

LIST OF PLANT DISCOVERED IN 2012

During the year 2012, the plant taxonomists of BSI and other institutes have

discovered

6 genera

159 New species

24 infra specific taxa as new to science from India and

3 genera

118 species

and 16 infraspecific taxa as new records for Indian Flora

SEED PLANTS

Seed plants (Spermatophytes) are the most evolved land plants on earth and are traditionally divided into flowering plants (or angiosperms) and gymnosperms. In the present state of our knowledge India has about 17,926 species of angiosperms and 74 species of gymnosperms. Many more are yet to be identified and described. The collated information presented here includes 01 new genus; 66 new species (21 from Kerala, 09 from Tamil Nadu, 08 from Maharashtra, 06 each from Karnataka and Uttarakhand, 05 from Arunachal Pradesh, 03 each from Andaman & Nicobar Islands, 02 each from Assam, 01 each from Andhra Pradesh, Jammu & Kashmir, Gujarat, Manipur, Nagaland and Odisha). 09 new infra specific taxa (varieties) and 33 new distributional records

from India.

NEW GENUS

Scapiarabis M.A. Koch, R. Karl, D. German & Al-Shehbaz, *Taxon* 61(5): 965. 2012. (BRASSICACEAE)

NEW SPECIES

Alysicarpus sanjappae S. Chavan, Sardesai & Pokle, *Kew Bulletin* 68(1): 183. 2012. (LEGUMINOSAE: PAPILIONOIDEAE)

Amomum agastyamalayanum V.P. Thomas & M. Sabu, *Edinburgh J. Bot.* 69(2): 313. 2012. (ZINGIBERACEAE)

Amomum carnosum V. P. Thomas & M. Sabu, *Kew Bulletin* 67(3): 549. 2012. (ZINGIBERACEAE)

Amomum newmanii M. Sabu & V.P. Thomas, *Edinburgh J. Bot.* 69(2): 319. 2012. (ZINGIBERACEAE)

Amomum nilgiricum V.P. Thomas & M. Sabu, *Phyto Keys* 8: 100. 2012. (ZINGIBERACEAE)

Calophyllum pascalianum B.R Ramesh, N. Ayyappan & De Franceschi, *Kew Bulletin* 67(1): 115. 2012. (CLUSIACEAE)

Canscora bhatiana K.S. Prasad & K Ravi, *Intern. J. Pl. Animal & Env. Sci.* 2(4): 197. 2012. (GENTIANACEAE)

Carissa andamanensis L.J. Singh & Murugan, *Ind. J. Forest.* 35(4): 493. 2012 (APOCYNACEAE)

Ceropegia concanensis Kambale, Chandore & S.R. Yadav, Kew Bulletin 67(4): 843. 2012. (APOCYNACEAE)

Chlorophytum belgaumense Chandore, Malpure, Adsul & S.R. Yadav, Kew Bulletin 67(3): 527. 2012. (ASPARAGACEAE)

Combretum recurvatum Sujana, Ratheesh, & Anil, J. Bot. Res. Inst. Texas 6(2): 543. 2012. (COMBRETACEAE)

Commelina clavatoides Nampy & S. Joseph, J. Bot. Res. Inst. Texas 6(1): 119. 2012. (COMMELINACEAE)

Corydalis magni Pusalkar, Kew Bulletin 66(4): 548. 2011. (FUMARIACEAE)

Corydalis devendrae Pusalkar, Kew Bulletin 66(4): 552. 2011. (FUMARIACEAE)

Crinum malabaricum Lekhak & S.R. Yadav, Kew Bulletin 67(3): 521. 2012. (AMARYLLIDACEAE)

Delphinium hajrae Pusalkar, Phytotaxonomy 12: 25. 2012. (RANUNCULACEAE)

Dendrobium sessanicum O. Apang, J. Econ. Taxon. Bot. 36 (2): 372. 2012. (ORCHIDACEAE)

Eragrostis henryi C.P Vivek, G.V.S. Murthy & V.J. Nair, Nelumbo 54: 10. 2012. (POACEAE)

Eriocaulon cheemenianum P. Biju, K S. Prasad, Jomy & R Ansari, Intern. J. Pl. Animal & Env. Sci. 2(4): 176. 2012. (ERIOCAULACEAE)

Eriocaulon madayiparense Swapna, Rajesh, Manju & Prakash Kumar, Phyto Keys 10: 20. 2012. (ERIOCAULACEAE)

Henckelia pradeepiana Nampy, Manudev & A. Weber, Rheedia 22(2): 119. 2012. (GESNERIACEAE)

Hubbardia diandra Chandore, Gosavi & S.R. Yadav, Kew Bulletin 67: 533. 2012.
(POACEAE)

Impatiens aadishankarii Bhaskar & Sringsesh in Bhaskar, Taxon. Monogr. Impatiens Western Ghats 118. 2012. (BALSAMINACEAE)

Impatiens aquatica Bhaskar, Taxon. Monogr. Impatiens Western Ghats 123. 2012.
(BALSAMINACEAE)

Impatiens bicornis Laly Joseph & Bhaskar in Bhaskar, Taxon. Monogr. Impatiens Western Ghats 57. 2012. (BALSAMINACEAE)

Impatiens hirta Laly Joseph & Bhaskar in Bhaskar, Taxon. Monogr. Impatiens Western Ghats 66. 2012. (BALSAMINACEAE)

Impatiens johnsiana Ratheesh, Sunil & Anil, J. Bot. Res. Inst. Texas 6(1): 113. 2012. (BALSAMINACEAE)

