghalaya, Nagaland, Sikkim, Tamil Nadu, Uttarakhand, West Bengal (Nath & Asthana, 1998; Alam, 2012; Singh et al., 2016).

Frullania inflexa Mitt., J. Proc. Linn. Soc., Bot. 5: 120. 1861.

Frullania delavayi Steph., *Hedwigia* 33: 157. 1884.

Distribution: Karnataka (Shivamogga), Meghalaya, Sikkim, Tamil Nadu, West Bengal (Nath & Asthana, 1998; Alam, 2012; Singh et al., 2016).

Frullania moniliata (Reinw., Blume & Nees) Mont., Ann. Sci. Nat. Bot., sér. 2 18: 13. 1842.

Jungermannia moniliata Reinw., Blume & Nees, Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur. 12: 224, 1825.

Frullania breviramea Steph., Sp. Hepat.4: 547. 1911.

Frullania tamariscivar. Breviramea (Steph.) S.Hatt., J. Hattori Bot. Lab. 35: 222. 1972.

Frullaniatamariscisubsp.obscura (Verd.)S.Hatt., J. Hattori Bot. Lab. 35: 216. 1972.

Frullania moniliata subsp. *obscura* Verd., Ann. Bryol. Suppl. 1: 80. 1930.

Frullania tamarisci subsp. *moniliata*(Reinw., Blume & Nees) Kamim., J. Hattori Bot. Lab. 24: 65. 1961.

Distribution: Karnataka (Chikkamagaluru, Dakshina Kannada), Kerala, Sikkim, Tamil Nadu (Schwartz, 2013; Singh et al., 2016).

Frullania neurota Taylor, J. Bot. 5: 400. 1846.

Distribution: Karnataka (Kodagu Shivamogga), Arunachal Pradesh, Jammu & Kashmir, Meghalaya, Mizoram, Sikkim, Tamil Nadu, Uttarakhand, West Bengal (Nath & Asthana, 1998; Alam,2012; Singh et al., 2016).

Frullania obscura (Sw.) Nees ex Mont., Ann. Sci. Nat. Bot. (sér. 2) 14: 333, 1840.

Jungermannia obscura Sw., Fl. Ind. Occid. 1869. 1806.

Distribution: Karnataka (Kodagu)(Schwarz, 2013).

Frullania tamarisci (L.) Dumort., Recueil Observ. Jungerm. 13. 1835.

Jungermannia tamarisci L., Sp. pl. 2: 1134. 1753.

Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Kerala, Meghalaya, Manipur, Sikkim, Tamil Nadu, West Bengal (Nath & Asthana, 1998; Singh et al., 2016).

Geocalycaceae

Notoscyphus Mitt.

Notoscyphus lutescens (Lehm.& Lindenb.) Mitt., Seemann, Fl. Viti 407. 1871.

Jungermannia lutescens Lehm. & Lindenb. in Lehm., Nov. Stirp. Pug. 4: 16. 1832.

Distribution: Karnataka (Chikkamagaluru, Kodagu), Tamil Nadu (Udar & Kumar, 1981; Schwartz, 2013; Singh et al., 2016).

Notoscyphus paroicus Schiffn., Denkschr. Math.-Nat. Class. Kais. Akad. Wiss., Wien 67: 192. 1898.

Saccogyna subalternifolia Steph., Sp. Hepat.6: 317. 1922.

Distribution: Karnataka (Chikkamagaluru, Uttara Kannada), Meghalaya, Sikkim, Tamil Nadu, West Bengal (Chopra, 1938; Udar & Kumar, 1981; Singh et al., 2016).

Herbertaceae

Herbertus Gray

Herbertus dicranus (Taylor ex Gottsche, Lindenb. & Nees) Trevis., Mem. R. Istit. Lombardo Sci. (ser.3) 4: 397. 1877.

Sendtnera dicrana Taylor ex Gottsche, Lindenb. & Nees, Syn. Hepat.239. 1845.

Schisma dicranum (Taylorex Gottsche, Lindenb. & Nees) Steph., Sp.Hepat. 4: 26. 1909.

Herberta chinensis Steph., Hedwigia 34: 43. 1895.

Schisma chinensis Steph., Sp. Hepat. 4: 26. 1909.

Herberta wichurae Steph., Hedwigia 34: 45. 1895.

Schisma wichurae Steph., Sp. Hepat. 4: 25. 1909.

- Herberta fleischeri* (Steph.) H.A.Mill., J. Hattori Bot. Lab. 28: 307. 1965.
Schisma fleischeri Steph., Sp. Hepat. 6: 358. 1922.
Herberta himalayana (Steph.) H.A.Mill., J. Hattori Bot. Lab. 28: 319. 1965.
Schisma himalayanum Steph., Sp. Hepat. 6: 359. 1922.
Herberta lonchobasis (H.A.Mill., Ann. Bryol. 12: 80. 1939, nom. nud.) H.A.Mill., J. Hattori Bot. Lab. 28: 306. 1965.
Herberta nicholsonii Herzog, Ann. Bryol. 12: 80. 1939, nom. nud..
Herberta nilgerriensis (Steph.) H.A.Mill., J. Hattori Bot. Lab. 28: 308. 1965.
Schisma nilgerriense Steph., Sp. Hepat. 4: 28. 1909.
Herberta mastigophoroides Herzog & W.E. Nicholson (nom. nud) ex H.A.Mill., J. Hattori Bot. Lab. 28: 324. 1965.
Herberta pinnata (Steph.) H.A.Mill., J. Hattori Bot. Lab. 28: 299. 1965.
Schisma pinnata Steph., Sp. Hepat. 6: 361. 1922 ('*pinnatum*').
Herberta pseudoceylanica S.Hatt. in Hara, Fl. of E. Himal. 2: 225. 1971.
Herberta sanguinea (Mont.) Austin, Bull. Torrey Bot. Club 6: 302. 1897.
Schisma sanguineum (Mont.) Steph. Sp. Hepat. 4: 27. 1909.
Herberta sikkimensis (Steph.) W.E. Nicholson in Handel-Mazzetti, Symb. Sin. 5: 28. 1930.
Schisma sikkimense Steph., Sp. Hepat. 4: 25. 1909.
Herbertus capensis (Steph.) Sim., Trans. Royal Soc. South Africa 15: 75. 1926.
Distribution: Karnataka (Chikkamagaluru, Kodagu), Arunachal Pradesh, Kerala, Manipur, Meghalaya, Nagaland, Sikkim, Tamil Nadu, West Bengal (Schwartz & Frahm, 2013; Singh et al., 2016).

Jubulaceae

Jubula Dumort.

- Jubula hutchinsiae** (Hook.) Dumort. subsp. **javanica** (Steph.) Verd., Ann. Crypt. Exot. 1: 216. 1928.
Jubula javanica Steph., Sp. Hepat. 4: 688. 1911.
Jubula integrifolia Steph., Sp. Hepat. 4: 689. 1911.
Jubula rostrata Steph., Sp. Hepat. 4: 690. 1911.
Jubula samoana Steph., Sp. Hepat. 4: 690. 1911.
Jubula setacea Steph., Sp. Hepat. 4: 691. 1911.
Jubula sikkimensis Steph., Sp. Hepat. 4: 691. 1911.
Jubula tonkinensis Steph., Sp. Hepat. 4: 692. 1911.
Jubula cambouéna Steph., Sp. Hepat. 6: 554. 1924.
Jubula trifida Steph., Sp. Hepat. 6: 555. 1924.
Jubula hutchinsiae subsp. *javanica* f. *stephanii* Verd., Ann. Bryol. Suppl. 1: 26. 1930.
Jubula hutchinsiae subsp. *javanica* var. *integrifolia* S.Hatt., Bull. Tokyo Sci. Mus. 11: 156. 1944.
Jubula hutchinsiae subsp. *javanica* f. *integrifolia* Horik., J. Sci. Hiroshima Univ. Ser. B. Div. 2. 6: 65. 1952.
Distribution: Karnataka (Kodagu), Arunachal Pradesh, Assam, Kerala, Sikkim, Tamil Nadu, West Bengal (Schwartz & Frahm, 2013; Singh et al., 2016).

Lejeuneaceae

Acanthocoleus R.M.Schust.

- Acanthocoleus gilvus** (Gottsche) Kruijt, Bryophyt. Biblioth. 36: 79. 1988.
Lejeunea gilva Gottsche, Abh. Naturwiss. Vereine Bremen 7: 353. 1882.
Dicranolejeunea gilva (Gottsche) Steph., Hedwigia 35: 77. 1896.
Dicranolejeunea sikkimensis Steph., Sp. Hepat. 5: 170. 1912.
Distribution: Karnataka (Kodagu), Kerala, Meghalaya, Sikkim, West Bengal (Kruijt, 1988; Singh et al., 2016).

Acanthocoleus yoshinaganus (S.Hatt.) Kruijt, Bryophyt. Biblioth. 36: 105. 1988.
Lopholejeunea subfusca var. *yoshinagana* S. Hatt., Bot. Mag. (Tokyo) 58: 38. 1944.
Lopholejeunea yoshnagana (S.Hatt.) S. Hatt., J. Hattori Bot. Lab. 8: 33. 1952.
Dicranolejeunea yoshinagana (S.Hatt.) Mizut., J. Hattori Bot. Lab. 24: 174. 1961.
 Distribution: Karnataka (Kodagu, Madikeri), Meghalaya (Udar & Awasthi, 1982a; Schwarz, 2013; Singh et al., 2016).

Archilejeunea (Spruce) Schiffn.

Archilejeunea planiuscula (Mitt.) Steph., Sp. Hepat. 4: 731. 1911.
Lejeunea planiuscula Mitt., J. Proc. Linn. Soc., Bot. 5: 111. 1861.
Archilejeunea apiculifolia Steph., Sp. Hepat. 6: 558. 1924.
Ptychocoleus planiusculus (Mitt.) Verd., Ann. Bryol. Suppl. 4: 126. 1934.
 Distribution: Karnataka (Chikkamagaluru), Andaman & Nicobar Islands, Assam, Kerala, Tamil Nadu (Udar & Awasthi, 1981; Verma & Srivastava, 2011; Schwarz, 2013; Singh et al., 2016).

Caudalejeunea (Steph.) Schiffn.

Caudalejeunea reniloba (Gottsche) Steph., Sp. Hepat.5: 16. 1912.
Phragmicoma reniloba Gottsche in Gottsche et al., Syn. Hepat.301. 1844.
Thysananthus renilobus (Gottsche) Schiffn., Consp. Hepat. Archip. Ind. 306. 1898.
Caudalejeunea pluriplicata Udar, U.S. Awasthi & Shaheen, Bryologist 85: 329. 1982.
 Distribution: Karnataka (Shivamogga), Andaman & Nicobar, Assam, Kerala (Asthana et al., 1995; Schwarz, 2013 as *C. pluriplicata*; Singh et al., 2016).

Cheilolejeunea (Spruce) Schiffn.

Cheilolejeunea birmensis (Steph.) Mizut., J. Hattori Bot. Lab. 27: 139. 1964.
Strepsilejeunea birmensis Steph., Sp. Hepat.5:286.1913.
Cheilolejeunea rigida Steph., Sp. Hepat.5:670.1914.
 Distribution: Karnataka (Kodagu, Shivamogga), Kerala, Tamil Nadu (Asthana et al., 1995; Schwarz, 2013 also as *C. rigida*; Singh et al., 2016).

Cheilolejeunea laeviuscula (Mitt.) Steph., Sp. Hepat.5: 668. 1914.
Lejeunea laeviuscula Mitt., J. Proc. Linn. Soc., Bot. 5: 114. 1861.
 Distribution: Karnataka (Kodagu, Madikeri, Shivamogga), Sikkim, Tamil Nadu (Mizutani, 1963; Asthana et al., 1995; Alam, 2012; Schwarz, 2013; Singh et al., 2016).

Cheilolejeunea trapezia (Nees) Kachroo & R.M.Schust., J. Innn. Soc. Bot 56: 509.1961.
Jungermannia trapezia Nees, Enum. Pl. Crypt. Jav. 41. 1830.
Cheilolejeunea imbricata (Nees) S. Hatt., Misc. Bryol. Lichenol. 1(14): 1. 1957.
Lejeunea imbricata (Nees) Gottsche, Lindenb. & Nees, Syn. Hepat.359. 1845.
 Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Arunachal Pradesh, Assam, Kerala, Manipur, Meghalaya, Sikkim, Tamil Nadu, West Bengal (Asthana et al., 1995; Schwarz, 2013 also as *C. imbricata*; Singh et al., 2016).

Cololejeunea epiphylla G. Asthana & A. Shukla, Cryptog. Bryol. 31: 218. 2010.
 Distribution: Karnataka (Shivamogga), Mizoram (Asthana & Shukla, 2010a; Singh et al., 2016), endemic.

Cololejeunea floccosa (Lehm. & Lindenb.) Schiffn., Consp. Hepat. Arch. Ind.: 243. 1898.
Jungermannia floccosa Lehm. & Lindenb. in Lehm., Nov. Stirp. Pug. 5: 26. 1833.
 Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Arunachal Pradesh, Assam, Meghalaya, Sikkim Tamil Nadu (Asthana & Srivastava, 2003; Singh et al., 2016).

- Cololejeunea foliicola** S.C.Srivast. & G.Srivast., Proc. Indian Acad. Sci., Pl. Sci. 99: 86. 1989.
Distribution: Karnataka (Kodagu, Shivamogga), Assam, Kerala (Asthana & Srivastava, 2003; Singh et al., 2016).
- Cololejeunea furcilibulata** (Berrie & E.W.Jones) R.M.Schust., Beih. Nova Hedwigia 9: 178. 1963.
Leptocolea furcilibulata Berrie & E.W.Jones, Trans. Brit. Bryol. Soc. 2: 417. 1954.
Distribution: Karnataka (Shivamogga), Assam, Kerala, Tamil Nadu (Udar et al., 1985; Asthana & Srivastava, 1983; Singh et al., 2016).
- Cololejeunea gottschei** (Steph.) Mizut., J. Hattori Bot. Lab. 28: 117. 1965.
Physocolea gottschei Steph., Sp. Hepat. 5: 894. 1916.
Cololejeunea dentifolia Udar & G.Srivast., J. Bryol. 12: 229. 1982.
Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Assam, Mizoram (Asthana & Srivastava, 2003; Singh et al., 2016).
- Cololejeunea haskarliana** (Lehm. & Lindenb.) Schiffn., Consp. Hepat. Arch. Ind.: 244. 1898.
Lejeunea haskarliana Lehm. & Lindenb. in Lehm., Nov. Stirp. Pug. 8: 26. 1844.
Cololejeunea venusta (Sande Lac.) Schiffn., Hepat. (Engl.-Prantl) 122. 1895.
Cololejeunea hispidissima (Steph), Pande, K.P.Srivast. & Sultan Ahmad., J. Indian Bot. Soc. 36: 343. 1957.
Distribution: Karnataka (Chikkamagaluru, Kodagu, Shivamogga), Andaman & Nicobar Islands., Arunachal Pradesh, Assam, Kerala, Manipur, Meghalaya, Sikkim, Tamil Nadu (Asthana & Srivastava, 2003; Schwartz & Frahm, 2013; Singh et al., 2016).
- Cololejeunea hyalina** G.Asthana & S.C.Srivast., Bryophyt. Biblioth. 60: 25. 2003.
Distribution: Karnataka (Shivamogga) (Asthana & Srivastava, 2003; Singh et al., 2016).
- Cololejeunea karnatakensis** G.Asthana & S.C.Srivast., Bryophyt. Biblioth. 60: 26. 2003.
Distribution: Karnataka (Shivamogga) (Asthana & Srivastava, 2003; Singh et al., 2016), endemic.
- Cololejeunea kashyapii** Udar & G.Srivast., Geophytology 15: 64. 1985.
Distribution: Karnataka (Shivamogga), Assam, Kerala (Asthana & Srivastava, 2003; Singh et al., 2016), endemic.
- Cololejeunea lanciloba** Steph., Hedwigia 34: 250. 1895.
Leptocolea lanciloba (Steph.) A.Evans, Bull. Torrey Bot. Club. 38: 268. 1911.
Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Assam, Kerala, Maharashtra, Manipur, Meghalaya, Sikkim, Tamil Nadu (Bapna & Kachroo, 2000; Asthana & Srivastava, 2003; Singh et al., 2016).
- Cololejeunea latilobula** (Herzog) Tixier, Bryophyt. Biblioth. 27: 156. 1985.
Leptocolea latilobula Herzog in Hand.-Mazz., Symb. Sin. 5: 54. 1930.
Leptocolea himalayensis Pande & Misra, Proc. Nat. Acad. India 13 (1): 27. 1943.
Cololejeunea himalayensis (Pande & Misra) R.M.Schust., Beih. Nova Hedwigia 9: 177. 1963.
Distribution: Karnataka (Kodagu, Shivamogga), Arunachal Pradesh, Assam, Chhattisgarh, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Sikkim, Tamil Nadu, West Bengal (Asthana & Srivastava, 2003; Singh et al., 2016).
- Cololejeunea marginata** (Lehm. & Lindenb.) Schiffn., Hedwigia 29: 91. 1890.
Jungermannia marginata Lehm. & Lindenb. in Lehm., Nov. Stirp. Pug. 5: 11. 1833.
Leptocolea marginata (Lehm. & Lindenb.) A.Evans, Bull. Torrey Bot. Club 38: 262. 1911.
Distribution: Karnataka (Mysuru) (Chopra, 1938).

Cololejeunea mizutaniana Udar & G.Srivast., Misc. Bryol. Lichenol. 9: 137. 1983.

Distribution: Karnataka (Shivamogga), Assam, Kerala (Udar & Srivastava, 1983; Schwarz, 2013; Asthana & Srivastava, 2003; Singh et al., 2016), endemic.

Cololejeunea ocellata (Horik.) Benedix, Feddes Repert. Spec. Nov. Regni Veg. Beih.134:38. 1953.

Leptocolea ocellata Horik., J. Sci. Hiroshima Univ., Ser. B, Div. 2, Bot. 1: 86. 1932.

Distribution: Karnataka (Mysuru), Sikkim (Chopra, 1938; Singh et al., 2016).

Cololejeunea planissima (Mitt.) Abeyw., Ceylon J. Sci., Bio. Sci. 2 (1): 73. 1959.

Lejeunea planissima Mitt., J. Proc. Linn. Soc., Bot. 5: 117. 1861.

Physocolea trianguliloba Steph., Sp. Hepat.5: 907. 1916.

Cololejeunea trianguliloba (Steph.) Pande, K.P. Srivast. & Sultan Ahmad, J. Indian Bot. Soc. 36: 343. 1957.

Distribution: Karnataka (Kodagu, Shivamogga), Arunachal Pradesh, Assam, Kerala, Manipur, Meghalaya, Tamil Nadu (Asthana & Srivastava, 2003; Singh et al., 2016).

Cololejeunea sigmoidea Jovet-Ast & Tixier, Rev. Bryol. Lichénol. 31: 27. 1962.

Distribution: Karnataka (Shivamogga), Tamil Nadu (Asthana & Srivastava, 2003; Sreebha et al., 2015; Singh et al., 2016).

Cololejeunea trichomanis (Gottsche) Besch., Rev. Bryol. 19 (1): 14, 1892.

Lejeunea trichomanis Gottsche, Abh. Naturwiss. Vereine Bremen 7: 362. 1882.

Physocolea trichomanis (Gottsche) Steph., Sp. Hepat.5: 912.1916.

Cololejeunea goebelii (Gotteshe ex K.I. Goebel) Schiffn., Consp. Hepat.Arch. Ind. 244. 1898.

Cololejeunea pandei Udar & G.Srivast., J. Bryol. 12: 227. 1982.

Distribution: Karnataka (Kodagu, Shivamogga), Arunachal Pradesh, Assam, Manipur, Meghalaya, Sikkim, West Bengal (Asthana & Srivastava, 2003; Singh et al., 2016).

Cololejeunea udarii G.Asthana & S.C.Srivast., Bryophyt. Biblioth. 60: 40. 2003.

Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Assam, Kerala, Manipur, Tamil Nadu (Asthana & Srivastava, 2003; Singh et al., 2016).

Colura (Dumort.) Dumort.

Colura leratii (Steph.) Steph., Sp. Hepat.5: 939. 1916.

Colurolejeunea leratii Steph., Rev. Bryol. Lichénol. 35: 30. 1908.

Distribution: Karnataka (Shivamogga) (Asthana & Shukla, 2010).

Drepanolejeunea (Spruce) Schiffn.

Drepanolejeunea fleischeri (Steph.) Grolle & R.L.Zhu, Nova Hedwigia 70: 379. 2000.

Leptolejeunea fleischeri Steph., Sp. Hepat.5: 382. 1913.

Distribution: Karnataka (Chikkamagaluru), Arunachal Pradesh, Meghalaya, Sikkim, West Bengal (Asthana & Shukla, 2009; Kumar et al., 2015; Singh et al., 2016).

Drepanolejeunea pentadactyla (Mont.) Steph., Sp. Hepat.5: 357. 1913.

Lejeunea pentadactyla Mont., Ann. Sci. Nat., Bot., Sér. 3, 10: 113. 1848.

Distribution: Karnataka (Chikkamagaluru), Andaman & Nicobar Islands (Asthana & Shukla, 2009; Singh et al., 2016).

Drepanolejeunea yunnanensis (P.C.Chen) Grolle & R.L.Zhu, Nova Hedwigia 70: 388. 2000.
Rhaphidolejeunea yunnanensis P.C.Chen, Feddes Repert. Spec. Nov. Regni Veg. 58: 44. 1955.
 Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Assam, Manipur, Meghalaya, West Bengal (Dey & Singh, 2012; Dey et al., 2013; Kumar et al., 2015; Singh et al., 2016).

Frullanoides Raddi

Frullanoides tristis (Steph.) Slageren, Meded. Bot. Mus. Herb. Rijks Univ. Utrecht 544: 110. 1985.
Lejeunea tristis Steph., Hedwigia 29: 8. 1890.
 Distribution: Karnataka (Chikkaballapur, Mysuru), Kerala, Meghalaya, Tamil Nadu (Awasthi & Srivasatava, 1988; Singh et al., 2016).

Lejeunea Lib.

Lejeunea aloba Sande Lac., Verh. Kon. Ned. Akad. Wetensch. Afd. Natuurk. 5: 72 [Syn. Hepat.Jav.]. 1856.
Rectolejeunea aloba (Sande Lac.) Steph., Sp. Hepat.5: 696. 1914.
Eulejeunea aloba (Sande Lac.) Schiffn., Consp. Hep. Arch. Ind. 247. 1898.
 Distribution: Karnataka (Shivamogga), Gujarat, Madhya Pradesh, Maharashtra, Tamil Nadu (Pande & Misra, 1943; Singh et al., 2016).

Lejeunea eckloniana Lindenb. in Gottsche et al., Syn. Hepat. 381. 1845.
Taxilejeunea eckloniana (Lindenb.) A. Agarwal ex P.K. Verma & S.C. Srivast., Proc. Natl. Acad. Sci. India, B. 77: 209. 2007.
 Distribution: Karnataka (Chikkamagaluru, Kodagu), Kerala, Meghalaya, Sikkim, Tamil Nadu (Verma & S.C. Srivastava, 2007; Alam, 2012; Schwarz, 2013; Singh et al., 2016).

Lejeunea flava (Sw.) Nees, Naturgesch. Eur. Leberm. 3: 277. 1838.
Jungermannia flava Sw., Prodr. 144. 1788. [Plate 1: F]
 Distribution: Karnataka (Chikkamagaluru, Mysuru, Shivamogga), Andaman & Nicobar Islands, Arunachal Pradesh, Assam, Himachal Pradesh, Kerala, Manipur, Meghalaya, Sikkim, Tamil Nadu, West Bengal (Singh & Singh, 2009; Dey & Singh, 2012; Singh et al., 2016).

Lejeunea kudremukhensis Sushsil K. Singh & Pócs, Phytotaxa 263(1): 73. 2016.
Taxilejeunea tenerrima Steph., Sp. Hepat. 6: 406. 1923.
Lejeunea tenerrima (Steph.) A. Agarwal ex P.K. Verma & S.C. Srivast., Proc. Natl. Acad. Sci. India, B. 77: 206. 2007, non *Lejeunea tenerrima* (Nees) Lindenb. 1845, nom. Illeg.
 Distribution: Karnataka (Chikkamagaluru),(Singh & Pócs, 2016), endemic.

Lejeunea lowriana Steph., Sp. Hepat.5: 779. 1915.
 Distribution: Karnataka (Kodagu), Tamil Nadu (Chopra, 1938; Mizutani, 1964; Verma & Srivastava, 2011; Singh et al., 2016).

Lejeunea neelgherriana Gottsche in Gottsche et al., Syn. Hepat.354. 1845.
Strepsilejeunea neelgherriana (Gottsche) Steph., Sp. Hepat.5: 288. 1913.
Harpalejeunea indica Steph., Sp. Hepat.6: 392. 1923.
 Distribution: Karnataka (Chikkamagaluru), Kerala, Manipur, Meghalaya, Sikkim, Tamil Nadu, West Bengal (Schwarz, 2013; Singh et al., 2016).

Lejeunea stevensiana (Steph.) Mizut., J. Hattori Bot. Lab. 34: 452. 1971.
Taxilejeunea stevensiana Steph., Hedwigia 35: 136. 1896.
 Distribution: Karnataka (Chikkamagaluru), Kerala, Sikkim, West Bengal (Bapna & Kachroo, 2000; Singh et al., 2016).

Lejeunea subolivacea Mizut., J. Hattori Bot. Lab. 28: 121. 1965.

Eulejeunea olivacea Steph., Hedwigia 29: 85. 1890.

Lejeunea olivacea (Steph.) Steph., Hedwigia 29: 85. 1890, nom. illeg. (Art. 53.1; Mebourne Code); non *Lejeunea olivacea* (Hook. f. & Taylor) Gottsche et al., Syn. Hepat. 334. 1845].

Rectolejeunea olivacea (Steph.) S.C. Srivast. & A. Agarwal, Bryologist 89: 195. 1987 '1986'.

Rectolejeunea subacuta Steph., Sp. Hepat. 5: 700. 1914.

Distribution: Karnataka (Shivamogga), Assam, Jammu & Kashmir, Maharashtra, Tamil Nadu, West Bengal (Srivastava & Agarwal, 1986 as *R. olivacea*; Singh et al., 2016).

Lejeunea wightii Lindenb. in Gottsche et al., Syn. Hepat. 379. 1845.

Microlejeunea inflatiloba Steph., Sp. Hepat. 6: 422. 1923.

Distribution: Karnataka (Chikkamagaluru, Dakshina Kannada), Assam, Sikkim, Tamil Nadu, Uttarakhand, West Bengal (Mizutani, 1964; Alam, 2012; Schwarz, 2013; Singh et al., 2016).

Leptolejeunea (Spruce) Schiffn.

Leptolejeunea elliptica (Lehm. & Lindenb.) Schiffn., Hepat. (Engl.-Prantl) 126. 1895.

Jungermannia elliptica Lehm. & Lindenb. in Lehm., *Nov. Stirp. Pug. 5: 13. 1833.*

Leptolejeunea subacuta Steph. ex A. Evans, Proc. Wash. Acad. Arts Sci. 8: 149. 1906.

Leptolejeunea dapitana Steph., Bull. Herb. Boissier 5: 79. 1897.

Leptolejeunea schiffneri auct non Steph.: Pande et al., J. Indian Bot. Soc. 36: 338. 1957.

Distribution: Karnataka (Shivamogga), Andaman & Nicobar, Arunachal Pradesh, Assam, Kerala, Manipur, Meghalaya, Sikkim, Tamil Nadu, West Bengal (Pande et al., 1957; Awasthi, 1986; Singh et al., 2016).

Leptolejeunea maculata (Mitt.) Schiffn., Consp. Hepat. Arch. Ind. 275. 1898.

Lejeunea maculata Mitt., J. Proc. Linn. Soc., Bot. 5: 118. 1861.

Leptolejeunea schiffneri (Schiffn.) Steph., Hedwigia 35: 107. 1896.

Lejeunea schiffneri Steph. in Schiffner., Nova Acta Acad. Caes. Leop.-Carol. German. Nat. Cur. 60: 233. 1893.

Distribution: Karnataka (Shivamogga), Andaman & Nicobar, Tamil Nadu (Singh et al., 2010b).

Lopholejeunea (Spruce) Schiffn.

Lopholejeunea abortiva (Mitt.) Steph., Sp. Hepat. 5: 70. 1912.

Lejeunea abortiva Mitt., Philos. Trans. 168: 399. 1879.

Lopholejeunea gradsteinii Udar, U.S. Awasthi & Shaheen, Lindbergia 9: 34. 1983.

Distribution: Karnataka (Kodagu, Shivamogga), Andhra Pradesh, Kerala, Meghalaya (Udar et al., 1983; Awasthi et al., 2000; Singh et al., 2016).

Lopholejeunea nigricans (Lindenb.) Schiffn., Consp. Hepat. Arch. Ind. 293. 1898.

Lejeunea nigricans Lindenb. in Gottsche et al., Syn. Hepat. 316. 1845.

Distribution: Karnataka, Assam, Kerala, Manipur, Meghalaya (Awasthi et al., 2000; Singh et al., 2010a).

Lopholejeunea sikkimensis Steph., Sp. Hepat. 5: 87. 1912

Distribution: Karnataka (Kodagu), Andaman & Nicobar Islands, Assam, Chhattisgarh, Jammu & Kashmir, Kerala, Madhya Pradesh, Manipur, Meghalaya, Sikkim, Tamil Nadu, Uttarakhand, West Bengal (Awasthi et al., 2000; Singh et al., 2016).

Lopholejeunea subfusca (Nees) Schiffn., Bot. Jahrb. Syst. 23: 593. 1897 [“1896”].

Jungermannia subfusca Nees, Enum. Pl. Crypt. Jav. 36. 1830.

Lopholejeunea nilgiriensis U.S.Awasthi, S.C.Srivast. & D.Sharma, Geophytology 29: 51. 2000.

Lopholejeunea nongstoinii Ajit P. Singh & V.Nath, Phytotaxonomy 6: 26. 2006.

Distribution: Karnataka (Kodagu), Andaman & Nicobar, Kerala, Meghalaya, Sikkim, Tamil Nadu, West Bengal (Awasthi et al., 2000; Alam, 2012; Schwartz & Frahm, 2013; Singh et al., 2016).

Microlejeunea (Spruce) Jack & Steph.

Microlejeunea ulicina (Taylor) Steph., Hedwigia 29: 88. 1890.

Jungermannia ulicina Taylor, Trans. & Proc. Bot. Soc. Edinburgh 1: 115. 1844.

Lejeunea ulicina (Taylor) Gottsche in Gottsche et al., Syn. Hepat. 387. 1845.

Microlejeunea ulicina (Taylor) A. Evans, Mem. Torrey Bot. Club 8: 162. 1902. nom. inval.

Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Assam, Kerala, Meghalaya, Tamil Nadu, West Bengal (Alam, 2012; Schwarz, 2013; Singh et al., 2016).

Myriocoleopsis Schiffn.

Myriocoleopsis minutissima (Sm.) R.L.Zhu, Y. Yu & Pócs, Phytotaxa 183 (4): 293. 2014.

Jungermannia minutissima Sm. in Sowerby, Engler. Bot. 23: 1633. 1806.

Cololejeunea minutissima (Sm.) Steph., Bot. Gaz. 17: 171. 1892.

Cololejeunea minutissima (Sm.) Schiffn., Hepat. (Engl.-Prantl) 122. 1895, nom. illeg.

Lejeunea minutissima (Sm.) Spreng., Syst. Veg. 4(1): 234. 1827.

Distribution: Karnataka (Kodagu), Andaman & Nicobar, Goa, Kerala, Meghalaya, Sikkim, Tamil Nadu, West Bengal (Asthana & Srivastava, 2003; Singh et al., 2016).

Ptychanthus Nees

Ptychanthus striatus (Lehm. & Lindenb.) Nees, Naturgesch. Eur. Leberm. 3: 212. 1838.

Jungermannia striata Lehm. & Lindenb. in Lehm., Nov. Stirp. Pug. 4: 16. 1832.

Distribution: Karnataka (Chikkaballapur, Shivamogga), Andaman & Nicobar Islands, Arunachal Pradesh, Assam, Chhattisgarh, Goa, Himachal Pradesh, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Nagaland, Sikkim, Tamil Nadu, Uttarakhand, West Bengal (Singh et al., 2010a; Schwarz, 2013; Singh et al., 2016).

Schiffneriolejeunea Verd.

Schiffneriolejeunea pulopenangensis (Gottsche) Gradst., J. Hattori Bot. Lab. 38: 335. 1974.

Phragmicoma pulopenangensis Gottsche in Gottsche et al., Syn. Hepat. 299. 1845.

Ptychocoleus pulopenangensis (Gottsche) Steph., Sp. Hepat. 5: 51. 1912.

Ptychocoleus mangaloreus Steph., Sp. Hepat. 5: 47. 1912.

Schiffneriolejeunea indica (Steph.) Udar & U.S. Awasthi, Lindbergia 8: 57. 1982.

Archilejeunea indica Steph., Sp. Hepat. 5: 728. 1912.

Distribution: Karnataka (Dakshina Kannada), Andaman & Nicobar Islands, Kerala, Tamil Nadu (Stephani, 1912; Schwarz, 2013; Singh et al., 2016).

Spruceanthus Verd.

Spruceanthus semirepandus (Nees) Verd., Ann. Bryol. Suppl. 4: 153. 1934.

Jungermanniasemirepanda Nees, Hepat. Jav. 39. 1830.

Distribution: Karnataka (Chikkamagaluru), Arunachal Pradesh, Kerala, Manipur, Meghalaya, Sikkim, Tamil Nadu, Uttarakhand, West Bengal (Alam, 2012; Schwarz, 2013; Singh et al., 2016).

Lepidoziaceae

Bazzania Gray

Bazzania ovistipula (Steph.) Abeyw., Ceylon J. Sci., Biol. Sci. 2 (1): 45. 1959.

Mastigobryum ovistipulum Steph., Bull. Herb. Boissier (sér. 2) 8(10): 760. 1908 & Sp. Hepat. 3: 444. 1908.

Bazzania nudistipula Pandeet al., Proc. 36th Indian Sci. Cong. 9. 1949.

Bazzania pusilla (Steph.) S.Hatt. in Hara, Fl. E. Himal. 506. 1966.

Distribution: Karnataka (Hikkamagaluru) Arunachal Pradesh, Meghalaya, Manipur, Nagaland, Sikkim, West Bengal (Sharma & Srivastava, 1993; Schwarz, 2013; Singh et al., 2016).

Lophocoleaceae

Heteroscyphus Schiffn.

Heteroscyphus argutus (Reinw., Blume & Nees) Schiffn., Oesterr. Bot. Zeit. 60: 172. 1910.

Jungermannia arguta Reinw., Blume & Nees, Hepat. Java. 1: 206. 1824.

Chiloscyphus argutus (Reinw., Blume & Nees) Nees in Gottsche et al., Syn. Hepat. 183. 1845.

Chiloscyphus cubans Taylor, J. Bot. 282. 1846.

Heteroscyphus cubans (Taylor) Schiffn., Oesterr. Bot. Zeitschr. 60: 172. 1910.

Distribution: Karnataka (Chikkamagaluru, Kodagu, Kolar), Andaman & Nicobar Islands, Arunachal Pradesh, Assam, Himachal Pradesh, Jammu & Kashmir, Kerala, Madhya Pradesh, Manipur, Meghalaya, Odisha, Sikkim, Uttarakhand, Tamil Nadu, Uttarakhand, West Bengal (Srivastava & Srivastava, 2002; Singh et al., 2016).

Lophocolea (Dumort.) Dumort.

Lophocolea heterophylla (Schrad.) Dumort., Recueil Observ. Jungerm. 17. 1835.

Jungermannia heterophylla Schrad., J. Bot. 5: 66. 1801.

Lophocolea kurzii Sade Lac. in Miquel, Ann. Mus. Bot. Lugd. Batav. 1: 296. 1863 '1864'.

Chiloscyphus profundus (Nees) J.J. Engel & R.M. Schust., Nova Hedwigia 39: 421. 1984.

Distribution: Karnataka (Kodagu), Andhra Pradesh, Himachal Pradesh, Kerala, Meghalaya, Sikkim, Tamil Nadu, Uttarakhand (Schwarz & Frahm, 2013; Singh et al., 2016).

Lophocolea muricata (Lehm.) Nees in Gottsche et al., Syn. Hepat. 169. 1845.

Jungermannia muricata Lehm., Linnaea 4: 363. 1829.

Chiloscyphus muricatus (Lehm.) J.J. Engel & R.M. Schust., Nova Hedwigia 39: 419. 1984.

Distribution: Karnataka (Kodagu), Arunachal Pradesh, Kerala, Nadu (Schwarz & Frahm, 2013; Singh et al., 2016).

Marchantiaceae

Marchantia L.

Marchantia emarginata Reinw., Blume & Nees, Nova Acta Phys.-Med Acad. Caes. Leop.-Carol. Nat. Cur. 12: 192. 1824

Marchantia palmata Reinw., Blume & Nees, Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur. 12: 193. 1824.

Distribution: Karnataka, Andaman & Nicobar Islands, Arunachal Pradesh, Kerala, Odisha, Sikkim, Tamil Nadu, West Bengal (Bischler, 1989; Singh & Singh, 2013; Singh et al., 2016).

Mastigophoraceae

Mastigophora Nees

Mastigophora diclados Brid. ex F. Weber, Hist. Masc. Hep. Prodr. 56. 1815.

Sendtnera diclados (Brid.) Endl. in Gottsche et al., Syn. Hepat. 241. 1844.

Distribution: Karnataka (Kodagu), Andaman & Nicobar Islands, Sikkim, Tamil Nadu (Schwarz & Frahm, 2013 as *Chandonanthus birmensis* Steph.; Schwarz, 2013; Singh et al., 2016).

Metzgeriaceae

Metzgeria Raddi

Metzgeria coorgense S.C. Srivast. & Smita Srivast., Phytotaxonomy 4: 81. 2004.

Distribution: Karnataka (Kodagu), Tamil Nadu [Srivastava & Srivastava, 2004; Schwarz, 2013 as *M. crassipilis* (Lindb.) A. Evans; Singh et al., 2016], endemic.

Metzgeria furcata (L.) Corda, Naturalientausch 12: 654. 1829

Jungermannia furcata L., Sp. Pl. 1136. 1753.

Metzgeria decipiens (C. Massal.) Schiffn. in Engler, Forschungsr. Gazelle 4: 43. 1890.

Metzgeria furcata var. *decipiens* C. Massal., Nuovo Giorn. Bot. Ital. 17: 256. 1885.

Metzgeria crispula Herzog, Ann. Bryol. 12: 72. 1939.

Metzgeria lutescens Steph., Sp. Hepat. 6: 54. 1917.

Distribution: Karnataka (Bengaluru, Chikkamagaluru), Arunachal Pradesh, Kerala, Manipur, Meghalaya, Sikkim, Tamil Nadu, Uttarakhand, West Bengal (Chopra, 1938; Srivastava & Udar, 1975b as *M. decipiens*; Singh et al., 2016).

Pallaviciniaceae

Pallavicinia Gray

Pallavicinia levieri Schiffn., Denkschr. Kaiserl. Akad. Wiss., Math.-Naturwiss. Kl. 67: 184. 1898.

Distribution: Karnataka (Kodagu) (Schwarz & Frahm, 2013).

Pallavicinia lyellii (Hook.) Carruth, Nat. Arr. Brit. Pl. 1: 685, 775 [errata]. 1821.

Jungermannia lyellii Hook., Brit. Jungerm. t. 77. 1816.

Steetzia lyellii (Hook.) Lehm., Pl. Preiss. 2: 129. 1846.

Pallavicinia canara Steph., Sp. Hepat. 6: 62. 1917.

Pallavicinia crispata (Mont.) Trevis., Mem. Reale Ist. Lombardo Sci., Ser. 3, Cl. Sci. Mat. 4: 427. 1877.

Diplolaena crispata Mont., Ann. Sci. Nat., Bot. (ser. 2) 18: 16. 1842.

Pallavicinia indica Schiffn., Denkschr. Kaiserl. Akad. Wiss. Wien Math.-Naturwiss. Kl. 67: 183. 1899.

Pallavicinia ridleyi Steph., Sp. Hepat. 6: 64. 1917.

Distribution: Karnataka (Dakshina Kannada, Shivamogga), Andhra Pradesh, Arunachal Pradesh, Assam, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Odisha, Tamil Nadu, Uttarakhand, West Bengal (Stephani, 1917; Pande & Srivastava, 1953; Singh et al., 2016).

Plagiochilaceae

Plagiochila (Dumort.) Dumort.

Plagiochila elegans Mitt., J. Proc. Linn. Soc., Bot. 5: 97. 1861.

[Plate 1: G]

Plagiochila consimilis Steph., Sp. Hepat. 6: 141. 1918.

Plagiochila hartlessiana Steph., Bull. Herb. Boissier (ser. 2) 3: 881. 1903.

Plagiochilapermagna Schiffn. ex Steph., Sp. Hepat. 6: 198. 1921.

Plagiochila pluridentata Steph., Bull. Soc. Roy. Bot. Belgique 41: 122. 1905.

Distribution: Karnataka (Shivamogga), Arunachal Pradesh, Kerala, Himachal Pradesh, Meghalaya, Sikkim, Tamil Nadu, West Bengal (Rawat & Srivastava, 2007; Singh et al., 2016).

Plagiochila flexuosa Mitt., J. Proc. Linn. Soc., Bot. 5: 94. 1861.

Plagiochila kurseongensis Schiffn. ex Steph., Sp. Hepat. 6: 173. 1918.

Plagiochila spinosocornuta Steph., Sp. Hepat. 2: 289. 1906.

Distribution: Karnataka (Chikkamagaluru), Kerala, Meghalaya, Sikkim, Tamil Nadu, West Bengal (Rawat & Srivastava, 2007; Singh et al., 2016).

Plagiochila fruticosa Mitt., J. Proc. Linn. Soc., Bot. 5: 94. 1861.

Plagiochila bipinnata Steph., Sp. Hepat. 6: 131. 1918.

Distribution: Karnataka (Sispara), Assam, Kerala, Meghalaya, Sikkim, Uttarakhand, Tamil Nadu, West Bengal (Rawat & Srivastava, 2007; Singh et al., 2016).

Plagiochila himalayana Schiffn., Oesterr. Bot. Z. 49: 131. 1899.

Plagiochila kudremuktii Steph., Sp. Hepat. 6: 173. 1918.

Distribution: Karnataka (Chikkamagaluru), Sikkim, West Bengal (Stephani, 1918; Rawat & Srivastava, 2007; Schwarz, 2013; Singh et al., 2016).

Plagiochila nepalensis Lindenb., Sp. Hepat. (*Plagiochila* fasc. 2–4): 93. 1840.

Plagiochila brevifolia Steph., Bull. Herb. Boissier (ser. 2), 3: 876. 1903.

Plagiochila cornuta Steph., Bull. Herb. Boissier (ser. 2) 3: 874. 1903.

Plagiochila decolyana Schiffn. ex Steph., Sp. Hepat. 6: 144. 1918.

Plagiochila gammiana Steph., Bull. Herb. Boissier (ser. 2), 3: 963. 1903.

Plagiochila gollanii Steph., Bull. Herb. Boissier (ser. 2) 3: 883. 1903.

Plagiochila gollanii var. *triquetra* Herzog, Ann. Bryol. 12: 76. 1939.

Plagiochila grata Steph., Sp. Hepat. 6: 160. 1918.

Plagiochila luethiana Steph., Sp. Hepat. 6: 180. 1921.

Plagiochila pseudorientalis Inoue, J. Hattori Bot. 30: 126. 1967.

Plagiochila remotistipula Steph., Sp. Hepat. 6: 201. 1921.

Plagiochila semiaperta Schiffn. ex Steph., Sp. Hepat. 6: 210. 1921.

Distribution: Karnataka (Chikkaballapur), Andhra Pradesh, Arunachal Pradesh, Himachal Pradesh, Kerala, Meghalaya, Sikkim, Tamil Nadu, Uttarakhand, West Bengal (Rawat & Srivastava, 2007; Singh et al., 2016).

Plagiochila semidecurrens (Lehm. & Lindenb.) Lindenb., Sp. Hepat. (*Plagiochila* fasc. 5): 142. 1843

Jungermanniasemidecurrens Lehm. & Lindenb. in Lehm., Nov. Stirp. Pug. 4: 21. 1832.

Plagiochila aequalis Mitt., J. Proc. Linn. Soc. (Bot. 5): 98. 1861.

Plagiochila asymmetrica Steph., Sp. Hepat. 6: 125. 1917.

Plagiochila grossevitta Steph., Sp. Hepat. 6: 161. 1918.

Plagiochila inermis Schiffn. ex Steph., Sp. Hepat. 6: 169. 1918.

Plagiochila kamaounensis Taylor, J. Bot. 5: 262. 1846.

Plagiochila longicalyx Steph., Bull. Herb. Boissier (ser. 2) 3: 532. 1903.

Plagiochila nidulans Herzog, Ann. Bryol. 5: 73. 1932.

Plagiochila nilgherriensis Steph., Sp. Hepat. 6: 189. 1921.

Plagiochila renitens (Nees) Lindenb., Sp. Hepat. (*Plagiochilafasc.* 2–4): 90. 1840.

Plagiochila schaulina Schiffn. ex Steph., Sp. Hepat. 6: 210. 1921.

Plagiochila semidecurrens var. *undulata* Carl., Ann. Bryol., Suppl. 2: 98. 1931.

Distribution: Karnataka (Chikkamagaluru), Arunachal Pradesh, Kerala, Meghalaya, Sikkim, Tamil Nadu, Uttarakhand, West Bengal (Rawat & Srivastava, 2007; Schwarz, 2013; Singh et al., 2016).

Porellaceae

Porella L.

Porella campylophylla (Lehm. & Lindb.) Trevis. subsp. **lancistipula** (Steph.) S.Hatt., J. Hattori Bot. Lab. 44: 102. 1978.

Madotheca lancistipula Steph., Sp. Hepat. 6: 524. 1924.

Porella lancistipula (Steph.) S.Hatt., J. Hattori Bot. Lab. 30: 138. 1967.

Distribution: Karnataka (Chikkamagaluru, Kodagu), Kerala, Tamil Nadu, Uttarakhand (Shaheen & S.C. Srivastava, 1989; Singh et al., 2016).

Radulaceae

Radula Dumort.

Radula acuminata Steph., Sp. Hepat. 4: 230. 1910.

Distribution: Karnataka (Shivamogga), Andaman & Nicobar Islands, Arunachal Pradesh, Assam, Manipur, Meghalaya, Sikkim (Singh et al., 2016).

Radula javanica Gottsche in Gottsche et al., Syn. Hepat. 257. 1845.

Radula wallichiana Lehm. & Lindenb. in Lehm., Nov. Stirp. Pug. 10: 9. 1857.

Radula sandei Steph., Hedwigia 9: 130. 1884 & Sp. Hepat. 4: 182. 1910.

Radula multiflora Gottsche ex Schiffn., Forschungsr. Gazelle 4: 20. 1890.

Distribution: Karnataka (Chikkamagaluru, Kodagu), Andaman & Nicobar, Arunachal Pradesh, Kerala, Madhya Pradesh, Meghalaya, Nagaland, Tamil Nadu (Udar & Kumar, 1982; Schwarz, 2013; Singh et al., 2016).

Radula pandei Udar & Dh.Kumar, Lindbergia 9: 133. 1983.

Distribution: Karnataka (Kodagu, Shivamogga), Arunachal Pradesh, Kerala (Udar & Kumar, 1983; Singh et al., 2016), endemic.

Ricciaceae

Riccia L.

Riccia billardieri Mont. & Nees in Gottsche et al., Syn. Hepat. 4: 602. 1846.

Riccia bulbifera Steph., Sp. Hepat. 1: 24. 1900.

Riccia bengalensis Sultan Khan, Bryologist 60: 28. 1957.

Riccia pimodii Kachroo, J. Indian Bot. Soc. 38: 216. 1959.

Riccia himalayensis auct. non Kashyap 1916 sensu Kashyap, Liverw. W. Himal. 1 (Suppl.): 7. 1932.

Distribution: Karnataka (Bengaluru, Dakshina Kannada, Shivamogga), Andaman & Nicobar Islands, Andhra Pradesh, Assam, Goa, Gujarat, Himachal Pradesh, Jharkhand, Kerala, Madhya Pradesh, Maharashtra, Manipur, Rajasthan, Sikkim, Tamil Nadu, Uttarakhand, Uttar Pradesh, West Bengal (Pande & Udar, 1958; K.P. Srivastava 1964; Bag et al. 2007; Singh et al., 2016).

Riccia crystallina L. Sp. Pl. 1138. 1753 emend. Raddi, Opusc. Sci. (Bologna) 12: 353. 1818.

Riccia plana Taylor, London J. Bot. 5: 414. 1846.

Distribution: Karnataka (Dakshina Kannada), Goa, Jammu & Kashmir, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Uttar Pradesh, West Bengal (Pande & Udar, 1958; Singh et al., 2016).

Riccia discolor Lehm. & Lindenb. in Lehm., Nov. Stirp. Pug. 4: 1. 1832.

Riccia himalayensis Kashyap, J. Bombay Nat. Hist. Soc. 24: 349. 1916.

Riccia gollanii Lev. ex Steph., Sp. Hepat. 6: 2. 1924.

Distribution: Karnataka (Dakshina Kannada, Shivamogga), Andhra Pradesh, Assam, Gujarat, Himachal Pradesh, Jammu & Kashmir, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Punjab, Rajasthan, Sikkim, Tamil Nadu, Uttarakhand, Uttar Pradesh, West Bengal (Srivastava, 1964; Singh et al., 2016).

Riccia huebeneriana Lindenb., Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur. 18: 504d. 1837.

Riccia kashyapii Kachroo, Sci. & Cult. 20: 98. 1954.

Distribution: Karnataka (Dakshina Kannada), Assam, Goa, Kerala, Madhya Pradesh, Sikkim, Uttar Pradesh, West Bengal (Srivastava, 1964; Singh et al., 2016).

Riccia mangalorica Sultan Ahmad ex Jovet-Ast in Cryptog. Bryol. 24: 223. 2003.

Distribution: Karnataka (Dakshina Kannada), Rajasthan (Ahmad, 1942; Jovet-Ast, 2003).

Solenostomataceae

Solenostoma Mitt.

Solenostoma stephanii (Schiffn.) Steph., Bull. Herb. Boissier, Ser. 2, 1: 496. 1901 & Sp. Hepat. 2: 58. 1901.

Aplozia stephanii Schiffn., Denkschr. Kaiserl. Akad. Wiss. Math.-Naturwiss. Kl. 67: 195. 1898.

Jungermannia stephanii (Schiffn.) Amakawa, J. Hattori Bot. Lab. 31: 101. 1968.

Distribution: Karnataka (Dakshina Kannada), Andaman & Nicobar Islands, Sikkim, West Bengal (Bapna & Kachroo, 2000; Singh & Singh, 2006; Schwartz, 2013, all as *J. stephanii*; Singh et al., 2016).

Solenostoma tetragonum (Lindenb.) R.M. Schust. ex Váňa & D.G. Long, Nova Hedwigia 89: 509. 2009.

Jungermannia tetragona Lindenb., Bot. Zeit. (Berlin) 6: 462. 1848.

Distribution: Karnataka (Dakshina Kannada), Andaman & Nicobar, Arunachal Pradesh, Assam, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Sikkim, Tamil Nadu, Uttarakhand, West Bengal (Váňa, 1974 as *J. tetragona*; Schwartz, 2013; Singh et al., 2016).

Targioniaceae

Targionia L.

Targionia hypophylla L., Sp. Pl. 1136. 1753.

Distribution: Karnataka (Kodagu, Mysuru), Andhra Pradesh, Arunachal Pradesh, Gujarat, Himachal Pradesh, Jammu & Kashmir, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Odisha, Rajasthan, Sikkim, Tamil Nadu, Uttarakhand, West Bengal (Chopra, 1938; Schwarz & Frahm, 2013; Singh et al., 2016).

Bryophyta (Mosses)

Archidiaceae

Archidium Brid.

Archidium birmannicum Mitt. ex Dixon, *J. Indian Bot.* 2: 175. 1921; J.-P. Frahm, U. Schwarz & C.N. Manju, *Arch. Bryol.* 158: 2. 2013.

Archidium novae-guineae Dixon, *J. Bot.* 80: 3. 1942.

Distribution: Karnataka (Uttara Kannada, Karwar) (Dixon, 1921; Frahm et al., 2013).

Bartramiaceae**Philonotis** Brid.

Philonotis angusta Mitt., *J. Proc. Linn. Soc., Bot., Suppl. 1: 61.1859*; J.-P. Frahm, U. Schwarz & C.N. Manju, *Arch. Bryol.* 158: 9. 2013.

Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Philonotis hastata (Duby) Wijk & Margad., *Taxon* 8: 74.1959; J.-P. Frahm, U. Schwarz & C.N. Manju, *Arch. Bryol.* 158: 9. 2013.

Hypnum hastatum Duby, *Syst. Verz.* 132.1846.

Philonotis heterophylla Mitt., *J. Proc. Linn. Soc., Bot., Suppl. 1: 60.1859*

Philonotis imbricatula Mitt., *J. Proc. Linn. Soc., Bot., Suppl. 1: 60.1859*.

Philonotis imbricatula var. *synoica* Thér., *Recueil Publ. Soc. Havraise Études Diverses* 87: 102. 1f. 3.1920.

Philonotis asperifolia Mitt., *J. Linn. Soc., Bot.* 10: 185.1868.

Bartramia obtusifolia Mitt., *Fl. Vit.* 381. 1873.

Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Philonotis mollis (Dozy & Molk.) Mitt., *J. Proc. Linn. Soc., Bot., Suppl. 1: 60.1859*; J.-P. Frahm, U. Schwarz & C.N. Manju, *Arch. Bryol.* 158: 9. 2013.

Bartramia mollis Dozy & Molk., *Ann. Sci. Nat., Bot., sér. 3, 2: 300.1844*.

Bartramia secunda Dozy & Molk., *Pl. Jungh.* 3: 332.1854.

Philonotis mollis var. *simplicicaulis* Zanten, *Nova Guinea, Bot.* 16: 10(16): 293. pl. 25: f. 1.1964.

Distribution: Karnataka (Kodagu) (Brotherus, 1899; Dixon, 1912; Gangulee, 1974).

Philonotis thwaitesii Mitt., *J. Proc. Linn. Soc., Bot., Suppl. 1: 60. 1859*; J.-P. Frahm, U. Schwarz & C.N. Manju, *Arch. Bryol.* 158: 9. 2013.

Philonotis appressifolia Dixon, *Hong Kong Naturalist, Suppl. 2: 18.1933*.

Philonotis revoluta Bosch & Sande Lac., *Bryol. Jav.* 1: 158. 128.1861.

Philonotis socia Mitt., *J. Proc. Linn. Soc., Bot.* 8: 151.1864.

Philonotis sumatrana Dixon, *Ann. Bryol.* 5: 32.1932.

Distribution: Karnataka (Kodagu ?), Maharashtra (Frahm et al., 2013).

Brachytheciaceae

Brachythecium Schimp.

Brachythecium buchananii (Hook.) A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1876–77: 341 (Gen. Sp. Musc. 2: 1159) 1878; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 3. 2013.
Hypnum buchananii Hook., Trans. Linn. Soc. London 9: 320. 28 f. 3. 1808.
 Distribution: Karnataka (Kodagu), Maharashtra (Brotherus, 1899).

Brachythecium procumbens (Mitt.) A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1876–77: 341 (Gen. Sp. Musc. 2: 409).1878; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 3. 2013.
Hypnum procumbens Mitt., J. Proc. Linn. Soc., Bot., Suppl. 1: 70. 1859.
 Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Oxyrrhynchium (Schimp.) Warnst.

Oxyrrhynchium vagans (A. Jaeger) Ignatov & Huttunen, Arctoa 11: 273. 2002; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 7. 2013.
Rhynchostegium vagans A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1876–77: 369.1878.
Rhynchostegium patentifolium Müll. Hal., Nuovo Giorn. Bot. Ital., n.s., 4: 272. 1897.
Eurhynchium vagans (A. Jaeger) E.B. Bartram, Bernice P. Bishop Mus. Bull. 101: 213. 158.1933.
 Distribution: Karnataka (Kodagu) (Gangulee, 1980).

Platyhypnidium M. Fleisch.

Platyhypnidium riparioides (Hedw.) Dixon, Rev. Bryol. Lichénol. 6: 111.1934; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 9. 2013.
Hypnum riparioides Hedw., Sp. Musc. Frond. 242.1801.
Eurhynchium riparioides (Hedw.) P.W. Richards, Ann. Bryol. 9: 135.1937.
 Distribution: Karnataka (Shivamogga) (Sundararaghavan & Wadhwa, 1968).

Rhynchostegium Bruch & Schimp.

Rhynchostegium herbaceum (Mitt.) A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1876–77: 368 (Gen. Sp. Musc. 2: 434) 1878; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 10. 2013.
Hypnum herbaceum Mitt., J. Proc. Linn. Soc., Bot., Suppl. 1: 81 1859.
 Distribution: Karnataka (Kodagu) (Brotherus, 1899; Gangulee, 1980).

Bruchiaceae

Trematodon Michx.

Trematodon longicollis Michx., Fl. Bor.-Amer. 2: 289.1803; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 11. 2013.
Trematodon paucifolius Müll. Hal., Syn. Musc. Frond. 1: 459.1848.
Trematodon acutus Müll. Hal., Syn. Musc. Frond. 1: 458.1848.
Trematodon reflexus Müll. Hal., Syn. Musc. Frond. 1: 459.1848.
Trematodon squarrosus Müll. Hal., Bot. Zeitung (Berlin) 15: 381.1857.
Trematodon ceylonensis Müll. Hal., Bot. Zeitung (Berlin) 22: 350.1864.
Trematodon uncinatus Müll. Hal., Linnaea 38: 628.1874.
Trematodon flexifolius Müll. Hal., Flora 69: 278.1886.
Trematodon cubensis Müll. Hal., Hedwigia 37: 228.1898.
Trematodon reineckei Müll. Hal., Bot. Jahrb. Syst. 23: 320.1896
 Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Bryaceae

Anomobryum Schimp.

Anomobryum auratum (Mitt.) A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1873–74: 142 (Gen. Sp. Musc. 1: 604). 1875; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 2. 2013.

Bryum auratum Mitt., J. Proc. Linn. Soc., Bot., Suppl. 1: 67. 1859.

Distribution: Karnataka (Dakshina Kannada, Kodagu), Maharashtra (Brotherus, 1899).

Anomobryum cymbifolium (Lindb.) Broth., Rec. Bot. Surv. India 1(12): 320.1899.

Bryum cymbifolium Lindb., Not. Sällsk. Fauna Fl. Fenn. Förh. 11: 45. 1870.

Distribution: Karnataka (Kodagu), Maharashtra (Brotherus, 1899).

Brachymenium Schwägr.

Brachymenium bryoides Hook. ex Schwägr., Sp. Musc. Frond., Suppl. 2 2: 134. t. 135. 1824; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 3. 2013.

Brachymenium weissia Harv., Icon. Pl. 1: t.19, f. 1.1836.

Distribution: Karnataka (Kodagu) (Brotherus, 1899), endemic.

Brachymenium nepalense Hook., Sp. Musc. Frond., Suppl. 2 2: 131.t. 135.1824; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 3. 2013.

Brachymenium contortum Griff., Calcutta J. Nat. Hist. 3: 56.1843.

Distribution: Karnataka (Kodagu, Shivamogga, Uttara Kannada), Maharashtra (Sundara-raghavan & Wadhwa, 1968).

Brachymenium turgidum Broth. ex Dixon, Rev. Bryol. 35: 94. 1908; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 3. 2013.

Brachymenium turgidum var. *nanum* Dixon, J. Indian Bot. 2: 183.1921.

Distribution: Karnataka (?), Maharashtra (Frahm et al., 2013), endemic.

Brachymenium walkeri Broth., Rec. Bot. Surv. India 1(12): 320.1899; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 3. 2013.

Distribution: Karnataka (Kodagu), Maharashtra (Brotherus, 1899; Dixon, 1911), endemic.

Bryum Hedw.

Bryum apalodictyoides Müll. Hal., Bot. Zeitung (Berlin) 11: 21 1853; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 3. 2013.

Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Bryum argenteum Hedw., Sp. Musc. Frond. 181.1801; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 3. 2013.

Brachymenium argenteoides Dixon, Notes Roy. Bot. Gard. Edinburgh 19(95): 289.1938.

Distribution: Karnataka (Kodagu, Shivamogga) (Brotherus, 1899; Sundararaghavan & Wadhwa, 1968).

Bryum billarderi Schwägr., Sp. Musc. Frond., Suppl. 1 2: 115. t. 76.1816; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 3. 2013.

Distribution: Karnataka (Kodagu, Shivamogga) (Brotherus, 1899).

- Bryum coronatum** Schwägr., Sp. Musc. Frond., Suppl. 1 2: 103. t. 71.1816; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 3. 2013.
Distribution: Karnataka (Shivamogga) (Sundararaghavan & Wadhwa, 1968).
- Bryum doliolum** Duby, Syst. Verz. 133.1846.
Distribution: Karnataka (Kodagu) (Brotherus, 1899).
- Bryum medianum** Mitt., J. Proc. Linn. Soc., Bot., Suppl. 1: 74.1859; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 4. 2013.
Distribution: Karnataka (Kodagu), Meghalaya (Mitten, 1859; Brotherus, 1899).
- Bryum mildeanum** Jur., Verh. Zool.-Bot. Ges. Wien 12: 967.1862
Bryum apiculatum Schwägr., Sp. Musc. Frond., Suppl. 1 2: 102. t. 72.1816; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 3. 2013.
Bryum mauiense Broth., Bernice P. Bishop Mus. Bull. 40: 14.1927.
Bryum megalostegium Sull., U.S. Expl. Exped., Musci 9. 7a.1859.
Bryum ghatense Broth. ex Dixon, J. Bombay Nat. Hist. Soc. 19: 941. 1910.
Bryum alpinum var. *mildeanum* (Jur.) Podp., Consp. Musc. Eur. 357.1954.
Distribution: Karnataka (Shivamogga) (Sundararaghavan & Wadhwa, 1968).
- Bryum ramosum** (Harv.) Mitt., J. Proc. Linn. Soc., Bot., Suppl. 1: 75.1859.
Mnium ramosum Harv., Icon. Pl. 1: t. 20, f. 2.1836.
Distribution: Karnataka (Kodagu, Shivamogga) (Frahm et al., 2013).
- Bryum thomsonii** Mitt., J. Proc. Linn. Soc., Bot., Suppl. 1: 73.1859; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 4. 2013.
Bryum erythrinum Mitt., J. Proc. Linn. Soc., Bot., Suppl. 1: 70.1859.
Bryum porphyroneuron var. *giganteum* M. Fleisch., Musci Buitenzorg 2: 549.1904.
Bryum porphyroneuron Müll. Hal. var. *erythrinum* (Mitt.) M. Fleisch. in Broth., Nat. Pflanzenfam. 1(3): 590. 1904.
Distribution: Karnataka (Kodagu) (Brotherus, 1899; Gangulee, 1974).
- Bryum wightii** Mitt., J. Proc. Linn. Soc., Bot., Suppl. 1: 74.1859; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 4. 2013.
Bryum bohnhofii Müll. Hal. ex Broth., Nat. Pflanzenfam. 1(3): 598.1900.
Bryum formosum Mitt., J. Bot. 38: 329. 413.1900.
Bryum srilankenese Mohamed, J. Bryol. 12: 25. f. 2.1982; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 4. 2013.
Distribution: Karnataka (Kodagu, Shivamogga), Sri Lanka (Brotherus, 1899; Sundararaghavan & Wadhwa, 1968).

Rhodobryum (Schimp.) Hampe

Rhodobryum giganteum (Schwägr.) Paris, Index Bryol. 1116.1898; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 10. 2013.

Mnium giganteum Schwägr., *Sp. Musc. Frond., Suppl. 2 2(1): 20. t. 158.1826.*

Bryum giganteum (Schwägr.) Arn., Mém. Soc. Linn. Paris 5: 279.1827.

Bryum sollyanum Griff., Calcutta J. Nat. Hist. 3: 61.1843.

Bryum pseudogiganteum Müll. Hal., Flora 82: 439.1896.

Rhodobryum pseudogiganteum (Müll. Hal.) Paris, Index Bryol. 1119.1898.

Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Rosulabryum J.R.Spence

Rosulabryum tuberosum (Mohamed & Damanhuri) J.R. Spence, Bryologist 99: 223.1996; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 10. 2013.

Bryum tuberosum Mohamed & Damanhuri, Bryologist 93: 288. F.1–10.1990.

Distribution: Karnataka (Udupi) (Nair et al., 2004; Frahm et al., 2013).

Calympereaceae**Calymperes** Sw. ex F.Weber

Calymperes erosum Müll. Hal., Linnaea 21: 182.1848; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 4. 2013.

Calymperes fordii Besch., Ann. Sci. Nat., Bot., sér. 8, 1: 284.1896.

Distribution: Karnataka (Uttara Kannada) (Dixon, 1912).

Calymperes lonchophyllum Schwägr., Sp. Musc. Frond., Suppl. 1 2: 333. t. 98.1816; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 4. 2013.

Calymperes nietneri Müll. Hal., Bot. Zeitung (Berlin) 22: 348.1864.

Calymperes lonchophylloides Müll. Hal., Gen. Musc. Frond. 362.1900.

Distribution: Karnataka (Uttara Kannada) (Dixon, 1912).

Calymperes mangaloreense Dixon & P. de la Varde, Arch. Bot. Bull. Mens. 1(8–9): 164. 4, f.1.1927; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 4. 2013.

Distribution: Karnataka (Dakshina Kannada) (Ellis, 1989).

Chameleion L.T.Ellis & A.Eddy

Chameleion peguense (Besch.) L.T. Ellis & A. Eddy, Handb. Males. Mosses 2: 250. 1990; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 4. 2013.

Calymperes peguense Besch., Ann. Sci. Nat., Bot., sér. 8, 1: 299.1896.

Calymperes palisotii subsp. *richardii* (Müll. Hal.) S.R. Edwards, *J. Bryol.* 11: 81.1980.

Heliconema peguense (Besch.) L.T. Ellis & A. Eddy, *J. Bryol.* 15: 730.1989.

Distribution: Karnataka (Dakshina Kannada) (Ellis, 1989).

Octoblepharum Hedw.

Octoblepharum albidum Hedw., Sp. Musc. Frond. 50.1801; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 7. 2013.

Octoblepharum longifolium Lindb., Öfvers. Förh. Kongl. Svenska Vetensk.-Akad. 21: 608. 1865.

Octoblepharum minus Hampe, Vidensk. Meddel. Dansk Naturhist. Foren. Kjøbenhavn 1: 83.1879.

Octoblepharum albidum var. *cuspidatum* Müll. Hal., Bot. Jahrb. Syst. 23: 318.1896.

Octoblepharum cuspidatum Müll. Hal., Gen. Musc. Frond. 88.1900.

Distribution: Karnataka (Kodagu, Shivamogga) (Sundararaghavan & Wadhwa, 1968).

Syrrhopodon Mont.

Syrrhopodon semiliber (Mitt.) Besch., Index Bryol. 12: 55. 1898; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 11. 2013.

Calymperes semiliberum Mitt., J. Proc. Linn. Soc., Bot., Suppl. 1: 41.1859.

Calymperopsis semiliber (Mitt.) M. Fleisch., Biblioth. Bot. 80: 5.1913.

Syrrhopodon assamicus H. Rob., Bryologist 71: 84. f. 11–18.1968.

Distribution: Karnataka (Uttara Kannada) (Dixon, 1912).

Cryphaeaceae

Dendropogonella E. Britton

Dendropogonella rufescens (Schimp.) E. Britton, Bryologist 9: 39.1906; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 5. 2013.

Dendropogon rufescens Schimp., Bot. Zeitung (Berlin) 1: 381. t. 1.1843.

Cryphaea rufescens (Schimp.) Müll. Hal., Linnaea 18: 682.1845.

Distribution: Karnataka (Kodagu) (Sundararaghavan & Wadhwa, 1968).

Schoenobryum Dozy & Molk.

Schoenobryum concavifolium (Griff.) Gangulee, Mosses E. India 5: 1209.1976; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 10. 2013.

Orthotrichum concavifolium Griff., Calcutta J. Nat. Hist. 2: 484. 1842.

Acrocryphaea concavifolia (Griff.) Bosch & Sande Lac., Bryol. Jav. 2: 106.1864.

Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Daltoniaceae

Daltonia Hook. & Taylor

Daltonia reticulate Müll. Hal., Linnaea 36: 20.1869; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 5. 2013.

Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Dicranaceae

Campylopus Brid.

Campylopus fragilis (Brid.) Bruch & Schimp. subsp. **goughii** (Mitt.) J.-P. Frahm, Trop. Bryol. 4: 61. 1991; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 4. 2013.

Campylopus goughii (Mitt.) A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1870–71: 424 (Gen. Sp. Musc. 1: 128). 1872.

Campylopus nietneri (Müll. Hal.) A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1870–71: 423 (Gen. Sp. Musc. 1: 136). 1872.

Dicranum goughii Mitt., J. Proc. Linn. Soc., Bot., Suppl. 1: 17.1859.

Dicranum nietneri Müll. Hal., Linnaea 36: 35.1869.

Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Campylopus richardii Brid., Muscol. Recent. Suppl. 4: 73.1819.

Dicranum nigrescens Mitt., J. Proc. Linn. Soc., Bot., Suppl. 1: 19.1859.

Campylopus nigrescens Duby, Mém. Soc. Phys. Genève 19: 292, f. 1.1868.

Campylopus nigrescens (Mitt.) A. Jaeger

Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1870–71: 417 (Gen. Sp. Musc. 1: 121). 1872; Broth., Rec. Bot. Surv. India 1(12): 312. 1899.

Distribution: Karnataka (Kodagu), Bihar, Meghalaya, Sikkim (Brotherus, 1899).

Campylopus umbellatus (Schwägr. & Gaudich. ex Arn.) Paris, *Index Bryol.* 264.1894; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 4. 2013.

Thysanomitrium umbellatum Schwägr. & Gaudich. ex Arn., Mém. Soc. Linn. Paris 5: 263.1827.

Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Dicranella (Müll. Hal.) Schimp.

Dicranella griffithii (Mitt.) A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1870–71: 376 (Gen. Sp. Musc. 1: 80). 1872; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 5. 2013.

Leptotrichum griffithii Mitt., J. Proc. Linn. Soc., Bot., Suppl. 1: 9.1859.

Distribution: Karnataka (Kodagu) (Giese & Frahm, 1985).

Dicranella pomiformis (Griff.) A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1870–71: 372 (Gen. Sp. Musc. 1: 76). 1872; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 5. 2013.

Didymodon pomiformis Griff., Calcutta J. Nat. Hist. 2: 508.1842.

Weissiabra siliensis Duby, Mém. Soc. Phys. Genève 7: 412. t. 4.1836.

Aongstroemia pomiformis (Griff.) Müll. Hal., Linnaea 36: 12.1869.

Microdus pomiformis (Griff.) Besch., Index Bryol. 805.1897.

Microdus brasiliensis (Duby) Thér., Bull. Herb. Boissier, sér. 2, 7: 278.1907.

Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Leucoloma Brid.

Leucoloma taylorii (Schwägr.) Mitt., Hooker's J. Bot. Kew Gard. Misc. 8: 353.1856; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 7. 2013.

Syrrhopodon taylorii Schwägr., Sp. Musc. Frond., Suppl. 2 2: 115. t. 132.1824.

Leucoloma walkeri Broth., Rec. Bot. Surv. India 1(12): 313.1899.

Leucoloma mittenii M. Fleisch., Musci Buitenzorg 1: 125.1904.

Distribution: Karnataka (Kodagu, Uttara Kannada) (Brotherus, 1899).

Leucoloma tenerum Mitt., Hooker's J. Bot. Kew Gard. Misc. 8: 353.1856; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 7. 2013.

Leucoloma renaudii Broth., Rec. Bot. Surv. India 1(12): 313.1899.

Leucoloma strictifolium Dixon, J. Indian Bot. 2: 176. 1921.

Distribution: Karnataka (Kodagu, Shivamogga, Uttara Kannada) (Brotherus, 1899; Sundara-raghavan & Wadhwa, 1968).

Microcampylopus (Müll. Hal.) M. Fleisch.

Microcampylopus khasianus (Griff.) Giese & J.-P. Frahm, Lindbergia 11: 118. 1986; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 8. 2013.

Dicranum khasianum Griff., Calcutta J. Nat. Hist. 2: 496.1842.

Campylopodium khasianum (Griff.) Paris, Index Bryol. 237.1894.

Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Ditrichaceae**Garckea** Müll.Hal.

Garckea phascoides (Hook.) Müll. Hal., Bot. Zeitung (Berlin) 3: 865.1845; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 7. 2013.

Dicranum phascoides Hook., Bot. Misc. 1: 39. 21. 1829.

Grimmia flexuosa Griff., Calcutta J. Nat. Hist. 2: 492.1842.

Grimmia comosa Dozy & Molk., Ann. Sci. Nat., Bot., sér. 3, 2: 304.1844.

Garckea flexuosa (Griff.) Margad. & Nork., J. Bryol. 7: 440.1973.

Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Entodontaceae**Entodon** Müll.Hal.

Entodon plicatus Müll. Hal., Linnaea 18: 706.1845; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 5. 2013.

Entodon plicatififormis Dixon, Notes Roy. Bot. Gard. Edinburgh 20: 100. 1948.

Distribution: Karnataka (Kodagu, Shivamogga, Uttara Kannada), Maharashtra (Brotherus, 1899; Dixon, 1912; Sundararaghavan & Wadhwa, 1968; Gangulee, 1980).

Erythrodonium Hampe

Erythrodonium julaceum (Hook. ex Schwägr.) Paris, Index Bryol. 436.1896; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 5. 2013.

Pterogonium squarrosus Griff., Calcutta J. Nat. Hist. 3: 63.1843.

Pterogonium squarrosulum Mont., London J. Bot. 4: 9.1845

Braunia julacea (Hook. ex Schwägr.) J. Shaw, Cape Monthly Mag. 17: 38.1878.

Platygyrium squarrulosum A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1876–77: 277.1878.

Entodon squarrulosus (Mont.) Müll. Hal., Linnaea 42: 435.1879.

Erythrodonium squarrulosum (Mont.) Paris, Index Bryol. 437.1896.

Distribution: Karnataka (Kodagu) (Brotherus, 1899; Gangulee, 1980).

Mesonodon Hampe

Mesonodon flavescens (Hook.) W.R. Buck, J. Hattori Bot. Lab. 48: 117.1980; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 8. 2013.

Pterogonium flavescens Hook., Musci Exot. 2: 155.1819.

Campylodontium flavescens (Hook.) Bosch & Sande Lac., Bryol. Jav. 2: 128. 1865.

Fabronia flavescens (Hook.) Paris, Index Bryol. 454.1896.

Taxithelium isopterygioides Dixon, J. Bot. 53: 295. t. 540, f. 9.1915.

Glossadelphus isopterygioides (Dixon) Broth., Nat. Pflanzenfam. ed. 2, 11: 444. 1925.

Distribution: Karnataka (Kodagu, Mysore? or Chamarajanagara) (Brotherus, 1899; Gangulee, 1980).

Fissidentaceae**Fissidens** Hedw.

Fissidens anomalus Mont., Ann. Sci. Nat., Bot., sér. 2, 17: 252.1842; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 5. 2013.

Fissidens cryptotheca Dozy & Molk., Pl. Jungh. 314.1854.

Fissidens neckeroides Griff., Calcutta J. Nat. Hist. 2: 504.1842.

Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Fissidens bryoides var. **schmidii** (Müll. Hal.) R.S.Chopra & S.S.Kumar, Ann. Cryptog. Phytopathol. (New Delhi) 5: 43. 1981.

Fissidens schmidii Müll. Hal., Bot. Zeitung (Berlin) 11: 18.1853.

Fissidens glossobryoides Dixon, Proc. Linn. Soc. New South Wales 55: 269, 8 f.1.1930.

Fissidens hasskarlii A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1874–75: 89.1876.

Fissidens occultifolius Müll. Hal. ex Paris, Index Bryol. (ed. 2) 2: 217.1904.

Fissidens bryoides subsp. *schmidii* (Müll. Hal.) Nork. in Gangulee, Mosses E. India 2: 471. 1971; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 6. 2013.

Distribution: Karnataka (Dakshina Kannada) (Gangulee, 1969).

Fissidens carnosus Broth., Rec. Bot. Surv. India 1(12): 314.1899; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 6. 2013 ('*carnonis*').
Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Fissidens coorgensis Broth., Rec. Bot. Surv. India 1(12): 316. 1899; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 6. 2013.
Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Fissidens crispulus Brid., Muscol. Recent. Suppl. 4: 187.1819; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 6. 2013.
Fissidens sylvaticus Griff., Calcutta J. Nat. Hist. 2: 507. 1842.
Fissidens curvifolius Mitt., Trans. Linn. Soc. London 23: 55. 6 f. 14.1860.
Conomitrium amphibium Müll. Hal., Linnaea 39: 356.1875.
Fissidens procumbens Mitt., Philos. Trans. 168(extra vol.): 395.1879.
Distribution: Karnataka (Uttara Kannada) (Dixon, 1912).

Fissidens excedens Broth., Rec. Bot. Surv. India 1(12): 315.1899; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 6. 2013 '*exceedens*'.
Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Fissidens fuscoviridis Thwaites & Mitt., J. Linn. Soc., Bot. 13: 323.1873; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 6. 2013 '*Fissidens fuscoviridis* Mitt.'.
Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Fissidens immutatus Dixon, J. Indian Bot. 2: 179. 1921; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 6. 2013.
Distribution: Karnataka (Uttara Kannada) (Dixon, 1921).

Fissidens karwarensis Dixon, J. Indian Bot. 2: 179.1921; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 6. 2013.
Distribution: Karnataka (Uttara Kannada) (Dixon, 1921).

Fissidens lutescens Broth., Rec. Bot. Surv. India 1(12): 315.1899; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 6. 2013.
Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Fissidens macrosporus Dixon, J. Indian Bot. 2: 179. 1921; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 6. 2013.
Distribution: Karnataka (Uttara Kannada) (Dixon, 1921).

Fissidens sedgwickii Broth. & Dixon, J. Bot. 48: 305. 507, f. 1.1910; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 6. 2013.
Distribution: Karnataka (Uttara Kannada) (Dixon, 1912).

Fissidens subfirmus Dixon, J. Indian Bot. 2: 178.1921; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 6. 2013.
Distribution: Karnataka (Uttara Kannada) (Dixon, 1921).

Fissidens sylvaticus var. **auriculatus** (Müll. Hal.) Gangulee, Mosses E. India 2: 540.1971; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 6. 2013.
Fissidens auriculatus Müll. Hal., Linnaea 37: 166.1872.
Distribution: Karnataka (Kodagu) (Gangulee, 1969).

Fissidens walkeri Broth., Rec. Bot. Surv. India 1(12): 315.1899; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 6.2013.

var. **elimbatus** (Broth.) Dixon, J. Indian Bot. 2: 177.1921; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 6.2013.

Fissidens elimbatus Broth., Rec. Bot. Surv. India 1(12): 316.1899.

Distribution: Karnataka (Kodagu) (Brotherus, 1899).

var. **walkeri**

Distribution: Karnataka (Kodagu, Uttara Kannada) (Brotherus, 1899).

Fissidens zippelianus Dozy & Molk., Syst. Verz. 29. 1854; Dixon, J. Indian Bot. 2: 180. 1921.

Distribution: Karnataka (Uttara Kannada) (Dixon, 1921).

Fissidens zollingeri Mont., Ann. Sci. Nat., Bot., sér. 3, 4: 114.1845; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 6.2013.

Fissidens brachycaulon Broth., Wiss. Erg. Deut. Zentr.-Afr. Exped., Bot. 2: 143. 11 f. 143.1910.

Distribution: Karnataka (Uttara Kannada) (Dixon, 1912; Gangulee, 1969).

Funariaceae

Entosthodon Schwägr.

Entosthodon buseanus Dozy & Molk. Bryol.Jav. 1: 31. 22, f. 1-23. 1855.

Distribution: Karnataka (Schwarz, 2016).

Entosthodon physcomitrioides (Mont.) Mitt., J. Proc. Linn. Soc., Bot. suppl. 1: 55. 1859.

Funaria physcomitrioides Mont., Ann. Sci. Nat. Bot., sér. 2 17: 253. 1842.

Distribution: Karnataka (Schwarz, 2016).

Funaria Hedw.

Funaria hygrometrica Hedw., Sp. Musc. Frond. 172.1801; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 6.2013.

Funaria hygrometrica var. *patula* Bruch & Schimp., Bryol. Eur. 3: 266. 305 (fasc. 11 Mon. 8 3b). 1846.

Funaria hygrometrica var. *intermedia* Warnst., Verh. Bot. Vereins Prov. Brandenburg 42: 200.1901.

Funaria hygrometrica var. *utahensis* Grout, Moss Fl. N. Amer. 2: 84.1935.

var. **calvescens** (Schwägr.) Mont., Ann. Sci. Nat., Bot., sér. 2, 12: 54.1839; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 6. 2013.

Funaria calvescens Schwägr., Sp. Musc. Frond., Suppl. 1 2: 77. t. 65.1816.

Funaria leptopoda Griff., Calcutta J. Nat. Hist. 2: 512.1842; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 7. 2013 '*leptophylla*'.

Funaria nepalensis Müll. Hal., Bot. Zeitung (Berlin) 13: 748.1855.

Funaria annulata Besch., Mém. Soc. Sci. Nat. Cherbourg 16: 192.1872.

Funaria megapoda Müll. Hal., Bull. Herb. Boissier 5: 175.1897.

Distribution: Karnataka (Kodagu)(Sundararaghavan & Wadhwa, 1968; Schwarz, 2016).

var. **hygrometrica**

Distribution: Karnataka (Shivamogga) (Sundararaghavan & Wadhwa, 1968; Schwarz, 2016).

Physcomitrium (Brid.) Brid.

Physcomitrium coorgense Broth., Rec. Bot. Surv. India 1(12): 319.1899; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 9. 2013.

Distribution: Karnataka (Kodagu, Shivamogga, Uttara Kannada) (Brotherus, 1899; Gangulee, 1974; Schwarz, 2016).

Physcomitrium insigne Dixon & P. de la Varde, Arch. Bot. Bull. Mens. 1(8–9): 168, 3 f. 5. 1927.

Distribution: Karnataka (Schwarz, 2016).

Physcomitrium schummii U.Schwarz, Frahmia 13: 3. 1916.

Distribution: Karnataka (Kodagu)(Schwarz, 2016), endemic.

Hookeriaceae

Cyathophorum P.Beauv.

Cyathophorum adiantum (Griff.) Mitt., J. Proc. Linn. Soc., Bot., Suppl. 2: 147.1859; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 5. 2013. '*adianthum*'

Neckera adiantum Griff., Icon. Pl. Asiat. t. 85 f. 2.1849.

Cyathophorum sublimbatum Thwaites & Mitt., J. Linn. Soc., Bot. 13: 309.1873.

Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Hypnaceae

Ectropothecium Mitt.

Ectropothecium compressifolium (Mitt.) A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1877–78: 260 (Gen. Sp. Musc. 2: 524).1880; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 5. 2013. '*Ectropothecium compressifolium*'

Hypnum compressifolium Mitt., Hooker's J. Bot. Kew Gard. Misc. 8: 355. 1856.

Distribution: Karnataka (Uttara Kannada) (Dixon, 1921).

Ectropothecium cyperoides (Hook. ex Harv.) A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1877–78: 259 (Gen. Sp. Musc. 2: 522). 1880; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 5. 2013.

Hypnum cyperoides Hook. ex Harv., *Icon. Pl. 1: t. 23, f. 5*. 1836.

Ectropothecium pseudocyperoides M. Fleisch., *Hedwigia* 44: 326. 1905.

Rhaphidostegium ambiguum A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1876–77: 405. 1878.

Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Ectropothecium stereodontoides (Dixon) Wijk & Margad., *Taxon* 9: 189. 1960; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 5. 2013.

Ctenidium stereodontoides Dixon, *J. Indian Bot.* 2: 186. 9. 1921.

Distribution: Karnataka (Uttara Kannada) (Dixon, 1921).

Isopterygium Mitt.

Isopterygium lignicola (Mitt.) A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1876–77: 432 (Gen. Sp. Musc. 2: 498). 1878; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 7. 2013.

Hypnum lignicola Mitt., *Hooker's J. Bot. Kew Gard. Misc.* 8: 355. 1856.

Distribution: Karnataka (Kodagu) (Brotherus 1899; Gangulee, 1980).

Platygyriella Cardot

Platygyriella densa (Hook.) W.R. Buck, *Brittonia* 36: 86. 1984; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 9. 2013.

Leskea densa Hook., *Syn. Pl.* 1: 61. 1822.

Entodon pallidissimus Müll. Hal., *Linnaea* 42: 494. 1879.

Platygyriella helicodontioides Cardot, *Rev. Bryol.* 37: 9. 1910.

Erythrodontium subdensum Broth. & Thér., *Recueil Publ. Soc. Havraise Études Diverses* 88: 313, 5. 1921.

Distribution: Karnataka (Shivamogga) (Sundararaghavan & Wadhwa, 1968).

Taxiphyllum M. Fleisch.

Taxiphyllum taxirameum (Mitt.) M. Fleisch., *Musci Buitenzorg* 4: 1435. 1923; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 11. 2013.

Hylocomium isopterygioides Broth. & Paris, *Rev. Bryol.* 33: 27. 1906.

Stereodon taxirameus Mitt., *J. Proc. Linn. Soc., Bot., Suppl.* 1: 105. 1859.

Distribution: Karnataka (Kodagu) (Brotherus 1899; Gangulee, 1980).

Vesicularia (Mull. Hal.) Mull. Hal.

Vesicularia levieri Cardot ex Dixon, *J. Indian Bot.* 2: 187. 10. 1921; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 11. 2013.

Distribution: Karnataka (Uttara Kannada) (Dixon, 1921).

Vesicularia reticulata (Dozy & Molk.) Broth., Nat. Pflanzenfam. I(3): 1094.1908; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 11. 2013.

Hypnum reticulatum Dozy & Molk., Ann. Sci. Nat., Bot., sér. 3, 2: 309.1844.

Vesicularia samoana Broth., *Denkschr. Kaiserl. Akad. Wiss., Math.-Naturwiss. Kl.* 84: 399.1908.

Vesicularia filicuspis Broth., Philipp. J. Sci. 8: 88.1913.

Vesicularia okamuræ Broth., Oefvers. Förh. Finska Vetensk.-Soc. 62A(9): 49.1921.

Ectropothecium reticulatum (Dozy & Molk.) Besch., Ann. Sci. Nat., Bot., sér. 5, 18: 241.1873.

Distribution: Karnataka (Kodagu, Shivamogga) (Brotherus, 1899; Sundararaghavan & Wadhwa, 1968).

Vesicularia succosa (Mitt.) Broth., Nat. Pflanzenfam. I(3): 1094.1908; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 11. 2013.

Stereodon succosus Mitt., J. Proc. Linn. Soc., Bot., Suppl. 1: 101.1859.

Distribution: Karnataka (Shivamogga) (Sundararaghavan & Wadhwa, 1968).

Leucobryaceae

Leucobryum Hampe

Leucobryum imbricatum Broth., Rec. Bot. Surv. India 1(12): 314.1899; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 7. 2013.

Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Leucobryum wightii Mitt., J. Proc. Linn. Soc., Bot., Suppl. 1: 25.1859; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 7. 2013.

Distribution: Karnataka (Kodagu), Tamil Nadu (Brotherus, 1899).

Leucomiaceae

Leucomium Mitt.

Leucomium aneurodictyon (Müll. Hal.) A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1877–78: 275 (Gen. Sp. Musc. 2: 539). 1880; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 8. 2013.

Hypnum aneurodictyon Müll. Hal., Syn. Musc. Frond. 2: 681.1851.

Distribution: Karnataka (Dharwad) (Dixon, 1912).

Meesiaceae

Meesia Hedw.

Meesia uliginosa Hedw., Sp. Musc. Frond. 173.1801; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 8. 2013. '*uliginosa*'

Meesia stricta Brid., Bryol. Univ. 2: 61. 1827.

Funaria obtusifolia Weinm., Bull. Soc. Imp. Naturalistes Moscou 18(4): 438. 1845.

Meesia hymenostoma Cardot & Broth., Kongl. Svenska Vetensk. Acad. Handl., n.s. 63(10): 51.1923.

Ceratodon kinggeorgicus Kanda, Hikobia 9: 324. f. 3.1986.

Distribution: Karnataka (Kodagu) (Sundararaghavan & Wadhwa, 1968).

Meteoriaceae

Aerobryidium M. Fleisch.

Aerobryidium filamentosum (Hook.) M. Fleisch., Nat. Pflanzenfam. I(3): 821.1906; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 2. 2013.

Neckera filamentosa Hook., Musci Exot. 2: 158. 1819.

Daltonia filamentosa (Hook.) Arn., Mém. Soc. Linn. Paris 5: 296.1827.

Aerobryum filamentosum (Hook.) M. Fleisch. ex Thér., Bull. Soc. Bot. Genève 26: 87.1936.

Meteorium filamentosum (Hook.) Mitt., J. Proc. Linn. Soc., Bot., Suppl. 1: 91. 1859.

Distribution: Karnataka (Kodagu: Virajpet), Sikkim, Tamil Nadu, Nepal (Brotherus 1899; Gangulee, 1974).

Aerobryopsis M. Fleisch.

Aerobryopsis wallichii (Brid.) M. Fleisch., Musci Buitenzorg 3: 789.1908.

Hypnum wallichii Brid., Bryol. Univ. 2: 416.1827.

Neckera longissima Dozy & Molk., Ann. Sci. Nat., Bot., sér. 3, 2: 313.1844.

Aerobryopsis longissima (Dozy & Molk.) M. Fleisch., Hedwigia 44: 305.1905; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 2. 2013.

Aerobryum wallichii (Brid.) Müll. Hal., Linnaea 40: 262.1876.

Distribution: Karnataka (Kodagu) (Brotherus 1899; Gangulee, 1974).

Barbella M. Fleisch.

Barbella rufifolia (Thwaites & Mitt.) Broth., Nat. Pflanzenfam. I(3): 824.1906; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 2. 2013.

Meteorium rufifolium Thwaites & Mitt., J. Linn. Soc., Bot. 13: 316. 1873.

Distribution: Karnataka (Uttara Kannada) (Dixon, 1912).

Barbellopsis Broth.

Barbellopsis trichophora (Mont.) W.R. Buck, Mem. New York Bot. Gard. 82: 265.1998; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 2. 2013.

Isothecium trichophorum Mont., Ann. Sci. Nat., Bot., sér. 2, 19: 238.1843.

Meteorium diclados Schimp., Mém. Soc. Sci. Nat. Cherbourg 16: 227.1872.

Meteorium enerve Thwaites & Mitt., J. Linn. Soc., Bot. 13: 317.1873.

Barbella trichophora (Mont.) M. Fleisch., Nat. Pflanzenfam. I(3): 824.1906; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 2. 2013.

Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Cryptopapillaria M. Menzel

Cryptopapillaria fuscescens (Hook.) M. Menzel, Willdenowia 22: 183.1992; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 4. 2013.

Neckera fuscescens Hook., Musci Exot. 2: 157.1819.

Daltonia fuscescens (Hook.) Arn., Mém. Soc. Linn. Paris 5: 296.1827.

Papillaria fuscescens (Hook.) A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1875–76: 270 (Gen. Sp. Musc. 2: 174). 1877; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 4. 2013.

Distribution: Karnataka (Kodagu, Shivamogga) (Brotherus, 1899; Sundararaghavan & Wadhwa, 1968; Gangulee, 1974).