Impatiens kodachadriensis Bhaskar & Sringsesh in Bhaskar, Taxon. Monogr. Impatiens Western Ghats 150. 2012. (BALSAMINACEAE)

Impatiens mohana Ratheesh, Sujana & Anil, Edinburgh J. Bot. 69(2): 282. 2012
(BALSAMINACEAE)

Impatiens mullaingiriensis Bhaskar, Taxon. Monogr. Impatiens Western Ghats 159. 2012. (BALSAMINACEAE)

Impatiens neomunronii Laly Joseph & Bhaskar in Bhaskar, Taxon. Monogr. Impatiens Western Ghats 228. 2012. (BALSAMINACEAE)

Impatiens pseudoacaulis Bhaskar, Taxon. Monogr. Impatiens Western Ghats 77. 2012. (BALSAMINACEAE)

Impatiens shevaroyensis Bhaskar, Taxon. Monogr. Impatiens Western Ghats 83.

2012. (BALSAMINACEAE)

Impatiens tirunelveli Laly Joseph & Bhaskar in Bhaskar, Taxon. Monogr. Impatiens Western Ghats 87. 2012. (BALSAMINACEAE)

Impatiens wynadensis Laly Joseph & Bhaskar in Bhaskar, Taxon. Monogr. Impatiens Western Ghats 260. 2012. (BALSAMINACEAE)

Impatiens yercaudensis Bhaskar, Taxon. Monogr. Impatiens Western Ghats 180. 2012. (BALSAMINACEAE)

lone kipgenii Kishor, Chowlu & Vij, Kew Bulletin 67(3): 517. 2012. (ORCHIDACEAE)

Kobresia rcsrivastavae Bikash Jana, Indian J. Fundamental and Applied Life Sciences 2(2): 256. 2012. (CYPERACEAE)

Ledebouria hyderabadensis M.V. Ramana, Prasanna & Venu, Kew Bulletin 67(3): 561. 2012. (HYACINTHACEAE)

Lindernia madayiparens Flatheesh, Sunil & Nandakumar, Intern. J. Pl. Animal & Env. Sci. 2(3): 59. 2012. (LINDERNIACEAE)

Memecylon wayanadense Ratheesh, Sivu & N.S. Pradeep, Edinburgh J. Bot. 69(3): 372. 2012. (MELASTOMATACEAE)

Miliusa gokhalaei Ratheesh, Sujanapal, Anil Kumar & Sivadasan, Phytotaxa 42: 27. 2012 (ANNONACEAE)

Mucuna sanjappae Aitawade & S.R Yadav, Kew Bulletin 67(3): 539. 2012. (LEGUMINOSAE: PAPILIONOIDEAE)

Murdannia assamica Nampy & A. Ancy, Edinburgh J. Bot. 69(3): 441. 2012. (COMMELINACEAE)

Murdannia sahyadrica A. Ancy & Nampy, Willdenowia 42: 79. 2012.
(COMMELINACEAE)

Nervilia pangteyana J.S. Jalal, Kumar & G.S. Rawat, Nordic J. Bot. 30(4): 407. 2012.
(ORCHIDACEAE)

Neottia confusa M. Bhaumik, Edinburgh J. Bot. 69(3): 379. 2012. (ORCHIDACEAE)

Neottia dihangensis M. Bhaumik Edinburgh J. Bot. 69(3): 379. 2012
(ORCHIDACEAE)

Ornithochilus cacharensis Barbhuiya, B.K. Dutta & Schuit., Kew Bull. 67(3): 511.
2012. (ORCHIDACEAE)

Pandanus mangalorensis Nadaf & Zanan, Kew Bulletin 67(3): 555. 2012.
(PANDANACEAE)

Pandanus martinianus Nadaf & Zanan, Phytotaxa 73: 2. 2012. (PANDANACEAE)

Pandanus palakkadensis Nadaf, Zanan & Wakte, Kew Bull. 66(1): 183. 2011
(PANDANACEAE)

Piper relictum Lekhak, S.S. Kamble & S.R. Yadav, Nordic J. Bot. 30 (5): 571. 2012.
(PIPERACEAE)

Rhododendron pangeanum A.A. Mao & M. Bhaumik, Rhododendrom Yearbook
29. 2012. (ERICACEAE)

Rhododendron rawatii I.D. Rai & B.S. Adhikari, Phytotaxa 71: 12. 2012.
(ERICACEAE)

Rotala tulunadensis K.S. Prasad, P. Biju, K. Ravi & K.G. Bhat, Nordic J. Bot. 30(1):
58. 2012. (LYTHRACEAE)

Salacia agasthiamalana Udayan, Regy Yohannan & Pradeep, Edinburgh J. Bot.