Diaphanodon Renault & Cardot

Diaphanodon blandus (Harv.) Renault & Cardot, Bull. Soc. Roy. Bot. Belgique 38(1): 23.1900; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 5. 2013.
Neckera blanda Harv., Icon. Pl. 1: t. 22: f. 1.1836.
Trachypus blandus (Harv.) Mitt., J. Proc. Linn. Soc., Bot., Suppl. 1: 127. 1859.
 Distribution: Karnataka (Kodagu) (Brotherus, 1899; Gangulee, 1974).

Floribundaria M. Fleisch.

Floribundaria floribunda (Dozy & Molk.) M. Fleisch., Hedwigia 44: 302. a–i.1905; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 6. 2013.
Leskea floribunda Dozy & Molk., Ann. Sci. Nat., Bot., sér. 3, 2: 310.1844.
Meteorium floribundum (Dozy & Molk.) Dozy & Molk., *Musci Frond. Ined.* Archip. Ind. 6: 162. 53.1848.
Papillaria floribunda (Doz. & Molk.) Müll. Hal., Linnaea 40: 267.1876.
 Distribution: Karnataka (Kodagu) (Frahm et al., 2013).

Meteoriopsis M. Fleisch. ex Broth.

Meteoriopsis reclinata (Müll. Hal.) M. Fleisch., Nat. Pflanzenfam. I(3): 826. 1906; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 8. 2013.
Meteoriopsis reclinata f. *pilifer* M. Fleisch., Musci Buitenzorg 3: 834.1907.
Pilotrichum reclinatum Müll. Hal., Bot. Zeitung (Berlin) 12: 572.1854.
Meteorium reclinatum (Müll. Hal.) Mitt., J. Proc. Linn. Soc., Bot., Suppl. 1: 87. 1859.
 Distribution: Karnataka (Kodagu) (Frahm et al., 2013).

Meteoriopsis squarrosa (Hook. ex Harv.) M. Fleisch., Nat. Pflanzenfam. I(3): 826.1906; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 8. 2013.
Neckera squarrosa Hook. ex Harv., Icon. Pl. 1: t. 22, f. 2.1836.
 Distribution: Karnataka (Kodagu, Shivamogga) (Frahm et al., 2013).

Pseudotrachypus P. de la Varde & Thér.

Pseudotrachypus convolvens (Mitt.) W.R. Buck, J. Hattori Bot. Lab. 75: 63.1994; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 9. 2013.
Meteorium convolvens Mitt., J. Proc. Linn. Soc., Bot., Suppl. 1: 90.1859.
Meteorium javanicum Bosch & Sande Lac., Bryol. Jav. 2: 88. t. 203.1863.
Barbella convolvens (Mitt.) Broth., Nat. Pflanzenfam. I(3): 824.1906.
Meteorium bombycinum Renault & Cardot, Bull. Soc. Roy. Bot. Belgique 38(1): 26.1900.
 Distribution: Karnataka (Chamarajanagara or Mysuru), Kerala (Gangulee, 1974).

Trachypodopsis M. Fleisch.

Trachypodopsis serrulata var. **crispatula** (Hook.) Zanten, *Blumea* 9: 521.1959; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 11. 2013.
Hypnum crispatum Hook., Trans. Linn. Soc. London 9: 321. 28 f. 4.1808.
Trachypus crispatus (Hook.) Mitt., J. Proc. Linn. Soc., Bot., Suppl. 2: 129. 1859.
Trachypodopsis crispatula (Hook.) M. Fleisch., Hedwigia 45: 65.1906.
Trachypodopsis crispatula subsp. *longifolia* Reimers, Hedwigia 71: 56.1931.
Trachypodopsis plicata Dixon, Ann. Bryol. 9: 65.1937.
Trachypodopsis angustiretis Dixon, Ann. Bryol. 12: 53.1939.
 Distribution: Karnataka (Kodagu), Meghalaya, Sikkim (Brotherus, 1899).

Myriniaceae

Macgregorella E.B. Bartram

Macgregorella indica (Broth.) W.R. Buck, *J. Hattori Bot. Lab.* 47: 53. 1980; J.-P. Frahm, U. Schwarz & C.N. Manju, *Arch. Bryol.* 158: 8. 2013.

Schwetschkea indica Broth., *Rec. Bot. Surv. India* 1(12): 328.1899.

Macgregorella philippinensis E.B. Bartram, *Philipp. J. Sci.* 68: 285. f. 363.1939.

Austinia brotheri W.R. Buck & H.A. Crum, *J. Hattori Bot. Lab.* 44: 356. f. 13–16. 1978.

Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Neckeraceae

Himantocladium (Mitt.) M. Fleisch.

Himantocladium cyclophyllum (Müll. Hal.) M. Fleisch., *Musci Buitenzorg* 3: 887.1908; J.-P. Frahm, U. Schwarz & C.N. Manju, *Arch. Bryol.* 158: 7. 2013. '**Himanthocladium**'

Neckera rugulosa Mitt., *J. Proc. Linn. Soc., Bot., Suppl.* 2: 121.1859.

Neckera bicolorata Müll. Hal., *Bot. Jahrb. Syst.* 5: 85.1883.

Neckera celebesica Müll. Hal., *Biblioth. Bot.* 13: 6. 1889.

Neckera prionacis Müll. Hal., *Biblioth. Bot.* 13: 5. 3 A.1889.

Himantocladium seychellarum Dixon, *Ann. Bryol.* 2: 8.1929.

Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Homaliodendron M. Fleisch.

Homaliodendron flabellatum (Sm.) M. Fleisch., *Hedwigia* 45: 74.1906.

Hookeria flabellata Sm., *Trans. Linn. Soc. London* 9: 280. 23 f. 2.1808.

Homalia flabellata (Sm.) Bosch & Sande Lac., *Bryol. Jav.* 2: 58. 178.1863; J.-P. Frahm, U. Schwarz & C.N. Manju, *Arch. Bryol.* 158: 7. 2013 '*flabellata* (Dicks) Br.'

Distribution: Karnataka (Kodagu) (Brotherus, 1899; Gangulee, 1974).

Neckeropsis Reichdt.

Neckeropsis andamana (Müll. Hal.) M. Fleisch., *Musci Buitenzorg* 3: 878.1908; J.-P. Frahm, U. Schwarz & C.N. Manju, *Arch. Bryol.* 158: 7. 2013.

Distichia andamana Müll. Hal., *Flora* 61: 84.1878.

Distribution: Karnataka (Kodagu) (Dixon, 1912).

Pinnatella M. Fleisch.

Pinnatella alopecuroides (Mitt.) M. Fleisch., *Hedwigia* 45: 84.1906; J.-P. Frahm, U. Schwarz & C.N. Manju, *Arch. Bryol.* 158: 9. 2013.

Neckerae fructifera Griff., *Icon. Pl. Asiat.* t. 87 f. 3.1849.

Neckera alopecuroides Mitt., *J. Proc. Linn. Soc., Bot., Suppl.* 2: 123.1859.

Porotrichum alopecuroides (Mitt.) Besch., *Bull. Soc. Bot. France* 34: 96.1887.

Pinnatella intralimbata M. Fleisch., *Hedwigia* 45: 82. 4.1906

Distribution: Karnataka (Kodagu) (Brotherus, 1899; Gangulee, 1974).

Pinnatella calcutensis M. Fleisch., Hedwigia 45: 84.1906; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 9. 2013.

Pinnatella alopecuroides var. *calcutensis* (M. Fleisch.) Gangulee, Mosses E. India 5: 1440. 1976.

Distribution: Karnataka (Uttara Kannada) (Dixon, 1912; Gangulee, 1976).

Pinnatella limbata Dixon, J. Indian Bot. 2: 184. 8.1921; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 9. 2013.

Distribution: Karnataka (Shivamogga, Uttara Kannada) (Sundararaghavan & Wadhwa, 1968).

Orthotrichaceae

Macromitrium Brid.

Macromitrium leptocarpum Broth., Rec. Bot. Surv. India 1(12): 318. 1890; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 8. 2013.

Distribution: Karnataka (Kodagu, Shivamogga) (Brotherus, 1899; Sundararaghavan & Wadhwa, 1968).

Macromitrium moorcroftii (Hook. & Grev.) Schwägr., Sp. Musc. Frond., Suppl. 2 2(1): 67. t. 172. 1826; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 8. 2013.

Orthotrichum moorcroftii Hook. & Grev., Edinburgh J. Sci. 1: 116. 4. 1824.

Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Macromitrium nigricans Mitt., J. Proc. Linn. Soc., Bot., Suppl. 1: 53. 1859; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 8. 2013.

Distribution: Karnataka (Kodagu) (Mitten, 1859; Frahm et al., 2013).

Macromitrium sulcatum (Hook.) Brid., Bryol. Univ. 1: 319. 1826; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 8. 2013.

Schlotheimia sulcata Hook., Musci Exot. 2: 156. 1819.

Macromitrium ceylanicum Mitt., J. Proc. Linn. Soc., Bot., Suppl. 1: 52. 1859.

Macromitrium neelgheriense Müll. Hal., Syn. Musc. Frond. 1: 737. 1849.

Macromitrium ramentosum Thwaites & Mitt., J. Linn. Soc., Bot. 13: 301. 1873.

Distribution: Karnataka (Kodagu, Shivamogga, Uttara Kannada), Maharashtra (Brotherus 1899; Gangulee, 1974).

Pilotrichaceae

Actinodontium Schwägr.

Actinodontium raphidostegum (Müll. Hal.) Bosch & Sande Lac., Bryol. Jav. 2: 37. 160. 1862; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 2. 2013.

Hookeria raphidostega Müll. Hal., Syn. Musc. Frond. 2: 677. 1851.

Distribution: Karnataka (Dakshina Kannada, Udupi, Uttara Kannada) (Gangulee, 1974).

Callicostella (Müll. Hal.) Mitt.

Callicostella papillata (Mont.) Mitt., J. Proc. Linn. Soc., Bot., Suppl. 2: 136. 1859; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 4. 2013.

Hookeria papillata Mont., London J. Bot. 3: 632. 1844.

Hookeria baileyi Broth., Oefvers. Förh. Finska Vetensk.-Soc. 33: 105. 1891.

Distribution: Karnataka (Uttara Kannada) (Dixon, 1912).

Polytrichaceae

Pogonatum P. Beauv.

Pogonatum microstomum (R. Br. ex Schwägr.) Brid., Bryol. Univ. 2: 745.1827; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 9. 2013.

Polytrichum microstomum R. Br. ex Schwägr., Sp. Musc. Frond., Suppl. 2 2(1): 10. t. 154.1826.

Pogonatum subclavatum Dixon, Ann. Bryol. 12: 56. 1939.

Distribution: Karnataka (Shivamogga) (Sundararaghavan & Wadhwa, 1968).

Pogonatum neesii (Müll. Hal.) Dozy, Ned. Kruidk. Arch. 4(1): 75.1856; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 9. 2013.

Polytrichum neesii Müll. Hal., Syn. Musc. Frond. 2: 563.1851.

Pogonatum aloides var. *longicolle* Mitt., Trans. Linn. Soc. London, Bot. 3: 192.1891.

Pogonatum aloides auct. Non(Hedw.) P. Beauv; Sundararagh & Wadhwa, Bull. Bot. Surv. India 10(3 & 4): 347. 1968.

Distribution: Karnataka (Kodagu, Shivamogga, Uttara Kannada) (Brotherus, 1899; Sundara-raghavan & Wadhwa, 1968; Gangulee, 1969).

Polytrichum Hedw.

Polytrichum hexagonum (Mitt.) Müll. Hal., Linnaea 36: 12.1869; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 9. 2013.

Pogonatum hexagonum Mitt., J. Proc. Linn. Soc., Bot., Suppl. 2: 151.1859.

Pogonatum strictifolium Broth. ex Gangulee, Nova Hedwigia 12: 419. t. 2.1966.

Pogonatum decolyi Broth. ex Gangulee, Nova Hedwigia 13: 126.1966.

Distribution: Karnataka (Kodagu), Meghalaya, Tamil Nadu (Brotherus, 1899; Gangulee, 1969).

Pottiaceae

Anoetangium Schwägr.

Anoetangium walkeri Broth., Rec. Bot. Surv. India 1(12): 311.1899; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 2. 2013.

Distribution: Karnataka (Kodagu), Maharashtra (Brotherus, 1899).

Barbula Hedw.

Barbula arcuata Griff., Calcutta J. Nat. Hist. 2: 491.1842; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 2. 2013.

Barbula subulifolia Sull., Proc. Amer. Acad. Arts 5: 277.1861.

Barbula macrogonia Besch. in Morot, J. Bot. 8: 61. 1894.

Barbula suberythropoda Müll. Hal., Bull. Herb. Boissier 5: 194.1897.

Barbula sobolifera M. Fleisch., Musci Buitenzorg 1: 351.1904.

Barbula stillicidiorum Cardot, Rev. Bryol. 37: 126. 1910.

Barbula comosa var. *japonica* Broth., Oefvers. Förh. Finska Vetensk.-Soc. 62A (9): 9.1921.

Barbula rubricaulis Thér., Smithsonian Misc. Collect. 85(4): 19. 10 f. 1–5.1931.

Barbula comosa Dozy & Molk., Ann. Sci. Nat., Bot., sér. 3, 2: 299.1844.

Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Barbula consanguinea (Thwaites & Mitt.) A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1877–78: 409 (Gen. Sp. Musc. 2: 673). 1880; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 3. 2013.

Tortulaconsanguinea Thwaites & Mitt., J. Linn. Soc., Bot. 13: 300. 1873.

Distribution: Karnataka (Uttara Kannada, Dharwad) (Dixon, 1912).

Barbula dharvarensis Dixon, J. Indian Bot. 2: 182. 7.1921; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 3. 2013 '*dharwaensis*'.

Distribution: Karnataka (Dharwad, Uttara Kannada) (Dixon, 1921), endemic.

Barbula indica (Hook.) Spreng., Nomencl. Bot. 2: 72.1824; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 3. 2013.

Trichostomum orientale F. Weber, Arch. Syst. Naturgesch. 1(1): 129. 4, f. 6.1804.

Tortula indica Hook., Musci Exot. 2: 135.1819.

Semibarbula indica (Hook.) Herzog ex Hilp., Beih. Bot. Centralbl., Abt. 2 50(2): 626.1933.

Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Barbula spathulifolia (Dixon & P. de la Varde) R.H. Zander, Bull. Buffalo Soc. Nat. Sci. 32: 151.1993; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 3. 2013.

Merceyopsis spathulifolia Dixon & P. de la Varde, Arch. Bot. Bull. Mens. 1(8–9): 16. pl. 4: f. 5. 1927.

Distribution: Karnataka (Dakshina Kannada) (Aziz & Vohra, 2008).

Chionoloma Dixon

Chionoloma duriuscula (Mitt.) M. Menzel, Willdenowia 22: 198.1992.

Tortula duriuscula Mitt., J. Proc. Linn. Soc., Bot., Suppl. 1: 27.1859.

Trichostomum duriusculum (Mitt.) Broth., Nat. Pflanzenfam. I(3): 394.1902; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 11. 2013.

Distribution: Karnataka (Shivamogga) (Sundararaghavan & Wadhwa, 1968).

Hyophila Brid.

Hyophila cylindrica (Hook. ex Harv.) A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1871–72: 356 (Gen. Sp. Musc. 1: 204) 1873; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 7. 2013.

Gymnostomum cylindricum Hook. ex Harv., Icon. Pl. 1: pl. 17: f. 2.1836.

Distribution: Karnataka (Dakshina Kannada, Kodagu, Shivamogga), Maharashtra (Brotherus, 1899).

Hyophila involuta (Hook.) A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1871–72: 354 (Gen. Sp. Musc. 1: 202). 1873; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 7. 2013.

Gymnostomum involutum Hook., Musci Exot. 2: 154.1819.

Distribution: Karnataka (Kodagu, Shivamogga, Kannada) (Brotherus, 1899; Dixon, 1912; Sundararaghavan & Wadhwa, 1968).

Syntrichia Brid.

Syntrichia fragilis (Taylor) Ochyra, *Fragm. Florist. Geobot.* 37: 212.1992; J.-P. Frahm, U. Schwarz & C.N. Manju, *Arch. Bryol.* 158: 11. 2013.

Tortula fragilis Taylor, *London J. Bot.* 6: 333. 1847.

Barbula affinis Hampe, *Linnaea* 31: 520.1862

Barbula trianae Müll. Hal., *Bot. Zeitung (Berlin)* 15: 578.1857.

Tortula affinis (Hampe) Broth., *Nat. Pflanzenfam.* I(3): 433.1902.

Distribution: Karnataka (Kodagu) (Aziz & Vohra, 2008).

Tortella (Lindb.) Limpr.

Tortella walkeri (Broth.) R.H. Zander, *Bull. Buffalo Soc. Nat. Sci.* 32: 104.1993; J.-P. Frahm, U. Schwarz & C.N. Manju, *Arch. Bryol.* 158: 11. 2013.

Hyophilawalkeri Broth., *Rec. Bot. Surv. India* 1(12): 317.1899.

Distribution: Karnataka (Kodagu, Uttara Kannada) (Brotherus, 1899; Dixon, 1912).

Trichostomum Bruch.

Trichostomum hyalinoblastum (Broth.) Broth., *Nat. Pflanzenfam.* I(3): 394.1902; J.-P. Frahm, U. Schwarz & C.N. Manju, *Arch. Bryol.* 158: 11. 2013.

Tortellahyalino blasta Broth., *Rec. Bot. Surv. India* 1(12): 318.1899.

Barbulahyalino blasta (Broth.) Paris, *Index Bryol. Suppl.* 25.1900.

Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Weissia Hedw.

Weissia edentula Mitt., *J. Proc. Linn. Soc., Bot., Suppl.* 1: 27.1859; J.-P. Frahm, U. Schwarz & C.N. Manju, *Arch. Bryol.* 158: 12. 2013. '*Weisia*'

Gymnostomum pancherianum Besch., *Ann. Sci. Nat., Bot., sér.* 5, 18: 188.1873.

Hymenostomum edentulum (Mitt.) Besch., *Bull. Soc. Bot. France* 34: 95. 1887; J.-P. Frahm, U. Schwarz & C.N. Manju, *Arch. Bryol.* 158: 7. 2013.

Hymenostomum pancherianum (Besch.) A. Jaeger, *Ber. Thätigk. St. Gallischen Naturwiss. Ges.* 1877–78: 366 (*Gen. Sp. Musc.* 2: 630). 1880.

Weissia viridula var. *tenuiseta* Besch., *Ann. Sci. Nat., Bot., sér.* 7, 17: 330.1893.

Distribution: Karnataka (Dharwad, Kodagu, Shivamogga) (Brotherus, 1899; Sundara-raghavan & Wadhwa, 1968).

Pterobryaceae
Calypothecium Mitt.

Calypothecium urvilleanum (Müll. Hal.) Broth., Nat. Pflanzenfam. I(3): 839.1906; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 4. 2013.

Neckera urvilleana Müll. Hal., Syn. Musc. Frond. 2: 52. 1850.

Calypothecium mac-gregorii Broth., Philipp. J. Sci. 5: 154.1910.

Calypothecium densirameum Broth., Rev. Bryol., n.s. 2: 9.1929.

Distribution: Karnataka (Kodagu) (Brotherus, 1899; Gangulee, 1974).

Calypothecium wightii (Mitt.) M. Fleisch., Hedwigia 45: 62.1905; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 4. 2013.

Meteorium wightii Mitt., J. Proc. Linn. Soc., Bot., Suppl. 1: 85. 1859.

Meteorium nematosum Müll. Hal., Flora 61: 84.1878.

Pterobryon patulum Broth., Rec. Bot. Surv. India 1(12): 325.1899.

Calypothecium dixonii Gangulee, Mosses E. India 5: 1371. f. 674.1976.

Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Pterobryopsis M. Fleisch.

Pterobryopsis foulkesiana (Mitt.) M. Fleisch., Hedwigia 45: 60.1905; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 10. 2013.

Meteorium foulkesianum Mitt., J. Proc. Linn. Soc., Bot., Suppl. 1: 85.1859.

Garovaglia foulkesiana (Mitt.) Paris, Index Bryol. 508.1896.

Pterobryon gracile Broth., Rec. Bot. Surv. India 1(12): 324.1899.

Distribution: Karnataka (Kodagu), Tamil Nadu (Brotherus, 1899).

Pterobryopsis frondosa (Mitt.) M. Fleisch., Hedwigia 45: 60.1905; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 10. 2013.

Meteorium frondosum Mitt., J. Proc. Linn. Soc., Bot., Suppl. 1: 86.1859.

Garovaglia frondosa (Mitt.) Paris, Index Bryol. 508.1896

Garovaglia scabriuscula (Mitt.) Paris, Index Bryol. 510.1896.

Pterobryon frondosum (Mitt.) Broth., Rec. Bot. Surv. India 1(12): 324. 1899.

Pterobryopsis scabriuscula (Mitt.) M. Fleisch., *Hedwigia* 45: 61.1905.

Pterobryopsis madurensis Cardot & P. de la Varde, Rev. Bryol. 50: 72.1923

Pterobryopsis madurensis var. *flexipendula* Cardot & P. de la Varde, Rev. Bryol. 50: 72.1923.

Distribution: Karnataka (Kodagu)(Brotherus 1899; Gangulee, 1974).

- Pterobryopsis kegeliana** (Müll. Hal.) M. Fleisch., Hedwigia 45: 61.1905; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 10. 2013.
Neckera kegeliana Müll. Hal., Bot. Zeitung (Berlin) 16: 165.1858.
 Distribution: Karnataka (Kodagu) (Brotherus, 1899).
- Pterobryopsis schmidii** (Müll. Hal.) M. Fleisch., Hedwigia 45:61.1905; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 10. 2013.
Neckera schmidii Müll. Hal., Bot. Zeitung (Berlin) 12: 571.1854.
Meteorium flexipes Mitt., J. Proc. Linn. Soc., Bot., Suppl. 1: 85.1859.
Garovaglia schmidii (Müll. Hal.) Paris, Index Bryol. 510.1896.
Pterobryon schmidii (Müll. Hal.) Broth., Rec. Bot. Surv. India 1 (12): 325. 1899.
Pterobryopsis denudata Dixon & P. de la Varde, Rev. Bryol. 50: 72.1923.
 Distribution: Karnataka (Kodagu) (Brotherus, 1899).
- Pterobryopsis tumida** (Dicks. ex Hook.) Dixon, J. Bot. 75: 122.1937; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 10. 2013.
Neckera tumida Dicks. ex Hook., Musci Exot. 2: 158.1819.
Trachyloma recurvulum Broth., Oefvers. Förh. Finska Vetensk.-Soc. 35: 53.1893.
Neckera recurvula (Broth.) Paris, Index Bryol. 857.1897.
Calyptothecium tumidum (Dicks. ex Hook.) M. Fleisch., Musci Frond. Archip. Ind. Exsic. 5: 222.1902.
Calyptothecium recurvulum (Broth.) Broth., Bull. Acad. Int. Géogr. Bot. 13: 86. 5.1904.
Aerobryum willisii M. Fleisch., Musci Buitenzorg 3: 846.1908
Pterobryopsis maxwellii Cardot & Dixon, J. Bot. 47: 160. 497 B. f. 1–4.1909.
 Distribution: Karnataka (Kodagu, Uttara Kannada) (Dixon, 1909, 1912; Gangulee, 1974).
- Pterobryopsis walkeri** (Broth.) Broth., Nat. Pflanzenfam. I(3): 803.1906; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 10. 2013.
Pterobryon walkeri Broth., Rec. Bot. Surv. India 1(12): 324.1899.
Pterobryopsis kanarensis Cardot & Dixon, J. Bot. 47: 163,497 B f. 5, 6.1909.
 Distribution: Karnataka (Uttara Kannada) (Dixon, 1909).
- Symphysodontella** M. Fleisch.
- Symphysodontella involuta** (Thwaites & Mitt.) M. Fleisch., Musci Buitenzorg 4: 1674.1923; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 11. 2013.
Pterobryon involutum Thwaites & Mitt., J. Linn. Soc., Bot. 13: 315.1873.
Symphysodon involutus (Thwaites & Mitt.) Broth., Nat. Pflanzenfam. I(3): 799.1906.
 Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Racopilaceae

Racopilum P.Beauv.

- Racopilum cuspidigerum** (Schwägr.) Ångström, Öfvers. Förh. Kongl. Svenska Vetensk.-Akad. 29(4): 10.1872; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 10. 2013.
Hypnum cuspidigerum Schwägr., Voy. Uranie 229.1828.
Racopilum indicum Mitt., J. Proc. Linn. Soc., Bot., Suppl. 2: 136.1859.
Racopilum demissum Bosch & Sande Lac., Bryol. Jav. 2: 18. 146.1861.
Racopilum cuspidigerum var. *abbreviatum* M. Fleisch., Musci Buitenzorg 4: 1625.1923.
Racopilum cuspidigerum var. *demissum* (Bosch & Sande Lac.) M. Fleisch., Musci Buitenzorg 4: 1625.1923.
 Distribution: Karnataka (Kodagu, Shivamogga) (Brotherus, 1899; Sundararaghavan & Wadhwa, 1968).

]Sematophyllaceae

Chionostomum Mull. Hal.

- Chionostomum rostratum** (Griff.) Müll. Hal., Linnaea 36: 21.1869; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 4. 2013.
Necker arostrata Griff., Calcutta J. Nat. Hist. 3: 70.1843.
Chionostomum latifolium Thér. & R. Henry, J. Siam Soc., Nat. Hist. Suppl. 10(1): 20. 1935.
Chionostomum rostratum var. *microcarpum* Broth., Oefvers. Förh. Finska Vetensk.-Soc. 62A(9): 50. 1921.
 Distribution: Karnataka (Kodagu) (Brotherus 1899; Gangulee, 1980).

Sematophyllum Mitt.

- Sematophyllum angusticuspis** Broth., Rec. Bot. Surv. India 1(12): 316. 1899; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 10. 2013.
 Distribution: Karnataka (Kodagu) (Brotherus, 1899).
Sematophyllum tristiculum (Mitt.) M.Fleisch., Musci Buitenzorg 4: 1262. 1923.
Stereodon tristiculus Mitt., J. Proc. Linn. Soc., Bot., Suppl. 2: 102. 1859.
Rhaphidostegium tristiculum (Mitt.) A.Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1876–77: 392 (Gen. Sp. Musc. 2: 458). 1878; Broth., Rec. Bot. Surv. India 1(19): 326. 1899; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 10. 2013 'Rhaphidostegium tristiculum'
 Distribution: Karnataka (Kodagu) (Brotherus, 1899; Frahm et al., 2013).

Taxithelium Spruce ex Mitt.

- Taxithelium nepalense** (Schwägr.) Broth., Monsunia 1: 51.1899; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 11. 2013.
Hypnum nepalense Schwägr., Sp. Musc. Frond., Suppl. 3 1(2): 226.1828.
Hypnum turgidellum Müll. Hal., Bot. Jahrb. Syst. 5: 87.1883.
Taxithelium trachaelophyllum Dixon, Bull. Torrey Bot. Club 51: 243. f.3.1924.
 Distribution: Karnataka (Uttara Kannada) (Dixon, 1912; Gangulee, 1980).

Trichosteleum Mitt.

Trichosteleum monostictum (Thwaites & Mitt.) Broth., Rec. Bot. Surv. India 1(12): 326.1899; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 11. 2013.

Sematophyllum monostictum Thwaites & Mitt., J. Linn. Soc., Bot. 13: 318.1873.

Distribution: Karnataka (Kodagu, Uttara Kannada) (Brotherus, 1899; Dixon, 1912).

Splachnaceae**Tayloria** Hook.

Tayloria schmidii (Müll. Hal.) Broth., Rec. Bot. Surv. India 1(12); 319. 1899; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 11. 2013.

Dissodon schmidii Müll. Hal., Flora 57: 287.1874.

Orthodonsubglaber Griff., Calcutta J. Nat. Hist. 2: 483.1842.

Tayloria subglabra (Griff.) Mitt., J. Proc. Linn. Soc., Bot., Suppl. 1: 57.1859.

Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Stereophyllaceae**Entodontopsis** Broth.

Entodontopsis anceps (Bosch & Sande Lac.) W.R. Buck & R.R. Ireland, Nova Hedwigia 41: 103.1985; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 5. 2013.

Hypnum anceps Bosch & Sande Lac., Bryol. Jav. 2: 161, t. 260.1867.

Hypnum llanosii Duby, Flora 60: 92.1877.

Stereophyllum oahuense Broth., Bernice P. Bishop Mus. Bull. 40: 28. 8f. 29.1927.

Stereophyllum philippinense Broth., Philipp. J. Sci. 31: 294.1926.

Distribution: Karnataka (Uttara Kannada) (Dixon, 1912).

Entodontopsis wightii (Mitt.) W.R. Buck & R.R. Ireland, Nova Hedwigia 41: 106. 1985; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 5. 2013.

Hypnum wightii Mitt., J. Proc. Linn. Soc., Bot., Suppl. 1: 82.1859.

Distribution: Karnataka (Kodagu, Dakshina Kannada), Meghalaya, Tamil Nadu (Brotherus, 1899; Gangulee, 1980).

Symphyodontaceae**Symphyodon** Mont.

Symphyodon perrottetii Mont., Ann. Sci. Nat., Bot., sér. 2, 16: 279. 17.1841; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 10. 2013.

Glossadelphus recurvo-marginatus Dixon & Sakurai, Bot. Mag. (Tokyo) 50: 620. 10.1936.

Symphyodon merrillii Broth., Philipp. J. Sci. 2: 341. 1907.

Distribution: Karnataka (Uttara Kannada) (Dixon, 1912).

Thuidiaceae

Cyrto-hypnum (Hampe) Hampe & Lorentz

Cyrto-hypnum tamariscellum (Müll. Hal.) W.R. Buck & H.A. Crum, Contr. Univ. Michigan Herb. 17: 67.1990; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 5. 2013.

Hypnum tamariscellum Müll. Hal., Bot. Zeitung (Berlin) 12: 573.1854.

Distribution: Karnataka (Kodagu) (Brotherus 1899; Gangulee, 1980).

Pelekium Mitt.

Pelekium velatum Mitt., J. Linn. Soc., Bot. 10: 176. t. 6, f. c. 1868; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 7. 2013.

Lorentzia longirostris Hampe, Nuovo Giorn. Bot. Ital. 4: 288.1872.

Pelekium calcicola M. Fleisch., Musci Buitenzorg 4: 1511. f. 240.1923.

Pelekium fissicalyx Müll. Hal., Bot. Jahrb. Syst. 5: 87.1883.

Thuidium fissicalyx (Müll. Hal.) Paris, Index Bryol. 1280.1898.

Distribution: Karnataka (Kodagu, Shivamogga, Uttara Kannada) (Brotherus, 1899; Dixon, 1912; Sundararaghavan & Wadhwa, 1968).

Thuidium Schimp.

Thuidium blepharophyllum (Müll. Hal.) A. Jaeger, Ber. Thätigk. St. Gallischen Naturwiss. Ges. 1876–77: 263 (Gen. Sp. Musc. 2: 329). 1878; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 11. 2013 '*blepharophyllum*'.

Hypnum blepharophyllum Müll. Hal., Bot. Zeitung (Berlin) 12: 573.1854.

Distribution: Karnataka (Kodagu) (Brotherus, 1899).

Thuidium glaucinum (Mitt.) Bosch & Sande Lac., Bryol. Jav. 2: 117. 222.1865; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 11. 2013.

Leskea glaucina Mitt., J. Proc. Linn. Soc., Bot., Suppl. 2: 133.1859.

Distribution: Karnataka (Kodagu), Assam, Meghalaya, Sikkim (Brotherus, 1899).

Thuidium meyenianum (Hampe) Dozy & Molk., Bryol. Jav. 2: 121. 224.1865; J.-P. Frahm, U. Schwarz & C.N. Manju, Arch. Bryol. 158: 11. 2013.

Hypnum meyenianum Hampe, Icon. Musc. 8.1844.

Distribution: Karnataka (Kodagu) (Gangulee, 1980).

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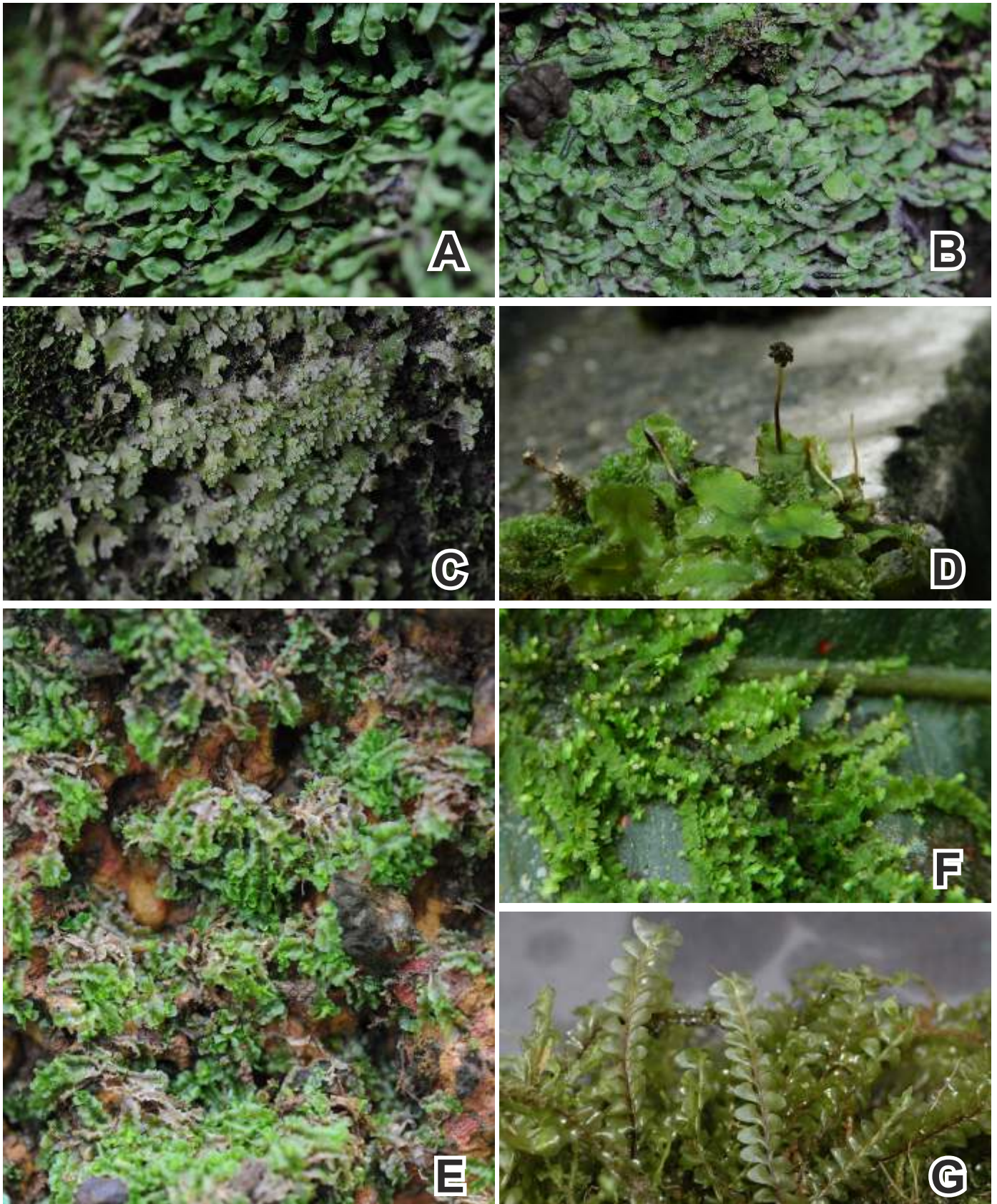


Plate 1 : **A.** *Asterella wallichiana* - female plants with young archegoniophores; **B.** *Asterella wallichiana* - male plants with cushion like antheridiophores; **C.** *Cyathodium smaragdinum*; **D.** *Dumortiera hirsuta*; **E.** *Fossombronina indica*; **F.** *Lejeunea flave*; **G.** *Plagiochila elegans*.

Pteridophytes of Karnataka
A Checklist

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Introduction

The term Pteridophyta is from two Greek roots that mean winged (*pteryz*) and plant (*phyto*). The reference is to the wing-like appearance of the compound leaves (fronds) that are characteristic of most ferns. They are plants with root, stem and leaves, but no flower, fruit and seeds. The Pteridophytes, which include ferns and fern-allies formed a dominant part of earth's vegetation in the historic past (354 to 290 million years ago). They flourished well during carboniferous period of the late Paleozoic (age of Pteridophyta). The tree ferns, giant horsetails and arborescent lycopods dominated the swampy landscapes of those ancient ages. In the present day flora though lesser in number, the pteridophytes lend a distinct charm and physiognomy to the landscape. They are important from evolutionary point of view as they show the evolution of vascular system and reflect the emergence of seed habit in plants. The alternating sporophytic and gametophytic generations in their life cycle being independent is another interesting aspect of these plants.

Pteridophytes exist in most habitat types except the marine environment. They grow as terrestrials, epiphytes, lithophytes, halophytes, climbers, hydrophytes, hygrophytes and some as xerophytes – majority of them are being terrestrials in damp and shady situations forming the undergrowth beneath the dense canopy trees and epiphytes on such trees and also as lithophytes on stream banks of evergreen forests. The greatest diversity of pteridophytes is in the tropical forests. Tropical ferns are extraordinarily beautiful plants with their delicate arching foliage. A considerable number of pteridophytes are grown as ornamental plants in gardens and fern houses, used as food and serve as medicinal plants.

The Indian sub-continent is one of the richest in its pteridophytic flora, like its angiospermic flora. In India, pteridophytes are particularly distributed in the Himalayas and Western Ghats of South India. The Western Ghats, principal geographical feature of southern India, extend 1,400 km along the west coast, about 50 km inland. They rise steeply to an average altitude of 900 m (reaching up to 2,600 m). The region has a monsoon climate dominated by the south-west and north-east monsoon winds. The annual rainfall is 2,000 - 6,000 mm, with the western slopes receiving the greatest precipitation. The rugged terrain and abundant rainfall support a diverse and rich flora. Considerable section of Western Ghats, about 400 km long, pass through the state of Karnataka and about 60 percent of the Ghats lie in Karnataka. Most of the pteridophytes of Karnataka are found in its Western Ghats region.

There are between 10,000 - 12,000 species of pteridophytes in the world. Subhash Chandra in his *Ferns of India* has enumerated 1100 species (belonging to 144 genera under 34 families) from the Indian region. Thus nearly 10 percent of world pteridophytic flora occurs in India.

Though Karnataka has been well explored as far as angiospermic flora is concerned (even floras for several districts have been published), till recently there has been no comprehensive work on the Pteridophytes of this state. The collection of pteridophytes of Karnataka was very meagre with only small regions of the state surveyed and taxonomic study on them has not received much attention. However, this lacuna was filled up by Rajagopal and Bhat (1998) who took up the work of extensive collection of pteridophytes of Karnataka State, during 1991-96. Subsequently a checklist of pteridophytes of Karnataka entitled "Pteridophytic Flora of Karnataka State, India" was published by them in *Indian Fern Journal* (1998). This work on the pteridophytes of Karnataka has revealed the occurrence of 178 species, belonging to 80 genera and 30 families in its political province (whereas the total number of species of flowering plants in Karnataka is about 4800).

Macpherson (1890) collected ferns from North Kanara (now Uttara Kannada) District and has merely listed 75 species of ferns from this area, without giving any descriptions. Blatter and d'Almeida (1922) have included the ferns of North Kanara, then a part of Bombay Presidency in their "Ferns of Bombay"; 90 species of ferns have been included by them as distributed in Uttara Kannada District. Alston (1945) has recorded 58

species of *Selaginella* P.Beauv. from India of only four species have been recorded from Karnataka. Kammathy et al. (1967) have listed 25 species of fern-allies and ferns in their “Contribution towards a flora of Biligirirangana hills”. Razi and Rao (1971) have published an artificial key to the Pteridophytes of Mysore city and its neighbouring areas where they have included 70 species of ferns and fern-allies spread over 41 genera. These have been collected from Mysore city, Chamundi hills, Srirangapatana, Ranganathittu and Biligirirangana hills. They have also included many ferns found under cultivation, which do not occur naturally in the state. Bhaskar and Razi (1973) have recorded seven species of ferns and one species of *Selaginella* from Mysore district. Holttum (1976) has included 10 members of Thelypteridaceae in the “Flora of Hassan District”. Yoganarasimhan et al. (1981) have recorded 12 species ferns in their ‘Flora of Chikmagalur District’. Very recently certain regionwise studies on the pteridopytic flora of Karnataka have been conducted by Deepa J et al. (2013): Kemmangundi and Kigga forests; Sumesh N Dudani et al. (2013,2014) forests of Yana and Sakleshpur; B.K.Mallayya et al. (2014): forest region of Sirsi taluk.

Synopsis of the checklist

The present checklist is based on the Ph D thesis on Ferns and Fern allies of Karnataka state and on the subsequent checklist entitled “Pteridophytic Flora of Karnataka State, India’ published in Indian Fern Journal (1998) by Rajagopal and Bhat and also on other literature available to the author. The families under each group and the genera and species within each family or the genus are arranged alphabetically. Each record has been provided with currently accepted name, its author(s) name and nomenclatural citation, followed by basionyms and synonyms, if any, and their citation.

A total of 178 species (including four subspecies and four varieties) of pteridophytes belonging to 80 genera and 30 families are recorded in this checklist. A table showing the floristic analysis of the Pteridophytes of the state is given below.

The arrangement of families and genera is based on the one proposed by Maarten J. M. Christenhusz, Xianchun Zhang & Harald Schneider in their paper entitled “Linear Sequence of Extant Families and Genera of Lycophytes and Ferns” in *Phytotaxa* 19: 7-54. 2011. Most of the names are updated as per The Plant List: www.theplantlist.org

Fiftyfive per cent of the genera and sixteen per cent of the species of Pteridophytes of India are represented in Karnataka. Seventeen species are listed as rare and endangered. Pteridaceae, Thelypteridaceae, Polypodiaceae and Aspleniaceae are the dominant families. *Asplenium* with 16 species is the largest genus followed by *Pteris* with 13 species. The following pteridophytes endemic to South India are found in Karnataka: *Huperzia niligarica* (Spreng.) Trevis., *Selaginella tenera* Spring, *Cheilanthes swartzii* Webb & Benth., *Cyathea nilgirensis* Holttum, *Lindsaea malabarica* (Bedd.) Baker & Christ, *Pseudocyclosorus ochthodes* (Kunze) Holttum, *Thelypteris xylodes* (Kunze) Ching, *Bolbitis semicordata* (Baker) Ching, *Grammitis pilifera* Ravi & J. Joseph.

Table: Floristic Analysis of the Pteridophytes of Karnataka State

Sl. No.	Family Name	No. of Genera	No. of Species
1	Lycopodiaceae	3	5
2	Isoetaceae	1	6
3	Selaginellaceae	1	9
4	Equisetaceae	1	1
5	Ophioglossaceae	2	6
6	Psilotaceae	1	1
7	Marattiaceae	1	1
8	Osmundaceae	1	1
9	Hymenophyllaceae	4	9
10	Gleicheniaceae	1	1
11	Lygodiaceae	1	2
12	Schizaeaceae	1	1
13	Marsileaceae	1	1
14	Salviniaceae	2	2
15	Cyatheaceae	1	3
16	Lindsaeaceae	2	6
17	Dennstaedtiaceae	3	4
18	Pteridaceae	12	34
19	Aspleniaceae	1	16
20	Diplaziopsidaceae	1	1
21	Thelypteridaceae	11	19
22	Blechnaceae	2	2
23	Athyriaceae	5	9

24	Hypodematiaceae	1	1
25	Dryopteridaceae	5	14
26	Nephrolepidaceae	1	2
27	Tectariaceae	1	2
28	Oleandraceae	1	1
29	Davalliaceae	1	1
30	Polypodiaceae	11	17

Most of the taxa, if not all, listed below has been published in Rajagopal, P K and K G Bhat (1998).

Athyriaceae

Allantodia R. Br.

Allantodia aspera (Blume) Ching, Acta Phytotax. Sin. 9(1): 54. 1964

Diplazium polypodioides Blume, Enum. Pl. Javae fasc. 2: 194. 1828; P. K. Rajagopal & K. G. Bhat, Indian Fern J. 15:20.1998.

Diplazium asperum Blume, Tom. Cit. 195. 1828.

Athyrium asperum (Blume) Copel., Philip. J. Sci. Sect. C 3 : 294. 1908.

Distribution: Karnataka (Hassan), S India; Cambodia, China, Indonesia, Laos, Malaysia, Myanmar, Papua New Guinea, Philippines, Sri Lanka, Taiwan, Thailand, Vietnam.

Anisocampium C.Presl

Anisocampium cumingianum C.Presl, Abh. Königl. Böhm. Ges. Wiss., ser. 56: 418. 1851; P. K. Rajagopal & K. G. Bhat, Indian Fern J. 15: 18.1998

Cyclodium cumingianum (C. Presl) T. Moore, *Index Fil.* 88.1857.

Aspidium otaria Kunze ex Mett., *Abh. Senckenberg. Naturf. Ges.* 4: 34, no. 73.1858.

Pleocnemia aristata Bedd., Ferns S. India 28, t. 83. 1863. *nom. illegit.*

Nephrodium otaria (Kunze ex Mett.) Baker in Hook. & Baker, *Synops. Fil.* 288. 1867.

Nephrodium otarium (Kunze ex Mett.) Baker, *Syn. Fil.* 288.1867.

Dryopteris otaria (Kunze ex Mett.) Kuntze, *Revis. Gen. Pl.* 2: 813.1891

Athyrium otaria (Kunze ex Mett.) Posth., *Proc. Fourth Pac. Sci. Congr.* 3: 197.1930.

Athyrium cumingianum (C. Presl) Ching, *Index Filic., Suppl.* 3, 40.1934.

Distribution: Karnataka (Hassan, Kodagu, Uttara Kannada), S India, Assam; China, Indonesia, Laos, Myanmar, Philippines, Sri Lanka.

Athyrium Roth

Athyrium anisopterum Christ., Bull. Herb. Boissier 6(12): 962. 1898

Athyrium macrocarpon Bedd., Ferns S. India 51, t. 152. 1864, *pro parte*, non *Aspidium macrocarpum* Blume.
Distribution: Karnataka (Chikkamagaluru, Uttara Kannada), S India, NW Himalayas eastwards to Assam;
China, Indonesia, Malaysia, Myanmar, Philippines, Sri Lanka, Taiwan.

Athyrium falcatum Bedd., Ferns S. India t. 151. 1864

Athyrium drepanophyllum Bedd, Handb. Ferns Brit. India Suppl. 32. 1892.

Distribution: Karnataka (Chikkamagaluru), throughout India in mountainous regions.

Athyrium hohenackerianum (Kunze) T. Moore, Index Fil. 49. 1857

Allantodia hohenackerianum Kunze, Farnkr. 2: 63, t. 126. 1850.

Distribution: Karnataka (Chikkamagaluru, Dakshina Kannada, Hassan, Kodagu, Shimoga, Udupi, Uttara Kannada), S India; Sri Lanka.

Athyrium solenopteris (Kunze) T. Moore, Index Fil. 43. 1857.

Allantodia solenopteris Kunze, Linnaea 24 : 266. 1851.

Athyrium pectinatum Bedd., Ferns S. India 51, t. 155. 1864, *pro parte* non *A. pectinatum* Wall. ex Mett.

Distribution: Karnataka (Chikkamagaluru, Uttara Kannada), S India; Sri Lanka.

Deparia Hook. & Grev.

Deparia petersenii (Kunze) M. Kato, Bot. Mag. (Tokyo) 90(1017): 37. 1977

Diplazium lasiopteris Kunze Linnaea 17: 568. 1843

Asplenium lasiopteris (Kunze) Mett., Fil. Hort. Bot. Lips. 78. 1856.

Asplenium thwaitesii Braunek, Mett. in Abhandl. Senckenb. Naturforsch. Ges. 3: 227. 1859.

Diplazium thwaitesii (Braunek ex Mett.) Klotzsch ex T. Moore, Index. Fil. 339. 1862.

Diplazium japonicum non Bedd. 1876 nec. *Asplenium japonicum* Thunb.; Bedd., Handb. Ferns Brit. India 180. 1883, *pro parte*

Distribution: Karnataka (Chikkamagaluru), S India; E, S & SE Asia, Oceania.

Diplazium dilatatum Blume, Enum. Pl. Javae fasc. 2: 194. 1828.

Athyrium dilatatum (Blume) Holttum, Fl. Malaya 2 : 574. 1966.

Distribution: Karnataka (Uttara Kannada), S to NE India; Australia, China, Indonesia, Japan, Laos, Malaysia, Myanmar, Nepal, Pacific islands, Philippines, Thailand, Vietnam.

Diplazium esculentum (Retz.) Sw. in Schrader, J. Bot. 1801(2): 312. 1803.

Hemionitis esculenta Retz., Obs. Bot. 6: 38. 1791.

Anisogonium esculenta (Retz.) C. Presl, Tent. Pterid. 116. 1836.

Athyrium esculentum (Retz.) Copel., Philip. J. Sci. Sect. C, 3 : 295. 1908.

Distribution: Karnataka (Chikkamagaluru, Hassan, Kodagu, Mandya, Shimoga, Uttara Kannada), throughout India; tropical Asia, subtropical and tropical Polynesia.

Aspleniaceae

Asplenium L.

Asplenium aethiopicum (Burm. f.) Bech., Candollea 6: 22. 1935.

Trichomanes aethiopicum Burm f., Fl. Indica 32. 1768.

Asplenium furcatum Thunb., Prodr. Pl. Cap. 172. 1794.

Asplenium laserpitiifolium auct. non Lam. 1786; Bedd., Ferns S. India 75, t. 225. 1864.

Distribution: Karnataka (Chamarajanagara, Hassan, Kodagu), S India; Australia, China, Indonesia, Macaronesia, Malaysia, Myanmar, Pacific islands, Philippines, Thailand, tropical Africa, tropical America, Vietnam.

Asplenium cheilosorum Kunze ex Mett., Abh. Senckenberg. Naturf. Ges. 6: 133, t. 5, f. 12–13. 1859.

Asplenium heterocarpum Wall. ex Hook., Sp. Fil. 3 : 132, t. 175. 1860.

Hymenasplenium cheilosorum (Kunze ex Mett.) Tagawa, Acta Phytotax. Geobot. 7(2): 84.1938.

Distribution: Karnataka (Chikkamagaluru, Hassan, Kodagu), S India, Himalayas from Nepal to Bhutan.

Asplenium crinicaule Hance, Ann. Sci. Nat., Bot., sér. 5, 5: 254. 1866.

Asplenium falcatum sensu Bedd., Ferns S. India t. 141. 1864.

Distribution: Karnataka (Hassan), S India; Australia, China, Malaysia, Myanmar, Philippines, Thailand, Vietnam.

Asplenium decrescens Kunze, Linnaea 24: 261. 1851.

Asplenium contiguum auct. non Kaulf. 1824; T. Moore, Index Fil. 121.1859

Asplenium caudatum auct. non G. Forst. 1786; Hook., Sp. Fil. 3 : 152.1880

Distribution: Karnataka (Chamarajanagara, Chikkaballapur), S India; Africa, Australia, Brazil, Malaysia, Sri Lanka.

Asplenium ensiforme Wall. ex Hook. & Grev., Icon. Filic. 1(4): t.71. 1828

Distribution: Karnataka (Chikkamagaluru), throughout India in mountainous regions; Bhutan, China, Japan, Myanmar, Nepal, Sri Lanka, Thailand, Vietnam.

Asplenium erectum Bory ex Willd., Sp. Pl. 328. 1810.

Asplenium camptorachis Kunze, Linnaea 24 : 262. 1851.

Asplenium brasiliensis auct. non Sw.1817, nec Raddi 1825; Bedd., Ferns S. India 45, t. 135. 1864

Asplenium lunulatum var. *camptorachis* (Kunze) Bedd., Handb. Ferns Brit. India 147. 1883.

Distribution: Karnataka (Chikkamagaluru), S India; Africa, Hawaii, Madagascar, Malaysia, Polynesia.

Asplenium formosum Willd., Sp. Pl. 5(1): 329. 1810.

Distribution: Karnataka (Chikkamagaluru, Kodagu), E Himalayas, S India; Africa, Australia, tropical America.

Asplenium inaequilaterale Willd. in L., Sp. Pl. 5(1): 322. 1810.

Asplenium brachtus Kunze, Linnaea 10 : 512. 1836.

Asplenium trapeziforme sensu Bedd., Ferns S. India 45, t. 234. 1864.

Asplenium lunulatum var. *trapeziforme* Bedd., Handb. Ferns Brit. India 148. 1883 *pro parte*, non *Asplenium trapeziforme* Roxb.

Distribution: Karnataka (Chikkamagaluru, Mysore, Uttara Kannada), S India; Africa, Mascarenes, Sri Lanka, Thailand.

Asplenium laciniatum D. Don. Prodr. Fl. Nepal. 8 : 1825.

Distribution: Karnataka (Chikkamagaluru), S India, Himalayas, Africa, China, Hawaii, Indochina, Japan, Sri Lanka, Taiwan.

Asplenium nidus L. var. **phyllitidis** (D. Don) Bir, J. Indian Bot. Soc. 43 : 567. 1964.

Asplenium phyllitidis D. Don, Prodr. Fl. Nep. 7. 1825.

Thamnopteris phyllitidis Bedd., Ferns S. India t. 123. 1864.

Thamnopteris nidus var. *phyllitidis* Bedd., Handb. Ferns Brit. India 139. 1883.

Distribution: Karnataka (Chikkamagaluru, Shimoga, Uttara Kannada), Andaman & Nicobar Islands, E Himalayas; Paleotropical.

Asplenium normale D. Don, Prodr. Fl. Nepal. 7 1825.

Asplenium multijugum Wall. ex Mett., Adhadel. Seneckenb. Natu. Forsch. Ges. 3 : 179. 1859.

Distribution: Karnataka (Chikkamagaluru), Andaman & Nicobar Islands, S India, NE India, Himalayas; Australia, Bhutan, China, Japan, Malaysia, Myanmar, Nepal, Pacific islands Philippines, Sri Lanka, Thailand, Tropical Africa, Vietnam.

Asplenium polyodon G. Forst., Fl. Ins. Austr. 80. 1786.

Asplenium falcatum Lam., Encycl. 2 : 306. 1786.

Trichomanes adiantoides L., Sp. Pl. 2 : 1098. 1753.

Asplenium adiantoides (L.) C. Chr., Ind. Fil. 99. 1905 non *A. adiantoides* Lam.

Distribution: Karnataka (Tumkur), S India, Sikkim, W Bengal; Australia, China, Indian Ocean islands, Indonesia, Malaysia, Myanmar, Pacific islands, Philippines, Sri Lanka, Taiwan, Tropical Africa, Vietnam.

Asplenium rockii C. Chr., Contr. U.S. Natl. Herb. 26: 332. 1931,

Distribution: Karnataka (Chamarajanagar), NE & S India; Australia, Bhutan, China, Malaysia, Myanmar, New Zeland, Taiwan, Thailand.

Asplenium tenuifolium D. Don, Prodr. Fl. Nepal. 8. 1825.

Distribution: Karnataka (Chikkamagaluru), S India, Himalayas; Bhutan, China, Indonesia, Malaysia, Myanmar, Nepal, Philippines, Sri Lanka, Thailand, Vietnam.

Asplenium unilaterale Lam., Encycl. 2(1): 305. 1786.

Asplenium resectum Sw., Icon. Pl. 3: t. 72. 1791.

Asplenium trapeziforme Wall. ex Roxb., Calc. J. Nat. Hist. 4 : 497. 1844.

Distribution: Karnataka (Chikkamagaluru, Shimoga), Himalayas; Africa, Polynesia, E & S E Asia, USA (Hawaii Islands)

Asplenium yoshinagae Makino, Phan. Pterid. Jap. Icon. 1: t. 64. 1900.

Asplenium indicum Sledge, Bull. Brit. Mus. (Nat. Hist.), Bot. 3: 264. 1965.

Asplenium planicula Wall. ex Mett., Abhandl. Senckenb. Naturforsch. Ges. 3 : 201. 1859, non Lowe 1858.

Asplenium laciniatum auct. non D. Don 1825; Bedd., Handb. Ferns Brit. India 154. 1883 *pro parte*

Distribution: Karnataka (Chikkamagaluru, Hassan, Kodagu, Mysore, Shimoga, Uttara Kannada), S India; Meghalaya, Himalayas; Madagascar, E & S Asia.

Blechnaceae

Blechnum L.

Blechnum orientale L., Sp. Pl. 2: 1077. 1753.

Distribution: Karnataka (Chikkamagaluru, Dakshina Kannada, Hassan, Kodagu, Shimoga, Udupi, Uttara Kannada), throughout India; Australia, China, Japan, Pacific islands, tropical Asia, Taiwan.

Stenochlaena J. Sm.

Stenochlaena palustris (Burm.f.) Bedd., Ferns Brit. India (Suppl.): 26, t. 201. 1876.

Polypodium palustre Burm.f., Fl. Indica 234. 1768.

(Plate 2A)

Acrostichum palustre (Burm.f.) C. B. Clarke, Trans. Linn. Soc. London, Bot. 1: 577. 1880.

Stenochlaena scandens (Sw.) J. Sm. in Hook, J. Bot. 3: 401. 1841.

Distribution: Karnataka (Dakshina Kannada, Udupi, Uttara Kannada), Kerala, Tamil Nadu, West Bengal; Australia, Cambodia, China, Fiji, Indonesia, Laos, Malaysia, Nepal, Pacific islands, Thailand, Sri Lanka, Vietnam.

Cyatheaceae

Cyathea Sm.

Cyathea gigantea (Wall. ex Hook.) Holttum, Gard. Bull. Straits Settlem. 8(4): 318. 1935.

Alsophila gigantea Wall. ex Hook., Sp. Fil. 1 : 53. 1844.

Alsophila glabra auct. non (Blume) Copel. 1909; Bedd., Ferns S. India t. 60. 1863.

Distribution: Karnataka (Dakshina Kannada, Hassan, Kodagu, Shimoga, Uttara Kannada), throughout India in hilly areas; Bhutan, China, S & SE Asia.

Cyathea nilgirensis Holttum, Kew Bull. 19 : 468. 1965. (Plate 1D)

Alsophila latebrosa Hook., Sp. Fil. 1 : 37. 1884, *pro parte quoad* Bedd., 1883.

Alsophila nilgirensis (Holttum) R.M. Tryon, *Contr. Gray Herb.* 200: 32 1970.

Distribution: Karnataka (Chikkamagaluru, Hassan, Kodagu, Uttara Kannada), Andhra Pradesh, Kerala, Odisha, Tamil Nadu; endemic.

Cyathea spinulosa Wall. ex Hook., Sp. Fil. 1 : 25, t. 12. 1844.

Alsophila decipiens J. Scott ex Bedd., Ferns British India t. 311. 1869.

Amphicosmia decipiens (J. Scott ex Bedd.) Bedd., Suppl. Ferns Brit. India 1. 1876.

Alsophila spinulosa (Wall. ex Hook.) R.M. Tryon, *Contr. Gray Herb.* 200: 32. 1970.

Distribution: Karnataka (Dakshina Kannada, Uttara Kannada), throughout India in hilly regions; E & SE Asia.

Davalliaceae

Araiostegia Copel.

Araiostegia pulchra (D. Don) Copel., Philipp. J. Sci. 34(3): 241. 1927.

Davallia pulchra D. Don, Prodr. Fl. Nepal 11. 1825.

Leucostegia pulchra (D. Don) J. Sm., London J. Bot. 1: 426. 1842.

Davallia chaerophylla Wall. ex Hook., *Sp. Fil.* 1: 157, t. 51 A. 1845

Acrophorus pulcher (D. Don) T. Moore, *Index Fil.* 3. 1857.

Humata pulchra (D. Don) Diels in Engl. & Prantl, *Nat. Pflanzenfam.* 1(4): 209. 1899.

Distribution: Karnataka (Chamarajanagara, Chikkamagalur, Kodagu, Hassan), throughout India in mountainous regions; Bhutan, China, Laos, Myanmar, Nepal, Papua New Guinea, Sri Lanka, Thailand, Vietnam.

Dennstaedtiaceae

Hypolepis Bernh.

Hypolepis glandulifera Brownsey & Chinnock, J. Adelaide Bot. Gard. 10(1): 16. 1987.

Polypodium punctatum Thunb., Fl. Japan 337. 1784.

Hypolepis punctata (Thunb.) Mett, ex Kuhn, Fil. Afr. 120. 1868.

Vernacular name/Common name: *Downy Ground-fern* (English).

Distribution: Karnataka (Chamarajanagara), throughout India in mountainous regions; Australia, Japan, Malaysia, Sri Lanka.

Microlepia Presl.

Microlepia speluncae (L.) Moore, Index Fil. 93. 1857.

Polypodium speluncae L., Sp. Pl. 1093. 1753.

Distribution: Karnataka (Chikkamagaluru, Hassan, Shimoga, Uttara Kannada), S India, Himalayas; Africa, Australia, Bhutan, Cambodia, China, Indonesia, Japan, Laos, Myanmar, Nepal, Pacific islands, Philippines, S America, Sri Lanka, Thailand, Vietnam, West Indies.

Microlepia strigosa (Thunb.) C. Presl, Epim. Bot. 95. 1849.

Trichomanes strigosum Thunb., Fl.Jap. 339. 1784.