69(2): 255. 2012. (HIPPOCRATEACEAE)

Saxifraga minutissima D.S. Rawat, Edinburgh J. Bot. 69(2): 211. 2012.
(SAXIFRAGACEAE)

Scolopia parkinsonii N. Balach., Gastmans & Chakrab., Kew Bulletin 66(4): 619.
2011. (FLACOURTIACEAE)

Silentvalleya chandwadensis Gosavi, B.R. Pawar & S.R. Yadav, Kew Bulletin 67(3):
545. 2012. (POACEAE)

Spodiopogon aristatus R.J. Desai & Raole, Kew Bull. 67(1): 103. 2012. (POACEAE)

Syzygium palodense Shareef, E.S.S. Kumar & Shaju, Phytotaxa 71: 28. 2012.
(MYRTACEAE)

Tropidia hegderaoi S. Misra, Nelumbo 54: 13. 2012. (ORCHIDACEAE)

Tylophora nicobarica Mueggenberg & M.Y. Kamble, Rheedea 22(2): 83. 2012.
(APOCYNACEAE)

Vigna sahyadriana Aitawade, K.V. Bhat & S.R. Yadav, Rheedea 22(1): 20. 2012.
(LEGUMINOSAE: PAPILIONOIDEAE)

Zeuxine mooneyi S. Misra, Nelumbo 54: 17. 2012. (ORCHIDACEAE)

NEW VARIETIES

Ceropegia mahabalei Hemadri & Ansari var. ***hemalatae*** S.S. Rahangdale & S.R.
Rahangdale, Ind. Forest. 2012. (APOCYNACEAE)

Impatiens aliciae var. ***pandavaramalayensis*** Bhaskar, Taxon. Monogr. Impatiens
Western Ghats 122. 2012. (BALSAMINACEAE)

Impatiens inconspicua var. ***jogensis*** Bhaskar, Taxon. Monogr. Impatiens Western
Ghats 145. 2012. (BALSAMINACEAE)

Impatiens inconspicua var. **pushpagiriensis** Laly Joseph & Bhaskar in Bhaskar, Taxon. Monogr. Impatiens Western Ghats 147. 2012. (BALSAMINACEAE)

Impatiens minor var. **hirsuta** Bhaskar, Taxon. Monogr. Impatiens Western Ghats 158. 2012. (BALSAMINACEAE)

Impatiens rufescens var. **agastymalayensis** Bhaskar, Taxon. Monogr. Impatiens Western Ghats 171. 2012. (BALSAMINACEAE)

Impatiens scabriuscula var. **alba** Bhaskar, Taxon. Monogr. Impatiens Western Ghats 212. 2012. (BALSAMINACEAE)

Impatiens scabriuscula var. **rosea** Bhaskar, Taxon. Monogr. Impatiens Western Ghats 213. 2012. (BALSAMINACEAE)

Scolopia kermodei C.E.C Fisch. var **minor** N. Balach, Gastmans & Chakrab, Kew Bull. 66: 620. 2011. (FLACOURTIACEAE)

NEW DISTRIBUTIONAL RECORDS

SPECIES

Aruncus gombalanus (Hand.–Mazz.) Hand.–Mazz. (ROSACEAE) published by M.K. Pathak & M. Bhaumik in Rheedea 22(2): 133. 2012.

Acanthospermum australe (Loefl.) Kuntze (ASTERACEAE) published by C. Haleshi, A.N. Sringeswara, Sahana Vishwanath, M.D. Flajanna & Balakrishna Gowda in Rheedea 22(1): 32. 2012.

Anredera cordifolia (Ten.) Steenis (BASELLACEAE) published by L. Flasingam & P.

Lakshminarasimhan in Rheedea 22(1): 16. 2012.

Arnebia griffithii Boiss. (*BORAGINACEAE*) published by Kumar Ambrish & S.K. Srivastava in Rheedea 22(2): 124. 2012.

Astraea lobata (L.) Klotzsch (*EUPHORBIACEAE*) published by S.P. Gaikwad, R.D. Gore & K.U. Garad in Rheedea 22(2): 131. 2012.

Briedelia mooni Thwaites (*EUPHORBIACEAE*) published by C. Murugan & M.Y. Kamble in Indian J. Forest. 35(3): 355. 2012.

Blumea milnei Seem. (*ASTERACEAE*) published by C. Murugan & G.V.S. Murthy in Indian J. Forest. 35(1): 119. 2012.

Cinnamomum litseaefolium Thwaites (*LAURACEAE*) published by M.P. Geethakumary, A.G. Pandurangan & E.S. Santhosh Kumar in Rheedea 22(2): 127. 2012.

Chamaecrista rotundifolia (Pers.) Greene (*LEGUMINOSAE: PAPILIONOIDEAE*) published by K. Sankara Rao, H.R. Bhat & Y.N. Seetharam in Rheedea 22(1): 66. 2012.

Hedyotis trimenii Deb & Dutta (*RUBIACEAE*) published by G.V.S. Murthy, R. Gopalan & C. Murugan in Indian J. Forest. 35(1): 89. 2012.

Ipomoea ochracea (Lindl.) G. Don (*CONVOLVULACEAE*) published by Vinod B. Shimpale, P.R. Kshirsagar & Nilesh V. Pawar in Rheedea 22(2): 99. 2012.

Ixora rangonensis Bremek. (*RUBIACEAE*) published by H.A. Barbhuiya, B.K. Dutta, Ajit Kr. Das & A.K. Baishya in Taiwania 57(4): 413. 2012.

Kobresia gandakiensis Rajbh. & H. Obha (*CYPERACEAE*) published by Bikash Jana, R.C. Srivastava in Nelumbo 54: 274. 2012.

Kobresia harae Rajbh. & H. Ohba (CYPERACEAE) published by Bikash Jana, R.C. Srivastava, D.G. Long & G.P. Sinha in J. Threatened Taxa 4(6): 2664. 2012.

Kobresia kansuensis Kuk. (CYPERACEAE) published by Bikash Jana & R.C. Srivastava in Rheedia 22(1): 68. 2012.