Distribution: Karnataka (Shimoga), S India, Himalayas; Indonesia, Japan, Pacific islands, Philippines, Sri Lanka, Thailand.

Pteridium Glod. ex Scop.

Pteridium aquilinum (L.) Kuhn, Bot. Ost-Afrika 3(3): 11. 1879.

Pteris aquilina L., Sp. Pl. 2 : 1075. 1753.

Vernacular name/Common name: *Common bracken, Eagle fern* (English)

Distribution: Karnataka (Hassan, Kodagu, Chamarajanagar, Shimoga, Uttara Kannada), throughout India in mountainous regions; throughout except Arctic and temperate S America.

Diplaziopsidaceae

Diplaziopsis C. Chr.

Diplaziopsis javanica (Blume) C. Chr., Index Filic. fasc. 4: 227. 1905.

Asplenium javanicum Blume, Enum. Pl. Javae 2 : 175. 1828.

Allantodia brunoniana Wall., Pl. Asiat. Rar. 1 : 44. 1830.

Allantodia javanica (Blume) Trev., Nuov. Giorn. Bot. Ital. 7 : 159. 1875.

Diplazium javanicum (Blume) Makino, Bot. Mag. Tokyo 2 : 85. 1906.

Athyrium javanicum (Blume) Copel., Univ. Calif. Publ. Bot. 16 : 70. 1929.

Distribution: Karnataka (Uttara Kannada), Himalayas; Bhutan, China, Indonesia, Nepal, Sri Lanka.

Dryopteridaceae

Bolbitis Schott

Bolbitis xlancea (Copel.) Ching in C. Chr., Ind. Fil. Suppl. 3 : 48. 1934.

Campium lanceum Copel., Philip. J. Sc. 37: 380, t. 25, f. 32. 1928.

Bolbitis kanarensis Nayar & Chandra, Amer. Fern. J. 54 : 9, f.1-9. 1964.

Distribution: Karnataka (Uttara Kannada), Andhra Pradesh; endemic.

Bolbitis xprolifera (Bory) C. Chr. Ex C. Chr. & Tard., Not. Syst. Paris 7: 102. 1938.

Polybotrya prolifera Bory, Belanger Voy. Ind. Bot. Or. B2: 18. 1833.

Distribution: Karnataka (Uttara Kannada).

Bolbitis semicordata (Baker) Ching in C. Chr., Index Filic., Suppl. Tertium pro Annis 1917-1933 50.1934. & Nat. Bot. Gard. Ind. Fil. Suppl. 3: 50. 1934.

Acrostichum semicordatum Baker in Hook. & Baker Syn. Fil. 422, 1868, *pro parte*.

Poecilopteris repanda non (Blume) Presl. 1851; Bedd., Fems S. India 68, t. 202. 1864.

Poecilopteris semicordata Bedd., Fems Brit. India Pl. 270. 1868.

Gymnopteris semicordata J. Smith, Hist. Fil. 138. 1875.

Gymnopteris contaminans Bedd., Handb. Fems Brit. India 435, f. 264. 1883.

Bolbitis semicordata var. *incisa* Nayar & Chandra, Amer. Fern J. 54 : 14, f. 10-15. 1964.

Distribution: Karnataka (Chikkamagaluru, Dakshina Kannada, Hassan, Shimoga, Uttara Kannada), E Himalayas, S India; Australia, Myanmar, Sri Lanka.

Bolbitis subcrenata (Hook. & Grev.) Ching in C. Chr. Ind. Fil. Suppl. 3: 50. 1934.

Acrostichum subcrenatum Hook. & Grev., Icon. Fil. t. 110. 1829.

Gymnopteris subcrenata (Hook. & Grev.) Bedd., Handb. Fems Brit. India 437. 1883.

Distribution: Karnataka (Chikkamagalur, Dakshina Kannada, Hassan, Shimoga, Udupi, Uttara Kannada), S India; Sri Lanka.

Arachniodes Blume

Arachniodes amabilis (Blume) Tindale, Contr. New South Wales Natl. Herb. 3(1): 90. 1961.

Aspidium amabile Blume, Enum. Pl. Javae. 2: 165. 1828

Polystichum amabile (Blume) J. Sm., Ferns Brit. For. 152.1866.

Dryopteris amabilis (Blume) Kuntze, Revis. Gen. Pl. 2: 812.1891.

Nephrodium amabile (Blume) Hand.-Mazz., Symb. Sin. 6: 26.1929.

Rumohra amabilis (Blume) Ching, Sinensia 5(1-2): 41.1934.

Polystichopsis amabilis (Blume) Tagawa, J. Jap. Bot. 33(3): 94.1958.

Byrsopteris amabilis (Blume) C.V. Morton, Amer. Fern J. 50(1): 153.1960.

Distribution: Karnataka (?), S India; China, Indonesia, Japan, Korea, Nepal, Philippines, Sri Lank,

Arachniodes aristata (G. Forst.) Tindale, Contr. New South Wales Natl. Herb. 3(1): 89 1961.

Polypodium aristatum G. Forst., Prodr. 82. 1786.

Aspidium aristatum (G. Forst.) Sw. in Schrader, J. Bot. 1800(2): 37.1801.

Polystichumaristatum (G. Forst.) C. Presl, Tent. Pterid. 83.1836.

Lastrea aristata (G. Forst.) T. Moore, Index Fil. 86.1858.

Dryopterisaristata (G. Forst.) Kuntze, Revis. Gen. Pl. 2: 812.1891.

Polystichum lobatum var. *aristatum* (G. Forst.) C. Chr., Index Filic. fasc. 10: 579, 583.1906.

Rumohra aristata (G. Forst.) Ching, Sinensia 5(1-2): 50.1934.

Byrsopterisaristata (G. Forst.) C.V. Morton, Amer. Fern J. 50(1): 152.1960.

Polystichopsis aristata (G. Forst.) Holttum, Rev. Fl. Malays 2: 486. 1966.

Distribution: Karnataka (Chamarajanagara), S India; Australia, China, Polynesia, Myanmar, Sri Lanka.

Arachniodes tripinnata (Goldm.) Sledge, in Bull. Brit. Mus. (Nat. Hist.), Bot. 5: 41. 1973.

Polystichum tripinnatum Goldm., Nova Acta Leop., Suppl. 19(I): 463.1843.

Lastrea coniiifolia auct. non T. Moore 1857; Bedd., Ferns Brit. Indiat. 261.1868,

pro parte, non *Aspidium coniiifolium* Wall. ex Mett.

Rumohra wallichii Ching, Sinensia 5(1-2): 56.1934.

Distribution: Karnataka (Chikkamagaluru, Hassan, Shimoga), S India; Indonesia, Malaysia, Philippines.

Dryopteris Adans.

Dryopteris austro-indica Fraser-Jenk., Bull. Brit. Mus. (Nat. Hist.), Bot. 18(5): 370, f. 24. 1989,
Lastrea intermedia auct. non C. Presl, 1836; nec *Dryopteris intermedia* (Muhlenb. ex Willd.) A. Gray
 1848; Bedd., Ferns S. India 39, Pl. 113. 1864, nom. illeg.,
 Distribution: Karnataka (Chikkamagaluru), endemic?

Dryopteris cochleata (D. Don) C. Chr., Index Filic. fasc. 5: 258.1905.

Nephrodium cochleatum D. Don, Prodr. Fl. Nepal. 6. 1825.

Lastrea cochleata (D. Don) T. Moore, Ind. Fil. 88. 1858.

Nephrodium filix-masvar.cochleatum (D. Don) Hook., Sp. Fil. 4: 117.1862.

Lastrea filix-masvar.cochleata (D. Don) Bedd., Suppl. Ferns Brit. Ind. 17, no. 33. 1876.

Aspidium filix-masvar.cochleatum (D. Don) Christ, Farnkr. Erde 257.1897.

Dryopteris filix-masvar.cochleata (D. Don) Alderw., Malayan Ferns 193.1908.

Distribution: Karnataka (Chamarajanagara, Chikkamagaluru, Hassan, Kodagu, Shimoga, Uttara
 Kannada), Himalayas; Bangladesh, Bhutan, China, Indonesia, Myanmar, Nepal, Philippines, Thailand.

Dryopteris deparioides (T. Moore) Kuntze subsp. **Gracillima** (Ching) Fraser-Jenk., Bull. Brit. Mus.
 (Nat. Hist.), Bot. 18(5): 449, f. 63.1989.

Dryopteris gracillima Ching, Bull. Fan. Meml. Inst. Biol. (Bot.) 8 : 452. 1938.

Dryopteris gracillima var. *gracillima* Sledge, Bull. Br. Mus. Nat. Hist. (Bot.) 5(1): 19.1973.

Nephrodium sparsum var. *minus* Thwaites ex Baker in Hook. & Baker, Syn. Fil. ed. 2 : 498.1872.

Lastrea sparsa var. *minor* (Thwaites ex Baker) Bedd., Suppl. Ferns S. India 17.1876.

Distribution: Karnataka (Chikkamagaluru), S India; Sri Lanka.

Dryopteris hirtipes (Blume) Kuntze, Revis. Gen. Pl. 2: 813. 189.

Aspidium hirtipes Blume, Enum. Pl. Javae fasc. 2: 148. 1828.

Lastrea hirtipes (Blume) T. Moore, *Index Fil.* 94.1858.

Nephrodium hirtipes (Blume) Hook., Sp. Fil. 4 : 115, t. 249. 1862.

Distribution: Karnataka (Chamarajanagara), Himalayas, S India; E & SE Asia.

Dryopteris sparsa (D. Don) Kuntze, Revis. Gen. Pl. 2: 813. 1891.

Nephrodium sparsum D. Don, Prodr. Fl. Nepal. 6.1825.

Aspidium sparsum (D. Don) Spreng., Syst. Veg. 4(1): 106.1827.

Lastrea sparsa (Buch.-Ham. ex D. Don) T. Moore, Index Fil. 87. 1858.

Polystichum sparsum (D. Don) Keyserl., Polyp. Herb. Bunge 43.1873.

Nephrodium sparsum var. *latisquamum* C.B. Clarke, Trans. Linn. Soc. London, Bot. 1(8): 524.1880

Distribution: Karnataka (Chamarajanagara, Chikkamagaluru, Shimoga), Himalayas; Bhutan, China,
 Indonesia, Japan, Myanmar, Nepal, Taiwan, Thailand, Vietnam.

Egenolfia Schott

Egenolfia appendiculata (Willd.) J. Sm., Ferns Brit. For. 111. 1866

Acrostichum appendiculatum Willd., Sp. Pl. ed. 5: 114. 1810.

Polybotrya asplenifolia C. Presl, Tent. Pterid. 231.1836.

Polybotrya appendiculata (Willd.) J. Sm. in Hook., J. Bot. 4: 150. 1841.

Bolbitis appendiculata (Willd.) K. Iwats., Acta Phytotax. Geobot. 18 : 48. 1959; P. K. Rajagopal & K. G.
 Bhat, Indian Fern J. 15:21.1998.

Bolbitis kanarensis Nayar & Chandra, Amer. Fern J. 54(1): 9.1964.

var. **appendiculata**

Distribution: Karnataka (Uttara Kannada), throughout India; China, Philippines.

var. **asplenifolia** (Bory) Sledge, Bot. J. Linn. Soc. 84: 19. 1982.
Acrostichum asplenifolium Bory, Bel. Voy. Bot. 2 : 21, t. 3. 1833.
Polybotrya asplenifolia (Bory) Presl., Tent. Pterid. 231. 1836.
Egenolfia asplenifolia (Bory) Fee, Gen. Fil. 358. 1852.
Polybotrya appendiculata var. *asplenifolia* (Bory) Bedd., Handb. Ferns Brit. India 424, t. 235. 1883.
 Distribution: Karnataka (Chikkamagaluru, Dakshina Kannada, Hassan, Shimoga), Kerala, Tamil Nadu; Sri Lanka.

Elaphoglossum Schott

Elaphoglossum ciliatum (C. Presl) T. Moore, Index Fil. 8.1857

Olfersia ciliata C. Presl, Tent. Pterid. 234.1836.
Acrostichum preslianum Fee, Acrost. 46.1845.
Gymnopteris preslianum (Fee) Bedd., Handb. Ferns Brit. India 439.1883.
Bolbitis x presliana (Fee) Ching, in C. Chr., Ind. Fil. Suppl. 3: 49. 1934; P. K. Rajagopal & K. G. Bhat, Indian Fern J. 15:21.1998
 Distribution: Karnataka (Shimoga, Uttara Kannada), S India; endemic.

Elaphoglossum nilgircum Krajina ex Sledge, Bull. Brit. Mus. (Nat. Hist.), Bot. 4: 94. 1967.

Elaphoglossum squamosum auct. non J. Sm. 1841; Bedd., Ferns S. India 67, 1. 197. 1864.
 Distribution: Karnataka (Dakshina Kannada), S India; endemic.

Equisetaceae

Equisetum L.

Equisetum ramosissimum subsp. **debile** (Roxb. ex Vaucher) Hauke, Amer. ern J. 52: 33. 1962.

Equisetum debile Roxb. ex Vaucher, Mém. Soc. Phys. Genève 1: 387.1822.

Hippochaetera mosissima subsp. *debilis* (Roxb. ex Vaucher) Á. Löve & D. Löve, Taxon 26(2–3): 324.1977.

Distribution: Karnataka (Hassan, Mandya, Mysuru), Himalayas; Afghanistan, Africa, Bangladesh, Bhutan, C and SW Asia, China, Europe, Indonesia, Japan, Korea, Laos, Malaysia, Mongolia, Myanmar, Nepal, New Guinea, Pakistan, Philippines, Russia, S Pacific islands, Singapore, Sri Lanka, Taiwan, Thailand, Vietnam; introduced in N America.

Gleicheniaceae

Dicranopteris Bernh.

Dicranopteris linearis (Burm. f.) Underw., Bull. Torrey Bot. Club 34(5): 250. 1907.

Polypodium lineare Burm. f., Fl. Ind. 235, t. 67, f. 2. 1768.

Gleichenia dichotoma (Willd.) Bedd., Handb. Ferns Brit. India 74. 1864.

Gleichenia linearis (Burm. f.) C.B. Clarke, Trans. Linn. Soc. London, Bot. 1(7): 428.1880.

Mertensia linearis (Burm. f.) Fritsch, Bull. Herb. Boissier, sér. 2, 1(11): 1092.1901

Vernacularname/Common name: Old World forked fern (English)

Distribution: Karnataka (Bengaluru, Dakshina Kannada, Hassan, Mysore, Shimoga, Udupi, Uttara Kannada), Arunachala Pradesh, Assam, Meghalaya, Madhya Pradesh, Tamil Nadu; Paleotropical.

Hymenophyllaceae

Cephalomanes Presl

Cephalomanes obscurum (Blume) K. Iwats., Fac. Sci. Univ. Tokyo, Sect. 3, Bot. 13 (5): 547.1985

Trichomanes obscurum Blume, Enum. Pl. Java 227. 1828; P.K. Rajagopal & K. G. Bhat, Indian Fern J. 15:13.1998.

Selenodesmium obscurum (Blume) Copel., Philip. J. Sci. 67:81. 1938.

Trichomanes rigidum auct. non Sw. 1788; Bedd., Ferns S. India t. 8. 1864.

Distribution: Karnataka (Chikkamagaluru, Kodagu), S India; Polynesia, Sri Lanka, SE Asia, Taiwan.

Crepidomanes Presl

Crepidomanes intramarginale (Hook. & Grev.) Copel., Philipp. J. Sci. 67(1): 59. 1938;

Trichomanes intramarginale Hook. & Grev., Icon. Fil. 2(11):t. 211.1831.

Distribution: Karnataka (Dakshina Kannada, Hassan, Shimoga, Udupi, Uttara Kannada), SE Asia.

Crepidomanes latealatum (Bosch) Copel., Philipp. J. Sci. 67(1): 60. 1938

Didymoglossum latealatum Bosch, Ned. Kruidk. Arch. 5(2): 138.1861.

Didymoglossum racemosum Bosch, Ned. Kruidk. Arch. 5(2): 137.1861

Didymoglossum plicatum Bosch, Ned. Kruid. Arch. 5(3): 139. 1861.

Didymoglossum insigne Bosch, Ned. Kruidk. Arch. 5(2): 143.1861.

Trichomanes plicatum (Bosch) Bedd., Ferns Brit. India t. 284. 1868; P.K. Rajagopal & K. G. Bhat, Indian Fern J. 15:14. 1998.

Trichomanes bipunctatum var. *latealatum* (Bosch) C.B. Clarke, *Trans. Linn. Soc. London, Bot. 1: 49.1880.*

Trichomanes bipunctatum var. *insigne* (Bosch) Bedd., *Handb. Ferns Brit. India 42.1883.*

Trichomanes bipunctatum var. *plicatum* (Bosch) Bedd., *Handb. Ferns Brit. India 42.1883.*

Trichomanes insigne (Bosch) Bedd., Ferns Brit. India, t. 284. 1868

Trichomanes plicatum (Bosch) Bedd., Ferns Brit. India, t. 285. 1868

Trichomanes filicula auct. on (Bory ex Willd.) Bory, 1849; Bedd., Ferns Brit. India t. 283. 1868.

Trichomanes bipunctatum auct. non Poir. 1808; Bedd., *Handb. Ferns Brit. India 41.1883. pro parte*

Trichomanes latealatum (Bosch) Christ, *Verh. Naturf. Ges. Basel 11: 424.1896.*

Crepidomanes plicatum (Bosch) Ching, *Fl. Reipubl. Popularis Sin. 2: 171.1959.*

Distribution: Karnataka (Bengaluru, Chamarajanagara, Chikkamagaluru, Dakshina Kannada, Hassan, Kodagu, Shimoga) S & N India, Australia, Bhutan, China, Japan, Malesia, Nepal, Sri Lanka, Taiwan, Vietnam.

Crepidomanes latemarginale (A.A.Eaton) Copel., Philipp. J. Sci. 67(1): 60. 1938

Trichomanes latemarginale A.A. Eaton, *Proc. Amer. Acad. Arts 4: 111. 1858;* P.K. Rajagopal & K. G. Bhat, *Indian Fern J. 15:13.1998.*

Trichomanes kurzii Bedd., Ferns Brit. India t. 286. 1868.

Distribution: Karnataka (Shimoga), Andaman & Nicobar Islands, Assam, S India; China, Japan (Ryukyu Islands), Malaysia, Taiwan, Thailand, Vietnam.

Crepidomanes minutum (Blume) K. Iwats., J. Fac. Sci. Univ. Tokyo, Sect. 3, Bot. 13 (5): 531. 1985.

Trichomanes minutum Blume, Enum. Pl. Javae. Fasc. 2: 223. 1828.

Trichomanes proliferum Blume, Enum. Pl. Jav. 224. 1828.

Trichomanes subpinnatifidum Bosch, Ned. Kruid. Arch. 5 : 141. 1861.

Gonocormus diffusus (Blume) Bosch, Hymen. Jav. 9. t. 4. 1861.

Gonocormus prolifer (Blume) Prantl, Hymenophyllac. 51.1875

Trichomanes pyxidiferum auct. non L. 1753; Bedd., Handb. Ferns Brit. India 42. 1883 quoad sp.

Distribution: Karnataka (Kodagu), NE & S India; Africa, Australia Bhutan, Cambodia, Indonesia, Japan, Korea, Malaysia, Nepal, Pacific islands, Philippines, Russia (Siberia), Sri Lanka, Thailand, Vietnam.

Didymoglossum Desv.

Didymoglossum henzaianum (Parish ex Hook.) Mazumdar, Phytotaxa 158(3): 297. 2014

Trichomanes henzaianum Parish ex Hook., 2nd Cent. Ferns Pl. 1. 1860; P.K. Rajagopal & K. G. Bhat, Indian Fern J. 15:27. 1998.

Microgonium henzaianum (Parish ex Hook.) Copel., Philip. J. Sci. 67 : 62. 1938.

Distribution: Karnataka (Shimoga); Malaysia, Myanmar, Thailand, Vietnam.

Hymenophyllum Sm.

Hymenophyllum exsertum Wall. ex Hook., Sp. Fil. 1: 109, t. 38 A 109. 1844.

Hymenophyllum gardneri Bosch, Ned. Kruidk. Arch. 4: 417. 1859.

Mecodium exsertum (Wall. ex Hook.) Copel. Philip. J. Sci. 67 (1) : 23. 1938.

Distribution: Karnataka (Chikkamagaluru, Kodagu), throughout India in mountainous regions; Bhutan, Cambodia, China, Laos, Malaysia, Thailand, Vietnam.

Hymenophyllum polyanthos Sw., J. Bot. 1800(2): 102. 1801.

Trichomanes polyanthos Sw., Prod. Fl. Ind. Occ. 137. 1788.

Hymenophyllum blumeanum Spreng, Syst. Veg. 4(1):131. 1827.

Mecodium polyanthos (Sw.) Copel., Philip. J. Sci. 67: 19. 1938.

Hymenophyllum himalaianum Bosch, Ned. Kruidk. Arch. 5(2): 156. 1861.

Hymenophyllum polyanthos var. *minor* Bedd., Ferns Brit. India ,t. 306. 1869

Distribution: Karnataka (Uttara Kannada), throughout India in mountainous regions; throughout tropical and subtropical regions of the world.

Trichomanes L.

Trichomanes exiguum (Bedd.) Baker in Hook. & Baker, Syn. Fil. ed. 2: 464. 1874.

Hymenophyllum exiguum Bedd, Ferns Brit. India t. 275. 1868.

Didymoglossum exiguum (Bedd.) Copel., Philip. J. Sci. 67 (1) : 78. 1938.

Distribution: Karnataka (Kodagu), S India; Australia, Sri Lanka, Malaysia, Thailand.

Hypodematiaceae

Leucostegia C. Presl

Leucostegia immerse Wall. ex C. Presl, Tent. Pterid. 95. 1836.

Distribution: Karnataka (Chikkamagaluru, Hassan, Kodagu, Uttara Kannada), throughout India in mountainous regions; Bhutan, Cambodia, China, Indonesia, Malaysia, Myanmar, New Guinea, Pacific islands, Philippines, Thailand.

Isoetaceae

Calamaria Boehm.

Calamaria coromandelina (L. f.) Kuntze, Revis. Gen. Pl. 2: 828. 1891.

Isoetes coromandelina L. f., Suppl. Pl. Syst. Veg. ed. 2 : 447. 1781; P.K.Rajagopal & K. G. Bhat, Indian Fern J. 15:5. 1998.

Isoetes capsularis Griff., Icon. Pl. Asiat. 2: t. 117. 1849 non Roxb. 1832.

Isoetes coromandelina var. *raipurensis* Unni, J. Bombay Nat. Hist. Soc. 64:590.1967.

Isoetes sahyadriensis Mahabale, Curr. Sci. 60: 62. 1938; P.K.Rajagopal & K. G. Bhat, Indian Fern J. 15:6. 1998.

Isoetes sampathkumarii L.N.Rao, Curr. Sci. 13:286.1944; P. K. Rajagopal & K. G. Bhat, Indian Fern J. 15:6. 1998.

Isoetes mahadevensis G.K. Srivast., D.D. Pant & P.K. Shukla, Amer. Fern J. 35: 85.1945.

Isoetes dixitei Shende, J. Univ. Bombay 14: 50. 1945; P.K.Rajagopal & K. G. Bhat, Indian Fern J. 15:6. 1998.

Isoetes indica D.D.Pant & G.K.Srivast., Proc. Natl. Inst. Sci. India, B 28: 246. 1962; S.Patil, Hande, S.R.Yadav & M.Dongare, Indian Fern J. 30:78.2013.

Isoetes mirzapurensis Panigr. & Dixit, Proc. Natl. Inst. Sci. India, B 28: 246. 1962.

Isoetes panchananii Pant & Srivast., Proc. Natl. Inst. Sci. India, B 28:243. 1962.

Isoetes pantii Goswami & Arya, J. Indian Bot. Soc. 49: 30. 1971

Isoetes bilaspurensis Panigr., Biol. Mem. 6(2): 135. 1981

Isoetes coromandelina subsp. *brachyglossa* (A.Braun) Panigr., Biol. Mem. 6(2): 131. 1981

Isoetes rajasthanensis Gena & Bhardwaja, J. Bombay Nat. Hist. Soc. 81(1): 165. 1984

Isoetes reticulata Gena & Bhardwaja, J. Bombay Nat. Hist. Soc. 81(1): 166. 1984

Isoetes tuberculata Gena & Bhardwaja, J. Bombay Nat. Hist. Soc. 81(1): 167. 1984

Isoetes panchganiensis G.K.Srivast., D.D.Pant & P.K.Shukla, Amer. Fern J. 83(4): 107. 1993

Isoetes panchganiensis var. *kemangundiensis* G.K.Srivast., D.D.Pant & P.K.Shukla, Amer. Fern J. 83(4): 108.1993.

Distribution: Karnataka (Chamarajanagar, Chikkamagaluru, Hassan, Mandya, Shimoga, Tumakuru); Andhra Pradesh, Bihar, Gujarat, Kerala, Madhya Pradesh, Maharashtra, Odisha, Tamil Nadu, Uttara Pradesh, West Bengal; Australia, Thailand, Vietnam.

Isoetes Reichenb.

Isoetes udupiensis P.K. Shukla, G.K. Srivast., S.K. Shukla & P.K. Rajagopal, Taxon 54(1): 112. 2005. (Plate 1B)

Distribution: Karnataka (Udupi); endemic.

Note: Probably a synonym of *Calamaria coromandelina* (L. f.) Kuntze

Lindsaeaceae

Lindsaea Dryand. ex Sm.

Lindsaea ensifolia Sw. in Schrader, J. Bot. 1800(2): 77. 1801.

Schizoloma ensifolium (Sw.) J. Sm., Hook., J. Bot. 3 :414. 1841.

Distribution: Karnataka (Chikkamagaluru, Dakshina Kannada, Kodagu, Shimoga, Udupi, Uttara Kannada), throughout India; Africa, Australia, Bangladesh, China, Japan, Myanmar, Nepal, Pacific islands, Philippines, Sri Lanka, SW Asia, Taiwan, Thailand, Vietnam.

Lindsaea heterophylla Dryand., Trans. Linn. Soc. London 3: 41, t. 8, f. 1. 41. 1797.

Schizoloma heterophyllum (Dryand.) J.Sm., in Hook., J. Bot. 3: 414. 1841.

Schizolegnia savantwadiensis Almeida, J. Bomb. Nat. Hist. Soc. 74 : 325. 1977.

Schizolegnia indica Almeida, J. Bomb. Nat. Hist. Soc. 74 : 325. 1977.

Distribution: Karnataka (Chikkamagaluru, Dakshina Kannada, Uttara Kannada), Andaman & Nicobar Islands, Maharashtra; Africa, China, Japan, Malaysia, Sri Lanka, Thailand, Vietnam.

Lindsaea malabarica (Bedd.) Baker ex Christ, Contr. U. S. Nat. Herb. 26 : 195. 1931; P.K. Rajagopal & K. G. Bhat, Indian Fern J. 15:12. 1998.

Schizoloma malabaricum Bedd., Fems Brit. India t. 268. 1868.

Schizoloma lobatum (Poir.) Bedd. var. *malabaricum* (Bedd.) Bedd., Handb. Ferns Brit. India 79. t. 39. 1883.

Distribution: Karnataka (?), Kerala, Madhya Pradesh, Tamil Nadu; endemic.

Lindsaea odorata Roxb. ex Griff., Calcutta J. Nat. Hist. 4: 511. 1844.

Lindsaea cultrata auct. multo

Lindsaea lobbiana Hook., Sp. Fil. 1 : 205, t. 62. 1846.

Distribution: Karnataka (Chikkamagaluru), E India; Africa, Madagascar.

Lindsaea venusta Kaulf. ex Kuhn, Linnaea 36. 79. 1869.

Schizoloma recurvatum auct. non (Wall. ex Hook.) T. Moore 1857; Bedd., Ferns S. India 9, t. 27. 1864.

Schizoloma lobata sensu Bedd., Handb. Fern Br. India 79. 1839 *pro parte*.

Distribution: Karnataka (Uttara Kannada), S India; Sri Lanka.

Sphenomeris Maxon

Sphenomeris chinensis (L.) Maxon, J. Wash. Acad. Sci. 3(5): 144. 1913.

Odontosoria chinensis (L.) J. Sm., Bot. Voy. Herald 430. 1857.

Trichomanes chinense L., Sp. Pl. 2 : 1099. 1753.

Davallia tenuifolia (Lam.) Sw. in Schrader, J. Bot. 88. 1801.

Stenoloma chinense (L.) Bedd., Ferns Brit. India 70 : 1868.

Distribution: Karnataka (Chikkamagaluru, Dakshina Kannada, Kodagu, Shimoga), throughout India from plains to hilly regions; E & SE Asia, Hawaii, Polynesia, Sri Lanka.

Lycopodiaceae

Huperzia Bernh.

Huperzia hamiltonii (Spreng.) Trevis., Atti Soc. Ital. Sci. Nat. 17: 248. 1874

Lycopodium hamiltonii Spreng., Syst. Veg. 5: 129, 428 1828; P. K. Rajagopal & K. G. Bhat, Indian Fern J. 15:4 1998.

Vernacular names/Common names: *Thai Fern*, *Club Moss* (English).

Distribution: Karnataka (Hassan, Kodagu, Mysore, Shimoga, Uttara Kannada); throughout India; Malaysia, Myanmar, Sri Lanka.

Huperzia niligarica (Spring) R. D. Dixit, J. Bombay Nat. Hist. Soc. 77(3): 541. 1980.

Lycopodium niligarica Spring, Bull. Acad. Roy. Sci. Belgique 15(1): 58. 1843; P. K. Rajagopal & K. G. Bhat, Indian Fern J. 15:4 1998. (Plate 1A)

Distribution: Karnataka (Chamarajanagar); Kerala, Tamil Nadu; endemic.

Huperzia squarrosa (G. Forst.) Trevis., Atti Soc. Crittog. Ital. 17: 247. 1875.

Lycopodium squarrosus G. Forst., Prodr. 86. 1786; P. K. Rajagopal & K. G. Bhat, Indian Fern J. 15:4 1998.

Vernacular name/Common name: *Tassel ferns* (English)

Distribution: Karnataka (Chikkamagaluru, Dakshina Kannada, Hassan), Andaman and Nicobar Islands, Kerala, NE India, West Bengal; Australia, Bangladesh, China, Indonesia, Madagascar, Mauritius, Malaysia, Myanmar, Mascarenes, Nepal, Philippines, Polynesia, Seychelles, Tahiti, Taiwan, Sri Lanka, Thailand.

Lycopodiella Holub

Lycopodiella cernua (L.) Pic.-Serm., Webbia 23(1): 166. 1968

Lycopodium cernuum L., Sp. Pl. 2: 1103.1753; P. K. Rajagopal & K. G. Bhat, Indian Fern J. 15:4. 1998.