Memecylon clarkeanum Cogn. (MELASTOMATACEAE) published by Ambikabai Raghavanpillai Sivu, Matalai Kokkaramath Ratheesh Narayanan, Ettickal Sukumaran Santhosh Kumar, Kanjiraparambil Arjunan Sujana, Nediaparambu Sukumaran Pradeep, Nadesapanicker Anil Kumar & Alagramam Govindasamy Pandurangan in Taiwania 57(3): 327. 2012.

Mirabilis viscosa Cav. (NYCTAGINACEAE) published by K.K. Sampath Kumara, A.N. Sringeswara, KB. Sadananda, G.R Shivamurthy & H.S. Prakash in Rheedia 22(2): 88. 2012.

Myriophyllum siamense (Craib) Tardieu (HALORAGACEAE) published by C. Pramod, K.M. Manudev, A.K. Pradeep & Santhosh Nampy in Rheedia 22(2): 95. 2012.

Neottia chandrae B.B. Rashkoti, J.J. wood & R. Ale. (ORCHIDACEAE) published by Vikas Kumar, H.J. Chowdhery & K.R Keshava Murthy in Indian J. Forest. 35(3): 375. 2012.

Rhododendron stewartianum Diels (ERICACEAE) published by M. Bhaumik & A.A. Mao in Nelumbo 54. 255. 2012.

Salix matsudana Koidzumi (SALICACEAE) published by Akhtar H. Malik, G.H. Dar, Anzar A. Khuroo, Aijaz H. Ganie & A.H. Munish in Pleione 6(1): 253. 2012.

Salvadora alii Rajput & Syeda (SALVADORACEAE) published by Shaikh Mujaffar,

C.M. Solanki & S. Ray in *Rheedea* 22(2): 80. 2012.

Sanguisorba minor Scop. (ROACEAE) published by Syed Mubashir Andrabi, Waheeda Rehman, Zafar Ahmad Reshi, Abdul Rashid Naqshi & Aijaz Hassan Genie in *Taiwania* 57(4): 410. 2012.

Sonneratia ovata Backer (SONNERATIACEAE) published by M.P. Goutham-Bharathi, M. Kaliyamoorthy, S. Dam Roy, P. Krishnan, Grinson George & C. Murugan in *Taiwania* 57(4): 406. 2012.

Symphotrichum subulatum (Michx.) G.L Nesom (ASTERACEAE) published by M. Sharma, Bandana Bhattacharjee & P. Lakshminarasimhan in *Nelumbo* 54: 252. 2012.

Thrixspermum saruwatarii (Hayata) Schltr. (ORCHIDACEAE) published by A.A. Mao, A. Nageswara Rao, M. Bhaumik & Ona Apang in *Bull. Arunachal Forest Research* 26(1&2): 68. 2010.

Trichosanthes quinquangulata A. Gray (CUCURBITACEAE) published by L. Rasingam in *Rheedea* 22(1): 9. 2012.

SUBSPECIES

Cornus kousa F. Buerger ex Hance subsp. **kousa** (CORNACEAE) published by Arun Chettri, S.K Barik, Bikarma Singh, D.Adhikari & M.K Lyngdoh in *Taiwania* 57(1): 77. 2012.

Ficus carica L subsp. **rupestris** (Hauskn. ex Boiss.) Browicz (MORACEAE) published by Kumar Ambrish & S.K. Srivastava in *Indian J. Forest.* 35(1): 95. 2012.

VARIETIES

Pseudomertensia moltkioides (Royle ex Benth.) Kazmi var *leichtlinii* Kazmi (BOFIAGINACEAE) published by Prashant K. Pusalkar & D.K. Singh in Ann. For. 20(1): 105. 2012.

Ranunculus hirtellus Royle var. *orientalis* W.T. Wang. (RANUNCULACEAE) published by Prashant K. Pusalkar, D.K. Singh & S.K. Srivastava in Indian J. Forest. 35(1): 110. 2012.

Strobilanthes viscosa var. *viscosa* (Am. ex Nees) T. Anders. (ACANTHACEAE) published by C. Murugan & G.V.S. Murthy in Indian J. Forest. 35(1): 119. 2012.

Strobilanthes viscosa (Am. ex Nees) T. Anders. var. *digitalis* (Nees) C.B. Clarke (ACANTHACEAE) published by C. Murugan & G.V.S. Murthy in Indian J. Forestry 35(1): 119. 2012.

FERNS AND FERN–ALLIES

Ferns and Fern–allies (Pteridophytes) live in a wide variety of habitats and often succeed in places where environmental factors discourage growth of flowering plants. The Indian ferns account for about 2% of the total fern species of the world.

In the present state of our knowledge India has about 1,267 species of ferns and Fern–allies. Many more are yet to be identified and described.

The collated information presented here includes 01 new genus from Himalaya and two new distributional records (one from Kerala and from Maharashtra) for

Indian pteridophytic flora.

NEW GENUS

Himalayopteris W. Shao & S. G. Lu Novon 21: 91. 2011. (POLYPODIACEAE)

NEW SPECIES

Pteris reptans T.G. Walker (PTERIDACEAE) published by V.K Sreenivas & P.V. Madhusoodan in Fern Gaz. 19(1): 25. 2012.

Selaginella crassipes Spring (SELAGINELLACEAE) published by Sarvesh Kumar Singh, Gopal Krishna Srivastava, Manju Srivastava & Pradeep Kumar Shukla in Taiwania 57(3): 283. 2012.

BRYOPHYTES

Bryophytes, the amphibians of the 'Plant Kingdom', and the second largest group of green plants next only to the angiosperms constitute a fascinating component of biodiversity and are widely spread in almost all climatic conditions. They are among the very few groups of plants found in Antarctica.

The Indian bryophytes account for about 15 per cent of the total Bryophyte species of the world.

In the present state of our knowledge India has about 2,504 species of bryophytes. Many more are yet to be identified and described.

The collated information presented here includes 05 new species from India (02

species from Kerala and 01 species each from Meghalaya, Mizoram and Sikkim); 03 new varieties (02 from Mizoram and 01 from Tamil Nadu) and 18 new distributional records.

NEW SPECIES

Aerobryopsis eravikulamensis Manju & Rajesh, *Bryologist* 115(1): 42. 2012.
(METEORACEAE)

Drepanolejeunea devendrae Sushil K. Singh & M. Dey, *Nelumbo* 54: 20. 2012.
(LEJEUNEACEAE)

Frullania mizoramensis Sushil K. Singh & Barbhuiya, *Taiwania* 57(2): 106. 2012.
(FRULLANIACEAE)

Lepidozia kashyapii D. Singh & D.K. Singh, *Nova Hedwigia* 94(1–2): 222. 2012.
(LEPIDOZIACEAE)

Symphysodontella madhusoodananii Manju & Rajesh, *PhytoKeys* 18: 39. 2012
(PTEROBRYACEAE)

NEW VARIETIES

Frullania evelynae S.Hatt. & Thait. var. ***devendrae*** Sushil K. Singh & Barbhuiya, *Taiwania* 57(2): 109. 2012. (FRULLANIACEAE)

Frullania evelynae S.Hatt. & Thait. var. ***srivastavae*** Sushil K. Singh & Barbhuiya, *Taiwania* 57(2): 106. 2012. (FRULLANIACEAE)

Solenostoma tetragonum (Lindenb.) R.M. Schust. ex Vana & D.G. Long var. ***kodaikanalensis*** Afroz Alam, D. Sharma & S. Yadav, *Phytotaxonomy* 12 : 70. 2012. (JUNGERMANNIACEAE)

NEW DISTRIBUTIONAL RECORDS

GENUS

Aulacopilum Wilson. (ERPODIACEAE) published by A.E.D Daniels, J.L Mabel & P. Daniel in *Taiwania* 57(2): 168. 2012.

Nowellia Mitt. (CEPHALOZIACEAE) published by D.K Singh, Shuvadeep Majumdar & Sudipa Das in *Nelumbo* 54: 24. 2012.

SPECIES

Anastrophyllum aristatum (Herzog ex N. Kitag.) A.E.D. Daniels, D.G. Long, K.C. Kariyappa & P. Daniel (ANASTROPHYLLACEAE) published by A.E.D Daniels, D.G. Long, K.C. Kariyappa & P Daniel in *J. Bryology* 34(2): 146. 2012.

Aulacopilum beccarii (Mull. Hal. ex Venturi) Mitt. (ERPODIACEAE) published by A.E.D. Daniels, J.L. Mabel & P. Daniel in *Taiwania* 57(2): 168. 2012.

Aulacopilum glaucum Wilson (ERPODIACEAE) published by A.E.D. Daniels, J.L. Mabel & P. Daniel in *Taiwania* 57(2): 168. 2012.

Bryum coronatum Schwaegr. (BRYACEAE) published by Pooja Bansal & Virendra Nath in *Taiwania* 57(3): 294. 2012.

Drepanolejeunea longii Grolle & RL. Zhu (LEJEUNEACEAE) published by M. Dey, D. Singh & D.K. Singh in M. Dey & D.K. Singh, *Epiphyllous Liverworts of Eastern Himalaya*. 233. 2012.

Drepanolejeunea siamensis (Bischn.) Grolle & R.L. Zhu (LEJEUNEACEAE) published by M. Dey, D. Singh & D.K. Singh in M. Dey & D.K Singh, *Epiphyllous Liverworts*

of Eastern Himalaya 237. 2012.

Drepanolejeunea tibetana (P.C. Wu & J.S. Lou) Grolle & R.L. Zhu (LEJEUNEACEAE) published by M. Dey, D. Singh & D.K. Singh in M. Dey and D.K. Singh, Epiphyllous Liverworts of Eastern Himalaya 241. 2012.

Erpodium glaziovii Hampe (ERPODIACEAE) published by A.E.D. Daniels, J.L. Mabel & P. Daniel in Taiwania 57(2):168. 2012.

Herbertus buchii Juslen (HERBERTACEAE) published by Sudipa Das & D.K. Singh in Phytotaxonomy 12: 20. 2012.

Lejeunea minutiloba A. Evans (LEJEUNEACEAE) published by Sudipa Das & D.K. Singh in Phytotaxonomy 12: 20. 2012.

Nowellia curvifolia (Dicks.) Mitt (CEPHALOZIACEAE) published by D.K. Singh, Shuvadeep Majumdar & Sudipa Das in Nelumbo 54: 24. 2012.

Polytrichastrum formosum (Hedw.) G.L Smith (POLYTRICHACEAE) published by Ashish Kumar Asthana, Vinay Sahu & Virendra Nath in Cryptogamie Bryologie 33 (1): 87. 2012.

Radula multiflora Gottsche ex Schiffn. (RADULACEAE) published by R.D.A. Raja & A.E.D. Daniels in Indian J. Forest. 35(2): 267. 2012.

Trichosteleum stigmatosum Mitt. (SEMATOPHYLLACEAE) published by Chandrasekharan Nair Manju, Raveendranpillai Prakashkumar, Bhavana Prajitha, Venda kullathil Rajilesh & Karadi Parambath Anoop in Taiwania 57(2): 222. 2012.