Palhinhaea cernua (L.) Franco & Vasc., Bot. Soc. Broter Ser. 2.41: 25.1967; Dixit, Lycopod. Ind. 90. 1988.

Vernacular name/Common name: *Staghorn clubmoss* (English)

Distribution: Karnataka (Chikkamagaluru, Dakshina Kannada, Hassan, Kodagu, Shimoga, Uttara Kannada), throughout India in mountainous regions; throughout tropical and subtropical regions of the world.

Phlegmariurus (Herter) Holub

Phlegmariurus phyllanthum (Hook. & Arn.) R. D. Dixit, J. Bombay Nat. Hist. Soc. 77(3): 541. 1980.

Lycopodium phyllanthum Hook. & Arn., Bot. Capt. Belg. Voy. 102. 1841; P. K. Rajagopal & K. G. Bhat, Indian Fern J. 15:4.1998.

Distribution: Karnataka (Hassan, Kodagu, Mysore); Arunachal Pradesh, Assam, Bengal, Kerala, Manipur, Meghalaya, Sikkim, Tamil Nadu, Uttara Pradesh, West Bengal; Arctic & alpine zones, throughout tropics and subtropics.

Lygodiaceae

Lygodium Sw.

Lygodium flexuosum (L.) Sw., J. Bot. 1800(2): 106. 1801.

Ophioglossum flexuosum L., Sp. Pl. 1063. 1753.

Distribution: Karnataka (Dakshina Kannada, Kodagu, Shimoga, Udupi, Uttara Kannada), throughout India from the plains to the mountainous regions; Australia, Bhutan, China, Japan, Malaysia, Nepal, Philippines, Sri Lanka, Thailand.

Lygodium microphyllum (Cav.) R. Br., Prodr. Fl. Nov. Holl. 162. 1810.

Ugenia microphyllum Cav., Icon. Descr. Pl. 6: 76. t. 595. 1801.

Distribution: Karnataka (Chikkamagaluru, Hassan, Uttara Kannada), Assam, Andaman & Nicobar Islands, Madhya Pradesh, Meghalaya, S India; Africa, Australia, China, Indonesia, Malaysia, Myanmar, N America, Nepal, Pacific Island, Philippines.

Marattiaceae

Angiopteris Hoffm.

Angiopteris evecta (G. Forst.) Hoffm., Commentat. Soc. Regiae Sci. Gott. 12: 29, t. 5, 29. 1794.

Polypodium evectum G. Forst. Fl. Ins. Austr. 81. 1786.

Distribution: Karnataka (Chikkamagaluru, Hassan, Kodagu, Shimoga, Udupi, Uttara Kannada); throughout India in hilly regions; Australia, New Guinea, Pacific islands, Philippines; naturalized in Costa Rica, Hawaii, Jamaica.

Marsileaceae

Marsilea L.

Marsilea minuta L., Mant. 308. 1771.

Marsilea quadrifolia auct. non L. 1753; Bhaskar & Razi, Hydrophy. Marsh pl. Mysore City 72.1973.

Distribution: Karnataka (Bengaluru, Chamarajanagara, Dakshina Kannada, Hassan, Mysuru, Tumakuru, Udupi), throughout India; Paleotropical; introduced in neotropics.

Nephrolepidaceae

Nephrolepis Schott

Nephrolepis auriculata (L.) Trimen, J. Linn. Soc., Bot. 24: 152. 1887.

Polypodium auriculatum L., Sp. Pl. 1088.1753.

Nephrolepis cordifolia (L.) Presl, Tent. Pterid. 79. 1836.

Polypodium cordifolium L., Sp. Pl. 2 : 1089. 1753.

Nephrolepis tuberosa Presl, Tent. Pterid. 79. 1836.

Distribution: Karnataka (Chamarajanagara, Dakshina Kannada, Hassan), throughout except in drier areas, also cultivated; Australia, throughout E, S & SE Asia; widely cultivated and introduced elsewhere

Nephrolepis multiflora (Roxb.) F.M. Jarrett ex C.V. Morton in Contr. U.S. Natl. Herb. 38(7): 309. 1974.

Davallia multiflora Roxb., Calc.in J. Nat. Hist. 4: 55, t. 31. 1844.

Nephrolepis exaltata auct. non (L.) Schott: Bedd., Ferns S. India t. 93. 1864.

Distribution: Karnataka (Chikkamagaluru, Dakshina Kannada, Shimoga), S India; Paleotropical; introduced elsewhere.

Oleandraceae

Oleandra Cav.

Oleandra musifolia (Blume) C. Presl, Abh. Königl. Böhm. Ges. Wiss., ser. 56: 402. 1851.

Aspidium musifolium Blume, Enum. Pl. Jav. 141. 1828.

Oleandra neriiformis auct. non Cav.1799; Bedd., Ferns South India 32, t. 91. 1863.

Distribution: Karnataka (Chikkamagaluru, Hassan), S India; Bhutan, Cambodia, China, Indonesia, Malaysia, Myanmar, Nepal, Pacific islands, Papua New Guinea, Philippines, Thailand.

Ophioglossaceae

Botrychium Sw.

Botrychium daucifolium Wall. ex Hook. & Grev., Icon. Filic. 2 (9): t. 161. 1830.

Botrychium subcarnosum Wall. ex Bedd., Ferns S. India 23, f. 68. 1864.

Distribution: Karnataka (Hassan, Kodagu), throughout mountainous regions of India up to 2400 m; Bhutan, China, Indonesia, Myanmar, Nepal, Philippines, Sri Lanka, Taiwan, Vietnam.

Botrychium lanuginosum Wall. ex Hook. & Grev., Icon. Filic. 1. T.79.1831 (9): t. 161. 1830.

Botrychium virginatum (L) Sw.var.*lanuginosum* Bedd. Ferns of S. India 22. T. 67. 1864.

Distribution: Karnataka (Chikkamagaluru, Mysore), throughout mountainous regions of India up to 2400 m; Bhutan, China, Indonesia, Malaysia, Myanmar, Nepal, New Guinea, Philippines, Sri Lanka, Taiwan, Thailand, Vietnam.

Ophioglossum L.

Ophioglossum costatum R. Br. Prod. Fl. Nov. Holl. 163. 1810.

Ophioglossum fibrosum Schum., Beskr. Guin. Pl. 452. 1827.

Ophioglossum wightii Grev. & Hook., Bot. Misc. 3: 218.1833.

Ophioglossum pedunculatum Desv., Ges. Naturf. Freunde Berlin Mag. Neuesten Entdeck. Gesammten Naturk. 5: 306. 1811.

Distribution: Karnataka (Bijapur, Dakshina Kannada, Hassan, Udupi, Uttara Kannada); Andhra Pradesh, Bihar, Chattisgarh, Kerala, Madhya Pradesh, Maharashtra, Tamil Nadu, Uttar Pradesh, West Bengal, NW to E Himalayas; Africa, Australia, Madagascar, Sri Lanka, New Zealand.

Ophioglossum lusitanicum subsp. **coriaceum** (A. Cunn.) R.T. Clausen, Mem. Torrey Bot. Club 19(2): 161. 1938

Ophioglossum coriaceum A.Cunn., Comp.Bot. Mag. 2:361. 1836.

Ophioglossum gramineum Willd., Nov. Act. Acad. Erf. 2 : 18, t. 1, f. 1. 1802; P.K. Rajagopal & K. G. Bhat, Indian Fern J. 15:6.1998.

Distribution: Karnataka (Dakshina Kannada, Hassan, Mandya, Udupi), Madhya Pradesh, Uttara Pradesh, Tamil Nadu; Afghanistan eastwards to Europe.

Ophioglossum nudicaule L. f., Suppl. Pl. 443. 1781.

Ophioglossum parvifolium Grev. & Hook. in Hook., Bot. Misc. 3: 218.1833; Bedd., Ferns S. India 23. t. 71. 1863.

Vernacular names/Common names: *Least Adders tongue*, Slender Adder's-tongue (English)

Distribution: Karnataka (Hassan, Udupi, Uttara Kannada), throughout India; Pantropical.

Ophioglossum reticulatum L., Sp. Pl. 2 : 1063. 1753.

Distribution: Karnataka (Dakshina Kannada, Hassan, Kodagu, Udupi, Uttara Kannada), throughout India from the plains to mountainous regions; Pantropical.

Osmundaceae

Osmunda L.

Osmunda regalis L., Sp. Pl. 1065. 1753.

Struthiopteris regalis (L.) Bernh., Schrad. J. 1800(2): 126 1801.

Aphyllocalpa regalis (L.) Lag., D. García & Clemente, Anales Ci. Nat. 5(14): 165.1802.

Osmunda hugeliana C. Presl, Suppl. Tent. Pterid. 64. 1845

Distribution: Karnataka (Chikkamagaluru, Hassan, Kodagu, Shimoga, Uttara Kannada), Assam, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Tamil Nadu, Uttara Pradesh; Africa, Americas, Asia, Europe.

Polypodiaceae

Colysis C.Presl

Colysis hemionitidea (Wall. ex C. Persl.) C. Presl., Epim. Bot. 147. 1849

Polypodium hemionitideum Wall., List. No. 284. 1828.

Polypodium hemionitideum (Wall. ex C. Presl) Mett., Abh. Senckenberg. Naturf. Ges. 1: 112.1856.

Pleopeltis hemionitidea Moore, Index Fil. 346. 1862.

Polypodium ensatosessilifrons Hayata, Icon. Pl. Formosan. 5: 312, f. 126 A,B.1915.

Distribution: Karnataka (Kodagu?); throughout India in mountainous regions; Bhutan, China, Japan, Malaysia, Nepal, Taiwan, Thailand.

Crypsinus C.Presl

Crypsinus montanus Sledge, Bull. Brit. Mus. (Nat. Hist.), Bot. 2(5): 145. 1960.

Pleopeltis oxyloba Bedd., Ferns S. India 59, t. 175. 1864 *pro parte*, non *Polypodium oxylobum* Wall. ex Kuntze 1851.

Pleopeltis hastata Bedd., Handb. Ferns Brit. India 362. 1883 *pro parte*, non *Polypodium hastatum* Thunb. 1784.

Phymatopteris montana (Sledge) Pichi-Serm., Webbia 28: 463. 1973.

Distribution: Karnataka (Chikkamagaluru, Kodagu, Shimoga), S India; Sri Lanka.

Drymoglossum C. Presl

Drymoglossum heterophyllum (L.) Trimen, J. Linn. Soc. Bot. 24: 152. 1887.

Acrostichum heterophyllum L., Sp. Pl. 1067. 1753.

Drymoglossum piloselloides var. *beddomei* Bedd., Handb. Ferns Brit. India 413. 1883, nom. invalid.

Drymoglossum piloselloides auct. non C. Presl. 1836; Bedd., Handb. Ferns Brit. India 411. 1883, *pro parte*

Distribution: Karnataka (Hassan), S India; tropical Asia.

Grammitis Sw.

Grammitis medialis (Baker) Ching, Bull. Fan Mem. Inst. Biol., Bot. 10(1): 15. 1940.

Polypodium mediale Baker, Syn. Pl. 507. 1874.

Polypodium parasiticum auct. non Mett.; Bedd., Handb. Ferns Brit. India 302. 1883.

Karnataka (Hassan), S India; Sri Lanka.

Grammitis pilifera Ravi & J. Joseph, J. Bombay Nat. Hist. Soc. 76(2): 348. 1980.

Distribution: Karnataka (Chikkamagaluru: Bababudan Hills); endemic.

Loxogramme (Blume) C. Presl

Loxogramme involuta (D. Don) Presl, Tent. Pterid. 215. 1836.

Grammitis involuta D. Don, Prodr. Fl. Nepal 14. 1825.

Distribution: Karnataka (Chamarajanagara, Chikkamagaluru, Uttara Kannada), throughout India up to 3000 m; China, Nepal, Thailand, Vietnam.

Loxogramme lanceolata (Sw.) C. Presl, Tent. Pterid. 215, t. 8. 1836.

Grammitis lanceolata Sw. in Schrad., Journ. Bot. 1800, 2: 18. 1801

Gymnogramma lanceolata (Sw.) Hook., Sp. Fil. 5: 156. 1864.

Loxogramme parallela auct. non Copel., 1905; P. K. Rajagopal & K. G. Bhat, Indian Fern J. 15: 24. 1998

Distribution: Karnataka (Chikkamagaluru), E India; Madagascar; Mascarene Islands, S. Africa, tropical Africa.

Drynaria (Bory.) J. Sm.

Drynaria quercifolia (L.) J. Sm. in Hook., J. Bot. 3: 398. 1841. (Plate 2C)

Polypodium quercifolium L., Sp. Pl. 1087. 1753.

Distribution: Karnataka (Dakshina Kannada, Hassan, Mysore, Shimoga, Udupi, Uttara Kannada), throughout India; Australia, China, Malaysia, Nepal, New Guinea, Philippines, Sri Lanka, Vietnam?

Pyrrosia Mirbel

Pyrrosia lanceolata (L.) Farw., Amer. Midl. Naturalist 12(8): 245. 1931.

Acrostichum lanceolatum L., Sp.Pl. 2 : 1067. 1753.

Polypodium adnascens Sw., Syn. Fil. 25. 1806.

Niphobolus adnascens (Sw.) Bedd., Ferns South India t. 184. 1864.

Pyrrosia adnascens (Sw.) Ching, Bull. Chin. Bot. Soc. 1 : 45. 1935.

Distribution: Karnataka (Dakshina Kannada, Kodagu, Shimoga, Udupi), Himalayas; Africa, Bangladesh, Bhutan, China, Indian Ocean islands, Indonesia, Laos, Malaysia, Myanmar, Nepal, New Guinea, Polynesia, Philippines, Sri Lanka, Thailand, Vietnam.

Pyrrosia porosa (C.Presl) Hovenkamp, Blumea 30(1): 208. 1984.

Niphobolus porosus C.Presl, Tent. Pterid. 200. 1836.

Cyclophorus porosus (C. Presl) C. Presl, Abh. Königl. Böhm. Ges. Wiss., ser. 5 6: 490. 1851

Polypodium porosum (C. Presl) Mett., Abh. Senckenberg. Naturf. Ges. 1: 128. 1856

Distribution: Karnataka (Chamarajanagara, Chikkamagaluru, Hassan, Kodagu, Mysore, Tumkur); Bhutan, China, Myanmar, Philippines, Sri Lanka, Taiwan, Thailand, Vietnam.

Lepisorus (J. Sm.) Ching

Lepisorus nudus (Hook.) Ching, Bull. Fan Mem. Inst. Biol. 4(3): 83. 1933.

Pleopeltis nuda Hook., Exot. Fl. 1: 63. 1823.

P. linearis sensu Bedd., Handb. Ferns Brit. India 346. 1883 *proparte*.

P. wightiana Bedd., Ferns S. India 60, t. 180. 1864 *proparte*.

Distribution: Karnataka (Chamarajanagara, Chikkamagaluru, Hassan, Kodagu, Shimoga, Uttara Kannada), throughout India in mountainous regions; Bhutan, China, Myanmar, Nepal, Sri Lanka, Thailand.

Leptochilus Kaulf.

Leptochilus axillaris (Cav.) Kaulf., Enum. Filic. 147, t.1, f. 10. 1824.

Acrostichum axillare Cav., Ann. Hist. Nat. 1 : 101. 1799.

Gymnopteris variabilis var. *axillaris* (Cav.) Bedd., Ferns Brit. India t. 271. 1868.

Distribution: Karnataka (Chikkamagaluru), S India, Assam, W Bengal; Bangladesh, China, Indonesia, Malaysia, Myanmar, New Guinea, Philippines, Thailand.

Leptochilus decurrens Blume, Enum. Pl. Javae fasc. 2: 206. 1828.

Acrostichum variable Hook., Sp. Fil. 5 : 277. 1864.

Gymnopteris variabilis (Hook.) Bedd., Ferns Brit. India t. 272. 1868.

G. lanceolatus (Fee) Bedd., Ferns Brit. India Suppl. 26. 1876.

G. variabilis var. *lanceolatus* (Fee) Bedd., Handb. Ferns Brit. India 429. 1883.

Paraleptochilus decurrens (Blume) Copel., Gen. Fil. 198. 1947.

Distribution: Karnataka (Chamarajanagar, Chikkamagaluru, Kodagu, Shimoga, Uttara Kannada); Bhutan, China, Indonesia, Malaysia, Myanmar, Nepal, New Guinea, Pacific Island, Philippines, Sri Lanka, Taiwan, Thailand, Vietnam.

Microsorium Link

Microsorium membranaceum (D. Don) Ching, Bull. Fan Mem. Inst. Biol. 4(10): 309.1933.

Polypodium membranaceum D. Don, *Prodr. Fl. Nepal.* 2.1825

Pleopeltis membranacea (D. Don) T. Moore ex Bedd., Ferns S. India 59, t. 177. 1864; P. K. Rajagopal & K. G. Bhat, Indian Fern J. 15:24.1998

Distribution: Karnataka (Chamarajanagara, Chikkamagaluru, Hassan, Kodagu, Mysore, Shimoga, Uttara Kannada), throughout India in mountainous regions; Bhutan, China, Myanmar, Nepal, Sri Lanka, Taiwan Thailand, Vietnam.

Microsorium pteropus (Blume) Copel., Univ. Calif. Publ. Bot. 16(2): 112.1929.

Kaulinia pteropus var. *minor* (Bedd.) B.K. Nayar & S. Kaur, *Companion Beddome's Handb. Ferns Brit. India* 87.1974.

Pleopeltis pteropus var. *minor* Bedd. Ferns S. India t. 179. 1864.

Microsorium pteropus (Blume) Copel. Forma *minor* (Bedd.) Ching, Bull. Fan. Meml. Inst. Biol. 4: 312. 1933; P. K. Rajagop. & K. G. Bhat, Indian Fern J. 15:24.1998

Microsorium pteropus var. *minor* (Bedd.) C. Chr. & Tardieu, Notul. Syst. (Paris) 8(4): 194.1939

Distribution: Karnataka (Kodagu), S & NE India; China, Indonesia, Japan, Laos, Malaysia, Myanmar, Nepal, New Guinea, Philippines, Thailand, Vietnam.

Microsorium punctatum (L.) Copel., Univ. Calif. Publ. Bot. 16(2): 111. 1929.

Acrostichum punctatum L., Sp. Pl. 1524. 1753.

Polypodium punctatum Sw. in Schrd. J. 1800. 2:21. 1801.

Pleopeltis punctata Bedd., Handb. Ferns Brit. India 357, t. 201. 1883.

Distribution: Karnataka (Chikkamagaluru, Hassan, Shimoga, Uttara Kannada), S & NE India; Africa, Australia, China, Indian Ocean islands, Indonesia, Madagascar, Malaysia, Myanmar, Papua New Guinea, Pacific islands, Philippines, Sri Lanka, Taiwan, Thailand, Vietnam.

Pleopeltis Humb. & Bonpl. ex Willd.

Pleopeltis macrocarpa (Bory ex Willd.) Kaulf., Berlin. Jahrb. Pharm. Verbundenen Wiss. 21: 41 1820.

Polypodium lanceolatum L., Sp. Pl. 2 : 1082. 1753.

Polypodium macrocarpum Bory ex Willd., Sp. Pl. ed. 4, 5 : 147. 1810.

Pleopeltis lanceolata Kaulf., Enum. Filic. 245.1824.

Phlebodium lanceolatum (L.) J. Sm. in J. Bot. 4: 59.1841.

Niphobolus lanceolatus (L.) Keyserl., Polyp. Herb. Bunge 39.1873.

Pleopeltis lanceolata (L.) Bedd., Handb. Ferns Brit. India 351, t. 197. 1883.

Lepicystis lanceolata (L.) Diels in Nat. Pflanzenfam. 1(4): 323.1899.

Distribution: Karnataka (Chamarajanagara), Maharashtra; Africa, China, Hawaii, Réunion, Madagascar, tropical America.

Psilotaceae

Psilotum Sw.

Psilotum nudum (L.) P. Beauv., *Prodr. Aethéogam.* 106, 112. 1805.

Lycopodium nudum L., Sp. Pl. 1100. 1753.

Psilotum triquetrum Sw. in *Schrader J. Bot.* 1800 (2) : 109. 1801.

Tristecanuda (L.) P. Beauv. ex J. St.-Hil., *Expos. Fam. Nat.* 1: 39. 1805.

Distribution: Karnataka (Bangalore, Mysore, Uttara Kannada), throughout India in hilly regions; throughout tropical and subtropical regions of the world.

Pteridaceae

Acrostichum L.

Acrostichum aureum L., Sp. Pl. 1069. 1753.

Distribution: Karnataka (Dakshina Kannada, Udupi, Uttara Kannada), throughout coastal areas of India; Pantropical coastal areas.

Actiniopteris Link

Actiniopteris radiata (Sw.) Link, *Fil. Spec.* 80. 1841. (Plate 1E)

Asplenium radiatum Sw., in *Schrud. J. Bot.* 1800 (2): 50. 1801.

Actiniopteris dichotoma Kuhn, *Bot. Zeit.* 504. 1871.

Distribution: Karnataka (Bengaluru, Bellary, Bidar, Chitradurga, Hassan, Mandya, Mysore, Raichur), throughout India in drier regions; Afghanistan, Africa, Arabia, Australia, Madagascar, Myanmar, Iran, Nepal, Sri Lanka.

Adiantum L.

Adiantum aethiopicum L., *Syst. Nat. ed.* 10, 2 : 1329. 1759.

Vernacular name/Common name: Common maidenhair fern (English).

Distribution: Karnataka (Uttara Kannada), Tamil Nadu ;Africa, Americas, Australia, New Zealand.

Adiantum capillus-veneris L., Sp. Pl. 2: 1096. 1753.

Distribution: Karnataka (Chikkamagaluru, Hassan, Kodagu, Mysore), throughout India in mountainous regions; Pan-tropical and temperate regions of the world.

Adiantum hispidulum Sw. in *Schrader J. Bot.* 1800(2): 82. 1801.

Adiantum pubescens Schk., *Krip. Grew.* 1: 41 : 116. 1809.

Vernacular names/Common names: Rough Maidenhair Fern, Five-fingered jack (English).

Distribution: Karnataka (Chikkamagaluru), Tamil Nadu; Africa, Australia, Malaysia, New Zealand, Pacific Islands, Polynesia, Sri Lanka.

Adiantum incisum Forssk., *Fl. Aegypt.-Arab.* 187. 1775.

Adiantum caudatum auct. non L. 1771; *Bedd., Ferns S. India t.* 2. 1863.

Distribution: Karnataka (Bidar, Chamarajanagar, Chikkamagaluru, Chitradurga, Hassan, Mysore, Tumkur), throughout India; Africa, Yemen.

Adiantum latifolium Lam., Encyc. 1: 43. 1783.

Vernacular name/Common name: Broadleaf maidenhair (English).

Distribution: Karnataka (Dakshina Kannada); native to Neotropical areas, naturalised in the palaeotropics.

Adiantum lunulatum Burm. f., Fl. Ind. 235. 1768.

Adiantum philippense L., Sp. Pl. 1094. 1753.

Vernacular names/Common names: Black maidenhair, Walking maidenhair fern (English), *Hamsapadhi* (Sanskrit).

Distribution: Karnataka (Bangalore, Chamarajanagar, Chikkamagaluru, Dakshina Kannada, Hassan, Mysore, Shimoga, Udupi, Uttara Kannada), Rajasthan, NE India; Africa, Asia, Madagascar.

Adiantum raddianum C.Presl, Tent. Pterid. 158. 1836.

Vernacular name/Common name: Delta maidenhair fern (English).

Distribution: Karnataka (Chamarajanagar, Chikkamagaluru, Kodagu, Mysore, Shimoga), S India; tropical and subtropical America, introduced elsewhere.

Adiantum zollingeri Mett. ex Kuhn, Ann. Mus. Bot. Lugduno-Batavi 4: 280. 1869; P.K. Rajagopal & K.G.Bhat, Indian Fern J. 15:10.1998.

Karnataka (Chikkamagaluru), S India, Himalayas; Cambodia, Indonesia, Malaysia, Myanmar, Thailand.

Anogramma Link

Anogramma leptophylla (L.) Link, Fil. Spec. 137. 1841.

Gymnogramma leptophylla Desv., Bed. Mag. 5 : 305. 1811.

Polypodium leptophyllum L., Sp. Pl. 2: 1092.1753.

Vernacular name/Common name: *Jersey fern* (English).

Distribution: Karnataka (Chikkamagaluru), Himachal Pradesh, Haryana, Kerala, Maharashtra, Punjab, Tamil Nadu; Africa, Australia, Brazil, Europe, Iran, Mediterranean, Mexico, New Zealand, Sri Lanka.

Antrophyum Kaulf.

Antrophyum plantagineum (Cav.) Kaulf., Enum. Filic. 197. 1824.

Hemionitis plantaginea Cav., Descr. 260. 1802.

Antrophyum reticulatum auct. non (G. Forst.) Kaulf. 1824; Bedd., Ferns S. India t. 52. 1864

Distribution: Karnataka (Chikkamagaluru, Hassan, Kodagu), Assam, Kerala, Meghalaya, Tamil Nadu; Australia, Indonesia, New Guinea, Polynesia, Philippines.

Ceratopteris Brongn.

Ceratopteris thalictroides (L.) Brongn., Bull. Sci. Soc. Philom. Paris 8: 186. 1821.

Acrostichum thalictroides L., Sp. Pl. 2 : 1070. 1753.

Vernacular name/Common name: *Water Sprite* (English).

Distribution: Karnataka (Bijapur, Chitradurga, Dakshina Kannada, Hassan, Kodagu, Mysuru, Tumakuru, Udupi, Uttara Kannada), throughout India; Pantropical.

Cheilanthes Sw.

Cheilanthes albomarginata C. B. Clarke, Trans. Linn. Soc. London, Bot. 1(7): 456. 1880.

Cheilanthes farinosa var. *albomarginata* (C.B.Clarke) Bedd., Handb. Ferns Brit. India Suppl. 22. 1892.

Distribution: Karnataka (Chamarajanagara), throughout India in hilly regions; Bhutan, China, Nepal.

Cheilanthes farinose (Forssk.) Kaulf., Enum. Filic. 212. 1824.

Pteris farinosa Forssk., Fl. Aegypt. Arab. 187. 1775.

Vernacular names/Common names: *Floury Cloak Fern*, *Lip fern* (English).

Distribution: Karnataka (Hassan, Kodagu, Shimoga), throughout India; Pantropical.

Cheilanthes swartzii Webb & Berthel., Hist. Nat. Iles Canaries 3 (2). pars 3. 453. 1847.

Cheilanthes mysurensis Wall, ex Bedd., Ferns S. India, t. 190. 1864.

Distribution: Karnataka (Bangalore, Bellary, Hassan, Kolar, Mandya, Mysore, Tumkur), Andhra Pradesh, Kerala, Orissa, Tamil Nadu; Myanmar, Sri Lanka.

Cheilanthes tenuifolia (Burm.) Sw., Syn. Fil. 129, 332. 1806.

Cheilosoriatenuifolia (Burm. f.) Trevis., Atti dell' Istit. Veneto 5(3): 579. 1877.

Trichomanes tenuifolia Burm. f., Fl. Ind. 237. 1768.

Distribution: Karnataka (Bangalore, Dakshina Kannada, Hassan, Shimoga, Udupi, Uttara Kannada), throughout India; Australia, China?, Myanmar, Malaysia, Polynasia, Philippines, Sri Lanka, Taiwan.

Doryopteris J. Sm.

Doryopteris concolor (Langsd. & Fisch.) Kuhn, Reisen Ost-Afrika 3(3): 19. 1879.

Pellaea concolor Langsd. & Fisch., Icon. Fil. 19, t. 21. 1810.

Pellaea geranifolia (Reddi) Fee, Mem. Fern Fough. 5 : 130. 1850-52.

Distribution: Karnataka (Bangalore, Kodagu, Mysore), Kerala, Tamil Nadu; Africa, Australia, Caribbean Islands, C & S America, China, Madagascar, Malaysia, Mexico, Sri Lanka, Vietnam.

Hemionitis L.

Hemionitis arifolia (Burm. f.) T. Moore., Index Fil. 114. 1859. (Plate 1F)

Asplenium arifolium Burm., Fl. Ind. 231. 1768.

Hemionitis cordifolia Roxb. ex Bedd., Ferns S. India, t. 53. 1864.

Vernacular name/Common name: *Heart Fern*, *Tongue fern* (English)

Distribution: Karnataka (Bangalore, Chamarajanagar, Chikkamagaluru, Dakshina Kannada, Hassan, Kodagu, Mysore, Shimoga, Tumkur, Udupi), S India; Indo-China, SE Asia, Sri Lanka

Pityrogramma Link

Pityrogramma calomelanos (L.) Link, Handbuch 3: 20. 1833.

Acrostichum calomelanos L., Sp. Pl. 2: 1072. 1753.

Gymnogramma calomelanos (L.) Kaulf., Enum. Filic. 76. 1824.

Pellaea calomelanos (L.) Link, Fil. 61. 1841.

Ceropteris calomelanos (L.) Link, Fil. Spec. 141. 1841.

Pteris calomelanos (L.) Bedd., Ferns Brit. India, t. 22. 1883

Gymnogramma calomelanos var. *aureoflava* Hook., Gard. Ferns t. 50. 1862; P.K. Rajagopal & K. G. Bhat, Indian Fern J. 15:10. 1998.

Neurogramma calomelanos (L.) Diels, Nat. Pflanzenfam. 1(4): 264. 1899.

Ceratopteris calomelanos (L.) Underw., Bull. Torrey Bot. Club ??: 632. 1929.

Pityrogramma calomelanos var. *Aureofiava* (Hook) Weath. ex Bailey, Man. Cult. Pl. 64. 1926; P.K. Rajagopal & K. G. Bhat, Indian Fern J. 15:10. 1998

Distribution: Karnataka (Chikkamagaluru, Dakshina Kannada, Hassan, Kodagu, Shimoga, Tumkur, Udupi, Uttara Kannada), throughout India; native to C & S America, cultivated and naturalised in old world countries.

Pteris L.

Pteris argyraea T.Moore, Gard. Chron. 1859: 671. 1859.

Pteris quadriaurita Retz. var. *argenta* Bedd., Handb. Ferns Br. India: 11. 1863.

Vernacular name/Common name: *Silver Brake fern* (English).

Distribution: Karnataka (Chamarajanagara, Chikkamagaluru, Hassan), Kerala, Tamil Nadu; endemic.

Pteris aspericaulis Wall. ex J. Agardh, *Recens. Spec. Pter.* 22. 1839.

Pteris quadriaurita var. *aspericaulis* (Wall. ex Agardh) Beddome, Handb. Ferns Brit. India 111. 1883.

Distribution: Karnataka (Kodagu), throughout India; Bhutan, China, Nepal

Pteris arisanensis Tagawa, Acta Phytotax. Geobot. 5: 102. 1936.

Distribution: Karnataka, Kerala, Tamil Nadu; China, Myanmar, Nepal, Sri Lanka, Thailand, Vietnam.

Pteris biaurita L. subsp. **walkeriana** Fraser-Jenk. & D. Rajkumar in Fraser-Jenkins, Taxon. Rev. Indian Subcont. Pterid. Rev. Cens. List: 115. 2008.

Pteris biaurita auct. non L., 1753; P. K. Rajagopal & K. G. Bhat, Indian Fern J. 15:8. 1998.

Campteria biaurita (L.) Hook., Gen. Fil. t. 65A. 1841.

Distribution: Karnataka (Chikkamagaluru, Kodagu, Shimoga, Uttara Kannada), Andhra Pradesh, Kerala, Tamil Nadu.

Pteris blumeana J. Agardh, Recens. Spec. Gen. Pterid. : 22. 1839.

Distribution: Karnataka (Kodagu), Kerala, Tamil Nadu; SE Asia.

Pteris confuse T. G. Walker, Kew Bull. 14 : 329. 1960.

Distribution: Karnataka (Chikkamagaluru, Kodagu), Andhra Pradesh, Kerala, Tamil Nadu; Sri Lanka.

Pteris ensiformis Burm.f. cv. **Victoriae** Baker, Gard. Chron. Ser. 37: 756. 1890.

Distribution: Karnataka (cultivated as ornamental in Bengaluru, Mysuru), Kerala; Indonesia, Malaysia.

Pteris heteromorpha Fee, Mem. Fam. Foug. 5. Gen. Fil.: 127. 1852.

Pteris proinqua J.Sm., J. Bot. 3: 405. 1841, non J. Agardh. 1839.

Pteris cretica var. *heteromorpha* (Fee) Bedd., Handb. Ferns. Brit. India: 106. 1883.

Pteris almeidiana Bole & Almeida, J. Bombay Nat. Hist. Soc. 74: 320. 1977.

Distribution: Karnataka (Kodagu), C, S to NE India; Sri Lanka.

Pteris linearis Poir., Encycl. 5(1): 723. 1804.

Pteris nemoralis Willd., Enum. Pl. 2: 1073. 1809

Pteris normalis D. Don, Prodr. Fl. Nepal. 15. 1825.

Campteria nemoralis J. Sm., Bot. Mag. 72: 23. 1846.

Pteris hildebrandtii Hieron., Bot. Jahrb. Syst. 3: 407. 1915.

Pteris glabra Merr., Lingnan Sci. J. 5: 16. 1927.

Distribution: Karnataka (Uttara Kannada), Himalayas; E Africa, tropical Asia.

Pteris longipes D. Don, Prodr. Fl. Nepal. 15. 1825.

Hypolepis pteridioides Hook., Sec. Cent. Ferns 39, t. 39. 1861.

Pteris brevisora Baker, Syn. Fil. 162. 1867.

Pteris pellucens J. Agardh, Recens. Spec. Pter. 43. 1839

Pteris zollingeri Mett. ex Miq., Ann. Mus. Bot. Lugduno-Batavi 4(4): 97. 1869.

Distribution: Karnataka (Shimoga), S India, E Himalaya; Bhutan, China, Indonesia, Myanmar, Nepal, Philippines, Sri Lanka, Taiwan, Thailand, Vietnam.

Pteris otaria Bedd., Ferns S. India: 13, t. 41. 1863.

Pteris quadriaurita forma *ludens* Thwaites, Enum. Pl. Zeyl.: 386. 1864.

Pteris quadriaurita var. *ludens* (Thwaites) Bedd., Handb. Ferns. Brit. India: 111. 1883.

Distribution: Karnataka, Kerala, Tamil Nadu; Sri Lanka.

Pteris sp. near **pellucens** J. Agardh, Recens. Spec. Gen. Pter.: 43. 1839.

Distribution: Karnataka (?), Kerala, Tamil Nadu; endemic?

Pteris pellucid C. Presl, Reliq. Haenk. 1 : 55. 1825.

Pteris venusta Kunze, Bot. Zeit. 1848: 195. 1848.

Distribution: Karnataka (Chamarajanagara, Chikkamagaluru, Dakshina Kannada, Kodagu, Shimoga, Uttara Kannada), throughout India; Bangladesh, Malaysia, Myanmar, Papua New Guinea, Philippines.

Pteris praetermissa T. G. Walker, Kew Bull. 14: 327. 1960.

Pteris furunculata N. C. Nair & S. R. Ghosh, J. Indian Bot. Soc. 55: 38. 1976.

Pteris manickamii D. Rajkumar, J. Bombay Nat. Hist. Soc. 102: 313. 2005.

Distribution: Karnataka (Chikkamagaluru, Kodagu), Kerala, Tamil Nadu; Sri Lanka.

Pteris quadriaurita Retz., Observ. Bot. 6: 38. 1791.

Distribution: Karnataka (Chamarajanagara, Chikkamagaluru, Dakshina Kannada, Hassan, Kodagu, Shimoga, Udipi, Tumkur, Uttara Kannada), Andhra Pradesh, Kerala, Tamil Nadu; Pantropical.

Pteris scabripes Wall. ex Agardh, Recens. Spec. Gen. Pterid.: 11. 1839.

Pteris silentvalliensis S. R. Ghosh & R. K., Ghosh, J. Bombay Nat. Hist. 79 : 385. 1982.

Distribution: Karnataka (Chikkamagaluru), Kerala, Tamil Nadu; Malaysia, Thailand.

Pteris semipinnata L., Sp. Pl. 1076. 1753.

Distribution: Karnataka (Chikkamagaluru, Uttara Kannada); throughout India in hilly regions; Bhutan, China, Indonesia, Japan, Laos, Malaysia, Myanmar, Nepal, Philippines, Sri Lanka, Taiwan, Thailand, Vietnam

Pteris vittata L., Sp. Pl. 2: 1074. 1753.

(Plate 1G)

Pteris linearis Roxb. in Griff., Calcutta J. Nat. Hist. 4: 505. 1844, non Poir. 1804.

Distribution: Karnataka (Dakshina Kannada, Kodagu, Mysore, Shimoga, Udipi, Uttara Kannada), Andhra Pradesh, Kerala, Tamil Nadu; throughout tropics and subtropics.

Vittaria Sm.

Vittaria elongate Sw., Syn. Fil. 109. 302. 1806. (Plate 1H)

Karnataka (Chikkamagaluru, Dakshina Kannada, Hassan, Shimoga, Udupi, Uttara Kannada).
throughout India in mountainous regions; Africa, Australia, Indo-China, S & SE Asia.

Salviniaceae**Azolla Lam.**

Azolla pinnata subsp. **africana** (Desv.) R.M.K. Saunders & K. Fowler, Bot. J. Linn. Soc. 109: 351, f. 30A. 1992.

Azolla pinnata R. Br., Prodr. Fl. Nov. Holl. 167.1810.

Azolla africana Desv., Mem.Soc. Linn.Paris 6(2):178.1827.

Azolla pinnata var. *africana* (Desv.) Baker, *Handb. Fern-Allies* 138.1887.

Vernacular names/Common names: *Feathered mosquito fern*, *Ferny azolla*, *Water velvet* (English).

Distribution: Karnataka (Dakshina Kannada, Dharwad, Hassan, Kodagu, Kolar, Mandya, Mysuru, Udupi), throughout India; Paleotropical.

Salvinia Seg.

Salvinia adnata Desv., Mém. Soc. Linn. Paris 6: 177. 1827.

Salvinia molesta D. S. Mitch., Brit. Fern. Gaz. 10 : 251. 1972.

Vernacular names/Common names: *African pyle*, *Aquarium water moss*, *Aquarium water-moss*, *Giant salvinia*, *Giant water fern*, *Kariba weed*, *Karibaweed*, *Salvinia*, *Water fern*, *African payal* (English).

Distribution: Karnataka (Bengaluru, Dakshina Kannada, Kolar, Mysore, Udupi), throughout tropical areas of India; native to Brazil; Pantropical water weed.

Salvinia natans (L.) All., Fl. Pedem. 2: 289.1785.

Distribution: Karnataka (Mysuru), throughout India; SE India, warmer parts of Europe.

Schizaeaceae**Schizaea Sm.**

Schizaea digitata (L.) Sw., Syn. Fil. 150, t. 4. 1806.

Acrostichum digitatum L., Sp. Pl. 2 : 1068. 1753.

Distribution: Karnataka (Dakshina Kannada), Peninsular to N and NE India; Paleotropical.

Selaginellaceae**Selaginella P. Beauv.**

Selaginella ciliaris (Retz.) Spring, Bull. Acad. Roy. Sci. Bruxelles 10(1): 231, no. 136. 1843.

Lycopodium ciliare Retz., Obs. Bot. 5: 32. 1789

Distribution: Karnataka (Dakshina Kannada, Hassan, Mysuru, Shimoga, Udupi), Andaman & Nicobar Islands, Assam, Bihar, Madhya Pradesh, Meghalaya, Orissa, Sikkim, Tamil Nadu, Tripura, West Bengal; Australia, China, Indonesia, Nepal, Papua New Guinea, Philippines, Sri Lanka, Taiwan, Thailand, Vietnam.

Selaginella delicatula (Desv. ex Poir.) Alston, J. Bot. 70 (838): 282. 1932.

Lycopodium delicatulum Desv. ex Poir. in Lam., Encycl. Suppl. 5: 554. 1814.

Distribution: Karnataka (Dakshina Kannada, Hassan, Shimoga, Udupi, Uttara Kannada), Andaman & Nicobar Islands, Assam, Goa, Kerala, Maharashtra, Sikkim, Tripura, Tamil Nadu; Bhutan, Cambodia, China, Indonesia, Laos, Malaysia, Myanmar, Nepal, Philippines, Sri Lanka, Taiwan, Vietnam.

Selaginella miniatospora (Dalz.) Baker, J. Bot. 23: 249. 1885.

Lycopodium miniatosporum Dalz. in Hook., J. Bot. 4: 114. 1852.

Distribution: Karnataka (Dakshina Kannada, Hassan, Shimoga, Uttara Kannada), Maharashtra, Goa; endemic.

Selaginella plana (Desv. ex Poir.) Hieron. in Engl. & Prantl, Nat. Pflanzenfam. 1(4): 703. 1901.

Lycopodium planum Desv. ex Poir. in Lam., Encycl. Suppl. 3: 554. 1814.

Vernacular name/Common name: *Asian Spikemoss* (English).

Distribution: Karnataka (Chamarajanagar, Dakshina Kannada, Udupi), West Bengal; tropical Asia, introduced elsewhere.

Selaginella proniflora (Lam.) Baker, J. Bot. 22: 156. 1885.

Lycopodium proniflorum Lam., Encycl. 3: 652. 1789.

Selaginella dalzellii Baker, J. Bot. 23: 249. 1885.

Distribution: Karnataka (Dakshina Kannada, Hassan, Uttara Kannada), Maharashtra.

Selaginella radicata (Hook. & Grev.) Spring, Mem. Acad. Sci. Bel. 24 (2): 114. 1850.

Lycopodium radicum Hook. & Grev. in Hook., Bot. Misc. 2 : 397. 1831.

Karnataka (Hassan), Arunachal Pradesh, Tamil Nadu; endemic.

Selaginella repanda (Desv. ex Poir.) Spring in Voy. Bonite Bot. 1: 329. 1844.

Lycopodium repandum Desv. ex Poir. in Lam., Encycl. Suppl. 3: 558. 1814.

Distribution: Karnataka (Mysore), Andhra Pradesh, Madhya Pradesh, Uttara Pradesh, Tamil Nadu; Cambodia, China, Indonesia, Laos, Malaysia, Myanmar, Nepal, Philippines, Thailand, Vietnam

Selaginella tenera (Hook. & Grev.) Spring, Bull. Ac. Brux. 10 (144): 232. 1843. (Plate 1C)

Lycopodium tenerum Hook. & Grev. in Hook., Bot. Misc. 2 (181): 400. 1831.

Distribution: Karnataka (Chikkamagaluru, Dakshina Kannada, Hassan, Kodagu, Shimoga, Udupi, Uttara Kannada), Kerala, Tamil Nadu; endemic.

Selaginella wightii Hieron., Hedw. 39: 319. 1900.

Lycopodium bryopteris Wall., Cat. No. 2188. 1829, non Linn.

Distribution: Karnataka (Hassan, Mandya, Tumkur), Tamil Nadu; Africa, Sri Lanka.

Tectariaceae

Tectaria Cav.

Tectaria coadunata (J. Sm.) C. Chr., Contr. U.S. Nat. Herb. 331. 1931.

Aspidium coadunatum Wall. ex Hook. & Grev., Icon Fil. 2 : t. 202. 1831, non Kaulf. 1824.

Sagenia coadunata J. Smith, in Hook. J. Bot. 4 : 184. 1841.

Sagenia macrodonta Fee, Gen. Fil. 313. t. 24A, fig. 1. 1852.

Aspidium cicutarium sensu Hook., Sp. Fil. 4 : 48. 1862, *pro parte*. non *Polypodium cicutarium* L.

Sagenia variolosa sensu Bedd., Fems Brit. India t. 170. 1866, non *Tectaria variolosa* (Wall. ex Hook.) C. Chr.

Tectarla macrodonta (Fee) C. Chr. Index Fil. Suppl. 3 : 181. 1934.

Karnataka (Chamarajanagar, Chikkamagaluru, Dakshina Kannada, Hassan, Kodagu, Shimoga, Uttara Kannada), S & NE India; Bhutan, China, Laos, Madagascar, Malaysia, Myanmar, Nepal, Sri Lanka, Taiwan, Thailand, tropical Africa, Vietnam.

Tectaria polymorpha (Wall. ex Hook.) Copel., Philipp. J. Sci. 2(6): 413. 1907.

Aspidium polymorphum Wall. ex Hook., Sp. Fil. 4: 54. 1862.

Distribution: Karnataka (Chikkamagaluru, Dakshina Kannada, Hassan, Kodagu, Shimoga, Uttara Kannada), S India, NW Himalaya; Bhutan, Cambodia, China, Indonesia, Malaysia, Nepal, Philippines, Sri Lanka, Taiwan, Thailand, Vietnam.

Thelypteridaceae

Ampelopteris Kunze

Ampelopteris prolifera (Retz.) Copel., Gen. Fil. 144. 1947.

Hemionitis prolifera Retz., Obs. Bot. 6:31. 1791.

Goniopteris prolifera (Retz.) C. Presl, Tent. Pterid. 183. 1836.

Distribution: Karnataka (Chikkamagaluru, Hassan, Mandya, Mysuru, Uttara Kannada), throughout India; throughout tropical and subtropical regions of the world.

Amphineuron Holttum

Amphineuron opulentum (Kaulf.) Holttum, Blumea 19(1): 45. 1971.

Aspidium opulentum Kaulf., Enum. Fil. Chamisso 238. 1824.

Aspidium extensum Blume, Enum. Pl. Jav. 156. 1828.

Nephrodium externum (Blume) Moore, Index Fil. 91. 1858.

Nephrodium punctatum Parish ex Bedd., Fems Brit. India t. 131. 1866.

Dryopteris extensa (Blume) Kuntz., Rev. Gen. Pl. 2 : 812. 1891.

Cyclosorus extensus (Blume) Ching in Bull. Fan.meml. Inst. Biol. (Bot.) 8 : 182. 1938.

Thelypteris extensa (Blume) Morton, Am. Fern. J. 49 : 113. 1959.

Distribution: Karnataka (Uttara Kannada), S& NE India; Australia, Indian ocean Islands, Myanmar, Polynesia, Philippines, Sri Lanka, Thailand, tropical America.

Christella Lev.

Christella dentate (Forssk.) Brownsey & Jermy, Brit. Fern Gaz. 10(6): 338. 1973.

Cyclosorus dentatus (Forssk.) Ching, Bull. Fan Mem. Inst. Biol., Bot. 8(4): 206. 1938.

Polypodium dentatum Forssk., Fl. Aegypt. Arab. 185. 1773.

Nephrodium molle sensu Hook., Sp. Fil. 4: 67. 1862, *pro parte*, non *Polypodium molle* Jacq.

Distribution: Karnataka (Dakshina Kannada, Hassan, Mysore, Shimoga, Udupi, Uttara Kannada), throughout India; Pantropical.

Christella hispidula (Decne.) Holttum, Kew Bull. 31(2): 312. 1976.

Aspidium hispidulum Decne., Nouv. Ann. Mus. Hist. Nat. Paris 3: 346. 1834.

Nephrodium quadrangulare Fee, Gen. Fil. 308. 1852.

Dryopteris contigua Rosenst., Meded Rijks. 31: 8. 1917.

Cyclosorus contiguous (Rosenst.) Ching, Bull. Fan. Mem. Inst. BioI. (Bot.) 10 : 243. 1941.

Christella quadrangularis (Fee) Holttum in Nayar & Kaur, Comp. Bedd. Handb. 207. 1974. *Nephrodium molle* sensu Bedd., Handb. Ferns. Brit. India 277. 1883, *proparte*, non *Aspidium molle* Sw.

Distribution: Karnataka (Kodagu, Shimoga, Udupi, Uttara Kannada), S India Meghalaya; Africa, Madagascar, Mauritius, Malaysia, Sri Lanka, tropical America. Seychelles, tropical Asia, tropical S. America.

Christella meeboldii (Rosenst.) Holttum in Nayar & Kaur, Comp. Bedd. Handb. 208. 1974.
Dryopteris meeboldii Rosenst., Reprim. Spec. Nov. Regni Veg. 12 : 247. 1913.
Cyclosorus meeboldii (Rosenst.) Ching, Bull. Fan. Meml. Inst. Biol. (Bot.) 8:210. 1938.
Thelypteris meeboldii C. F. Reed, Phytologia 17 : 291. 1968.
Christella malabariensis (Fee) Holttum, Kew Bull. 31: 317.1976.
proparte.

Distribution: Karnataka (Hassan, Mandya), S to NE India; Sri Lanka.

Christella papilio (Hope) Holttum in Nayar & Kaur, Comp. Bedd. Handb. 208. 1974.

Nephrodium papilio Hope, J. Bombay Nat. Hist. Soc. 12 : 625. 1899.

Nephrodium molle var. *major* Bedd., Handb., Ferns Brit. India Suppl. 76. 1892, *proparte.*

Distribution: Karnataka (Chikkamagaluru, Shimoga, Uttara Kannada), S to NE India; Malaysia, Sri Lanka, Taiwan, Thailand.

Christella parasitica (L.) Lev., Fl. Kouy-Tcheou 475. 1915.

Polypodium parasiticum L., Sp. Pl. 2 : 1090. 1753.

Nephrodium didymosorum Parish ex Bedd., Ferns Brit. India t. 200. 1868.

Nephrodium molle var. *didymosorum* (Parish ex Bedd.) Bedd., Handb. Ferns Brit. India 279. 1883.

Cyclosorus didymosorus (Parish ex Bedd.) Nayar & Kaur, Comp. Bedd. Handb. 208. 1974.

Dryopteris parasitica C. Chr., Ark. Bot. 9 : 26, f. 4. 1910.

Distribution: Karnataka (Bangalore, Chamarajanagara, Chikkamagaluru, Dakshina Kannada, Dharwad, Hassan, Mandya, Shimoga, Udupi, Uttara Kannada), S to NE India; Australia, Polynesia, tropical Africa, tropical & subtropical Asia.

Cyclosorus Link

Cyclosorus interruptus (Willd.) H. Ito, Bot. Mag. (Tokyo) 51(608): 714. 1937.

Pteris interrupta Willd., Phytographia 13, t. 10, fig. 1. 1794.

Nephrodium propingum R. Br., Prod. Fl. Nov. Holl. 148. 1810.

Vernacular name/Common name: *Swamp shield-fern* (English).

Distribution: Karnataka (Chitradurga, Uttara Kannada), throughout India; throughout tropical and subtropical regions of the world

Cyclosorus terminans (J. Sm. ex Hook.) K. H. Shing, Fl. Reipubl. Popularis Sin. 4(1): 220 1999.

Amphineuron terminans (J. Sm. ex Hook.) Holttum, Am. Fern J. 63 : 83. 1973.

Nephrodium terminans J. Sm. ex Hook., Sp. Fil. 4: 73. 1862.

Nephrodium pteroides sensu Bedd. J. Sm. Cat. Cult. Ferns 54. 1857, non *Polypodium pteroides* Retz.

Cyclosorus interruptus sensu Ching, Bull. Fan. Meml. Inst. Bot. 8 : 184. 1938, non *Pteris interrupta* Willd.

Distribution: Karnataka (Chikkamagaluru, Hassan, Mysore, Mandya, Tumkur, Uttara Kannada), S India; Africa, Australia, China, Indonesia, Japan, Malesia, Myanmar, Pacific islands, Taiwan, Thailand, Vietnam.

Macrothelypteris (H. Ito) Ching

Macrothelypteris ornate (Wall. ex Bedd.) Ching, Acta Phytotax. Sin. 8(4): 309. 1963.

Polypodium ornatum Wall. ex Bedd., Ferns S. India 56, 1. 171. 1864.

Phegopteris ornata J. Smith, Hist. Fil. 33. 1875.

Thelypteris ornata Ching, Bull. Fan. Meml. Inst. Biol. 6 : 346. 1936.

Distribution: Karnataka (Hassan), S & NE India; Bhutan, China, Nepal, Thailand

Macrothelypteris torresiana (Gaudich.) Ching, Acta Phytotax. Sin. 8(4): 310 1963.

Polystichum torresianum Gaudich., Freyc. Voy. Bot. 333.1828.

Lastrea torresianum (Hook.) Moore, India Fil. 99.1858.

Nephrodium tenericaule (Hook.) Hook., Sp. Fil. 4 : 142, excl. t. 269. 1862 *pro parte*.

Lastrea setigera auct.non Moore, 1858; Bedd., Ferns Brit. India corr. 1. 1870,

Distribution: Karnataka (Hassan, Kodagu, Shimoga), S India, Himalayas; Australia, Bhutan, China, Indonesia, Japan, Myanmar, Nepal, Pacific islands Philippines, tropical & subtropical regions of America, Vietnam.

Parathelypteris (H. Ito) Ching

Parathelypteris beddomei (Baker) Ching, Acta Phytotax. Sin. 8(4): 302. 1963

Nephrodium beddomei Baker in Hook. & Baker, Syn. Fil. 267. 1867.

Lastrea beddomei (Baker) Bedd., Ferns Brit. India corr.(Suppl. 6)11. 1870.

Thelypteris beddomei (Baker) Ching, Bull. Fan. Meml. Inst. Biol. (Bot.) 6 : 308. 1936.

Lastrea gracilescens sensu Bedd., Ferns S. India 38, 1.110. 1864 non *Aspidium gracilescens* Blume.

Distribution: Karnataka (Chikkamagaluru), S India; China, Indonesia, Japan, Malaysia, Philippines, Taiwan.

Pneumatopteris Nakai

Pneumatopteris truncate (Poir.) Holttum, Blumea 21(2): 314. 1973.

Polypodium truncatum Poir. in Lam., Encycl. 5: 534.1804.

Nephrodium truncatum sensu Bedd., Handb. Ferns Brit. India 280. 1883.

Cyclosorus truncatus (Poir.) Faou., Amer. Natu. 12: 250. 1931.

Vernacular name/Common name: *Christmas Island Fern* (English)

Distribution: Karnataka (Uttara Kannada), S to NE India; China, Indo-China, Indonesia, Malaysia, Philippines, Sri Lanka.

Pronephrium Presl

Pronephrium articulatum (Houlston & T. Moore) Holttum, Blumea 20(1): 116. 1972.

Nephrodium articulatum Houlston & T. Moore, Gard. Mag. Bot. 293. 1857.

Nephrodium abruptum sensu Bedd., Ferns S. India 31, t. 86. 1863 non *Aspidium abruptum* Blume.

Nephrodium pennigerum sensu Bedd., Handb. Ferns Brit. India 277. 1883 *pro parte*.

Distribution: Karnataka (Chikkamagaluru), S to NE India; Bangladesh, Myanmar, Sri Lanka, Thailand

Pseudocyclosorus Ching

Pseudocyclosorus ochthodes (Kunze) Holttum in Nayar & Kaur, Comp. Bedd., Hand. 204. 1974.

Aspidium ochthodes Kunze, Linnaea 24: 282. 1851.

Lastrea ochthodes (Kunze) Moore, Index Fil. 98. 1858.

Nephrodium ochthodes (Kunze) Hook. Sp. Fil. 4: 109. 1862. *pro parte* excl. syn. *Aspidium tylodes* Kunze

Thelypteris ochthodes (Kunze) Ching, Bull. Fan Mem. Biol. (Bot.) 6: 300. 1938.

Nephrodium prolixum Baker, Syn. Fil. 268. 1867 *pro parte*, C. B. Clarke, Trans. Linn. Soc. London Bot. 1: 516. 1880. *pro parte*.

Distribution: Karnataka (Chikkamagaluru, Dakshina Kannada, Hassan, Kodagu, Shimoga), Kerala, Tamil Nadu; China? Indo-China, Malaysia, Sri Lanka.

Thelypteris Schmid.

Thelypteris xylodes (Kunze) Ching, Bull. Fan Mem. Inst. Biol., Bot. 6(5): 296. 1936.
Pseudocyclosorus tylodes (Kunze) Ching, Acta Phytotax. Sin. 8:324. 1963.
Aspidium xylodes Kunze, Linnaea 24: 281. 1851.
Lastrea xylodes (Kunze) T. Moore, Index Fil. 107. 1858.
Nephrodium prolixum var. *tylodes* (Kunze) Baker, Syn. Syn. Fil. 268. 1867.
Lastrea oethodes var. *tylodes* (Kunze) Bedd., Ferns S. India 37, t.107.1873.
Nephrodium prolixum sensu C. B. Clarke, Trans. Linn. Soc. London, Bot. 1: 516. 1880, pro parte
Nephrodium tylodes (Kunze) Hope, J. Bombay Nat. Hist. Soc. 14: 724. 1903.
Thelypteris tylodes (Kunze) Ching, Bull. Fan Mem. Inst. Biol. (Bot) 6: 286. 1936.
Pseudocyclosorus tuberculifer (C. Chr.) Ching, Acta Phytotax. Sin. 8: 324. 1963.
Cyclosorus tylodes (Kunze) Panigrahi, Res. J. Pl. Environ. 9: 67. 1993.
 Distribution: Karnataka (Chikkamagaluru, Dakshina Kannada, Hassan, Kodagu, Shimoga), S India, Himalayas; China, Sri Lanka, Thailand, Vietnam.

Trigonospora Holttum

Trigonospora caudipinna (Ching) Sledge, Bull. Brit. Mus. (Nat. Hist.), Bot. 8 (1) : 15. 1981
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 Distribution: Karnataka (Hassan), S India, Himalayas; Myanmar, Sri Lanka.

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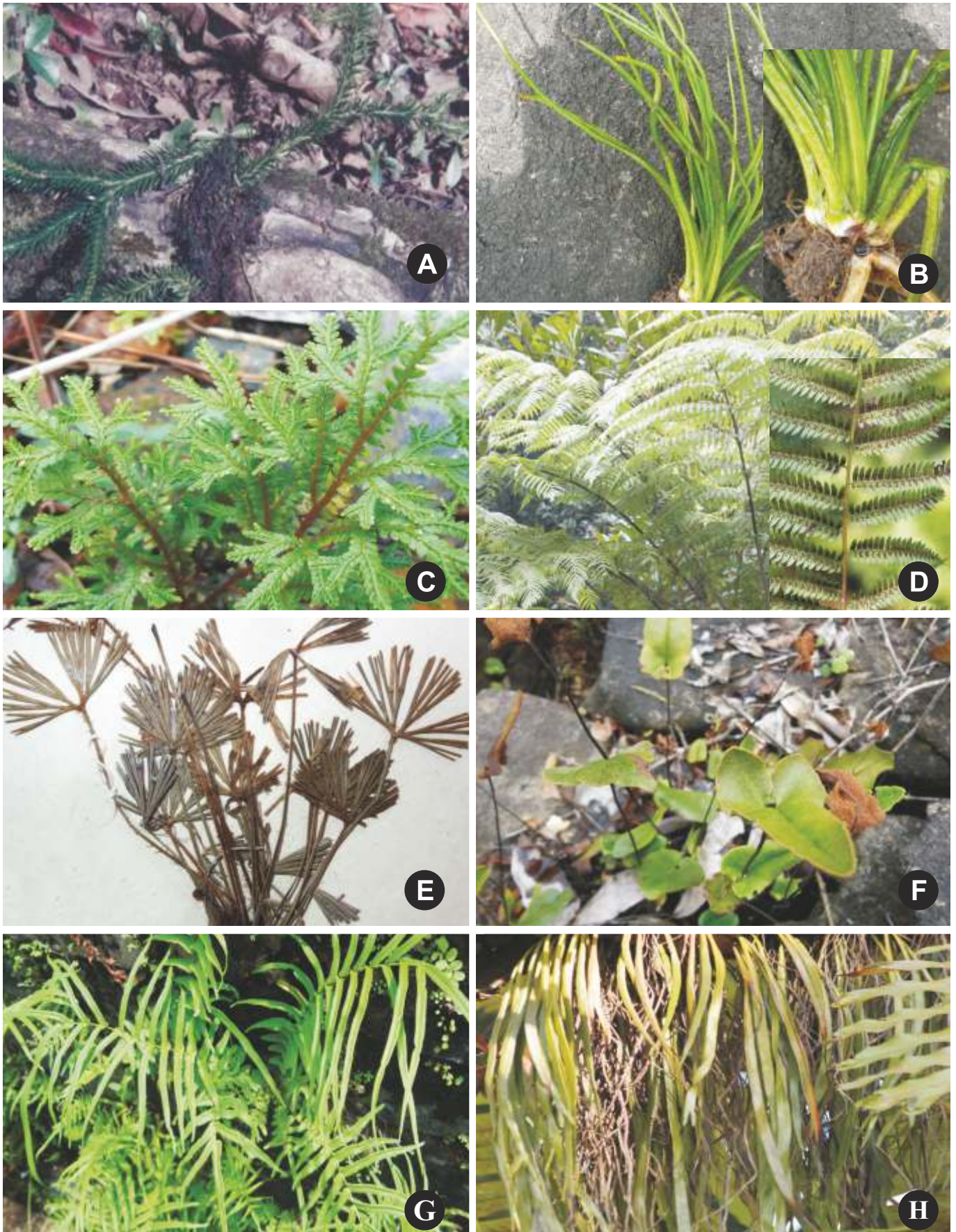


Plate 1 : A. *Huperzia niligarica*; B. *Isietes udupiensis*; C. *Selaginella teners*; D. *Cyathea nilgirensis*; E. *Actinopteris radiata*; F. *Parahemionitis cordata*; G. *Pteris vittata*; H. *Vittaria elongata*



Plate 2 : **A.** *Stenochlaena palustris*; **B.** *Bolbitis subcrenatooides*; **C.** *Drynaria quercifolia*; **D.** *Microsorium zippelii*