Thysananthus appendiculatus Steph. (LEJEUNEACEAE) published by R.D.A. Raja & A.E.D. Daniels in Lindbergia 34: 34. 2011.

LICHENS

Lichens are symbiotic association of a fungus with a photosynthetic partner usually a green alga or cyanobacterium. Lichens are widespread, however many species are sensitive to environmental disturbances and may be useful in assessing the effect of air pollution. Lichens have also been used in making dyes and perfumes as well as in traditional medicines.

The Indian lichens account for about 17 per cent of the total species of the world.

In the present state of our knowledge India has about 2390 species of lichens. Many more are yet to be identified and described.

The collated information presented here includes 24 new species (05 species from Karnataka, 04 species each from Kerala and Tamil Nadu, 03 species each from Andaman & Nicobar Islands and West Bengal, 02 species each from Arunachal Pradesh and Himachal Pradesh and 01 species from Uttarakhand) and 33 new distributional records of lichens from India.

NEW SPECIES

Caloplaca gyrophorica Jagadeesh, Y. Joshi & G.P. Sinha, Mycotaxon 122: 304. 2012. (TELOSCHISTACEAE)

Fissurina andamanensis B.O. Sharma, Khadilkar & Makhija, Lichenologist 44(3): 343. 2012. (GRAPHIDACEAE)

Fissurina disposita B.O. Sharma, Khadilkar & Makhija, Lichenologist 44(3): 347.

2012. (GRAPHIDACEAE)

Fissurina immersa B.O. Sharma, Khadilkar & Makhija, Lichenologist 44(3): 347.

2012. (GRAPHIDACEAE)

Fissurina indica B.O. Sharma, Khadilkar & Makhija, Lichenologist 44(3): 348.

2012. (GRAPHIDACEAE)

Fissurina microcarpa B.O. Sharma, Khadilkar & Makhija, Lichenologist 44(3):

348. 2012. (GRAPHIDACEAE)

Fissurina nicobarensis B.O. Sharma, Khadilkar & Makhija, Lichenologist 44(3):

349. 2012. (GRAPHIDACEAE)

Fissurina simplex B.O. Sharma, Khadilkar & Makhija, Lichenologist 44(3): 351.

2012. (GRAPHIDACEAE)

Fissurina sporolata B.O. Sharma, Khadilkar & Makhija, Lichenologist 44(3): 351.

2012. (GRAPHIDACEAE)

Fissurina submonospora B.O. Sharma, Khadilkar & Makhija, Lichenologist 44(3):

352. 2012. (GRAPHIDACEAE)

Hemithecium kodayarensis B.O. Sharma & Khadilkar, Lichenologist 44(3): 359.

2012. (GRAPHIDACEAE)

Hemithecium longilirellatum B.O. Sharma & Khadilkar, Lichenologist 44(3): 359.

2012. (GRAPHIDACEAE)

Hemithecium verrucosum B.O. Sharma & Khadilkar, Lichenologist 44(3): 361.

2012. (GRAPHIDACEAE)

Hypogymnia crystallina Me Cune, Divakar & Upreti, Lichenologist 44(5): 599.

2012. (PARMELIACEAE)

Lecanora girigangaensis Papong, Nayaka & Lumbsch, Phytotaxa 68: 25. 2012.

(LECANORACEAE)

Lecanora upretii Papong, Nayaka & Lumbsch, Phytotaxa 68: 26. 2012.

(LECANORACEAE)

Opegrapha granulosa Siljo & G.P. Sinha, Lichenologist 44(3): 371. 2012.

(OPEGRAPHACEAE)

Phlyctis karnatakana S. Joshi & Upreti, Bryologist 113(4): 726. 2010.

(PHLYCTIDACEAE)

Phlyctis monosperma S. Joshi & Upreti, Lichenologist 44(3): 363. 2012.

(PHLYCTIDACEAE)

Phlyctis subagelaea S. Joshi & Upreti, Bryologist 113(4): 725. 2010.

(PHLYCTIDACEAE)

Phlyctis subhimalayensis S. Joshi & Upreti, Lichenologist 44(3): 365. 2012.

(PHLYCTIDACEAE)

Pyrgillus idukkiensis Kr. P. Singh & Pushpi Singh, Taiwania 57(4): 392. 2012.

(PYRENULACEAE)

Pyrgillus tibellii Kr. P. Singh & Pushpi Singh, Lichenologist 44(6): 773. 2012.

(PYRENULACEAE)

Stictis palniense S. Joshi & Upreti, Bryologist 115(3): 403. 2012. (Stictidaceae)

NEW DISTRIBUTIONAL RECORDS

SPECIES

Anisomeridium ambiguum (Zahlbr.) R.C. Harris (MONOBLASTIACEAE) published by P.P. Sethy, G.S. Pandit & B.O. Sharma in Mycosphere 3(4): 476. 2012.

Bacidia arceutina (Ach.) Rehm & Arnold (RAMALINACEAE) published by Siljo Joseph & G.P. Sinha in Taiwania 57(3): 305. 2012.

Bacidia heterochroa (Mull.–Arg.) Zahlbr. (RAMALINACEAE) published by Siljo Joseph & G.P. Sinha in Taiwania 57(3): 305. 2012.

Conotrema lumbricoides Sipman (STICTIDACEAE) published by K.P. Singh & Kamal Kumar in Indian J. Forest. 35(3): 1. 2012.

Chapsa patens (Nyl.) Frisch (GRAPHIDACEAE) published by Santosh Joshi, Dalip K. Upreti & Sanjeeva Nayaka in Mycotaxon 120: 33. 2012.

Chapsa phlyctidioides (Mull. Arg.) Mangold (GRAPHIDACEAE) published by P.P. Sethy, G.S. Pandit & B.O. Sharma in Mycosphere 3(4): 476. 2012.

Chapsa platycarpella (Vain.) Frisch. (GRAPHIDACEAE) published by Santosh Joshi, Dalip K. Upreti & Sanjeeva Nayaka in Mycotaxon 120: 33. 2012.

Coccotrema cucurbitula (Mont.) Mull. Arg. (COCCOTREMATAACEAE) published by Pushpi Singh & K.P. Singh in Indian J. Forest. 35(1): 131. 2012.

Fissurina canlaonensis (Vain.) Staiger (GRAPHIDACEAE) published by B.O. Sharma, Khadilkar & Makhija in Lichenologist 44(3): 345. 2012.

Fissurina cingalina (Nyl.) Staiger (GRAPHIDACEAE) published by B.O. Sharma, Khadilkar & Makhija in Lichenologist 44(3): 346. 2012.

Fissurina comparimuralis Staiger (GRAPHIDACEAE) published by B.O. Sharma, Khadilkar & Makhija in Lichenologist 44(3): 346. 2012.

Fissurina monospora C. Knight (GRAPHIDACEAE) published by B.O. Sharma,

Khadilkar & Makhija in Lichenologist 44(3): 349. 2012.

Fissurina nitidescens (Nyl.) Nyl. (GRAPHIDACEAE) published by B.O. Sharma, Khadilkar & Makhija in Lichenologist 44(3): 349. 2012.

Fissurina rubiginosa (Fee) Staiger (GRAPHIDACEAE) published by B.O. Sharma, Khadilkar & Makhija in Lichenologist 44(3): 350. 2012.

Fissurina subnitidula (Nyl.) Staiger (GRAPHIDACEAE) published by B.O. Sharma, Khadilkar & Makhija in Lichenologist 44(3): 353. 2012.

Graphis pseudoaquilonia Lucking. (GRAPHIDACEAE) published by Pooja Gupta & G.P. Sinha in Indian J. Forest. 35(1): 133. 2012.

Graphis renschiana (Mull. Arg.) Stizenberg (GRAPHIDACEAE) published by P.P. Sethy, G.S. Pandit & B.O. Sharma in Mycosphere 3(4): 476. 2012.

Hypogymnia hengduanensis J. C. Wei. (PARMELIACEAE) published by McCune, Divakar & D.K. Upreti in Lichenologist 44(5): 595. 2012.

Lecanora bicincta Ramond (LECANORACEAE) published by Siljo Joseph & G.P. Sinha in Geophytology 42(1): 71. 2012.

Lecanora subalbellina Vainio (LECANORACEAE) published K Papong, Sanjeeva Nayaka & H. Thorsten Lumbsch in Phytotaxa 68: 27. 2012.

Lecanora expallens Ach. (LECANORACEAE) published Rajesh Bajpai, D.K. Upreti, S. Nayaka & U. Dubey in Phytotaxonomy 12: 123. 2012.

Leucodecton biokense A. Frisch (THELOTREMATAACEAE) published by P.P. Sethy, G.S. Pandit & B.O. Sharma in Mycosphere 3(4): 476. 2012.

Megalotremis biocellata Aptroot. (TRYPETHELIACEAE) published by K.P. Singh & Kamal Kumar in Indian J. Forest. 35(3):6. 2012.

Ocellularia lankaensis Hale. (GRAPHIDACEAE) published by K.P. Singh & Kamal Kumar in Indian J. Forest. 35(3): 6. 2012.

Pertusaria dermatodes Nyl. (PERTUSARIACEAE) published by K.P. Singh & Shashikant Gupta in Phytotaxonomy 12: 28. 2012.

Pertusaria leucostigma Mull. (PERTUSARIACEAE) published by KP. Singh & Shashikant Gupta in Phytotaxonomy 12: 28. 2012.

Pertusaria pycnothelioides Vain. (PERTUSARIACEAE) published by K.P. Singh & Shashikant Gupta in Phytotaxonomy 12: 28. 2012.

Pertusaria plittiana Eriksen. (PERTUSARIACEAE) published by K.P. Singh & Shashikant Gupta in Phytotaxonomy 12: 28. 2012.

Pertusaria subobductans Nyl. (PERTUSARIACEAE) published by KP. Singh & Shashikant Gupta in Phytotaxonomy 12: 28. 2012.

Pertusaria subrigidas Mull. (PERTUSARIACEAE) published by KP. Singh & Shashikant Gupta in Phytotaxonomy 12: 28. 2012.

Pyrgillus cubanus Nyl. (PYRENULACEAE) published by KP. Singh & Pushpi Singh in Taiwania 57(4): 391. 2012.

Pyrenula thailandica Aptroot (PYRENULACEAE) published by Andre Aptroot, Felix Schumm & Marcela E. S. Caceres in Lichenologist 44(5): 617. 2012.

Sticta duplolibata (Hue) Vain (LOBARIACEAE) published by G.S. Pandit & B.O. Sharma in Mycosphere 3(4): 434. 2012.

FUNGI

Fungi distributed worldwide, perform an essential role in nature by decomposing organic matter and are indispensable in nutrient cycling. They have long been used as source of food and in fermentation of various food products and now they are an important source of antibiotics.

The Indian fungi account for about 20 per cent of the total species of the world. In the present state of our knowledge India has about 14,756 species of fungi. Many more are yet to be identified and described.

The collated information presented here includes 03 new genera (02 from Andhra Pradesh and 01 from Gujarat). 30 new species from India (05 species each from Madhya Pradesh and Sikkim, 04 species each from Kerala and Uttar Pradesh, 03 species from Andhra Pradesh, 02 species each from Chhatisgarh and Karnataka, 01 species each from Goa, Gujarat, Himachal Pradesh, Maharashtra and Uttarakhand) and 01 new infra specific taxa from Kerala). 21 species and 02 varieties as new distributional record for India.

NEW GENUS

Bhadradiella Nagaraju, Kunwar & Manohar, J. Mycol. Pl. Pathol. 41(2): 238. 2011.

Hyalcephalotrichum Nagaraju, Kunwar, Sureshk. & Manohar., J. Mycol. Pl. Pathol. 41(4): 590. 2011.

Proliferosphaera Prameela, Indian Phytopath. 65(4): 395. 2012.

NEW SPECIES

Asterina aristolochiae V.B. Hosagoudar, Jacob Thomas & D.K. Agarwal, Taprobanica 3(1): 15. 2011. (ASTERINACEAE)

Asterina phyllanthi-beddomei V.B. Hosagoudar, Jacob Thomas & D.K. Agarwal, Taprobanica 3(1): 16. 2011. (ASTERINACEAE)

Auritella foveata C.K. Pradeep & Matheny, Kew Bulletin 67: 120. 2012. (INOCYBACEAE)

Beltraniella vateriae Swapna, Nagaveni, Kunwar & Manohar., J. Mycol. Pl. Pathol. 41 (1): 22. 2011.

Caliciopsis indica J. Pratibha & Bhat, Mycosphere 1: 66. 2010.

Cercospora albizziae Dubey, Rai, Verma & Thakur, J. Mycol. Pl. Pathol. 41(4): 512. 2011 (MYCOSPHAERELLACEAE)

Cercospora asiatica Dubey, Rai, Verma & Thakur, J. Mycol. Pl. Pathol. 41(4): 512. 2011. (MYCOSPHAERELLACEAE)

Cercospora blepherieae Dubey, Rai, Verma & Thakur. J. Mycol. Pl. Pathol. 41(4): 514. 2011. (MYCOSPHAERELLACEAE)

Chaetopsina indica Nagaraju, Kunwar, Suresh K. & Manohar, J. Mycol. Pl. Pathol. 41(1): 7. 2011. (NECTRIACEAE)

Cirsosia hopeae V.B. Hosagoudar, Jacob Thomas & D.K. Agarwal, Taprobanica 3(1): 16. 2011. (ASTERINACEAE)

Clavulicium hallenbergii Avneet P. Singh, J. Kaur & Dhingra, Mycotaxon 120: 354. 2012. (CLAVULINACEAE).

Corynespora carrisae R Singh & Kamal, Mycotaxon 118: 124. 2012.

(CORYNESPORASCACEAE)

Corynespora peristrophicola R. Singh & Kamal, Mycotaxon 118: 124. 2012.

(CORYNESPORASCACEAE)

Custingophora lignicola Nagaraju, Kunwar, Suresh K. & Manohar, J. Mycol. Pl. Pathol. 41(1): 6–10. 2011. (CHAETOSPHAERIACEAE).

Dentiscutata nigerita Khade, Mycosphere 1(3): 243. 2010.

(DENTISCUTATAACEAE)

Hyalopezalotrichum indica D. Nagaraju, I.K. Kunwar, G. Suresh Kumar & C. Manoharachary, J. Mycol. Plant. Pathol. 41(4): 589. 2011.

Lactifluus dissitus Van de Putte, K. Das & Verbeken, Fungal Diversity 55: 181. 2012. (RUSSULACEAE)

Lactifluus leptomerus Van de Putte, K. Das & Verbeken, Fungal Diversity 55: 182. 2012. (RUSSULACEAE)

Lactifluus versiformis Van de Putte, K. Das & Verbeken, Fungal Diversity 55: 186. 2012. (RUSSULACEAE)

Lactarius crenulatus K. Das & Verbeken, Taiwania 57(1): 38. 2012.

Lactarius croceigalus K. Das & Verbeken, Taiwania 57(1): 41. 2012.

Passalora aseptata R Singh, Chaurasia, K. Shukla & Upadhyaya, Mycotaxon 120: 462. 2012.

Penicilliopsis indicus Swapna & Nagaveni, Indian Phytopath. 65(3): 312. 2012.

Phaeoisariopsis neo-woodfordiae Tripathi, Rai & Verma, J. Mycol. Pl. Pathol. 42(2): 201. 2012.

Proliferosphaera capsici Prameela, Indian Phytopath. 65(4): 396. 2012.

Pseudocercospora zizyphusjuba Tripathi, Rai & Verma, J. Mycol. Pl. Pathol. 42 (2): 201. 2012.

Pseudoacrodictys steviae Dubey & Pandey, J. Mycol. Pl. Pathol. 42(2): 251. 2012.

Sarcinella nauradehiicola Tripathi, Rai & Verma, J. Mycol. Pl. Pathol. 42(2): 201. 2012.

Thermomucor abortosporangium A. Swathi Sri & A. Subrahm, Taiwania 57(1): 67–70, 2012. (MUCORALES)

Vararia longicystidiata Samita, Sanyal, Dhingra & Avneet P. Singh, Mycotaxon 120: 357. 2012.

Volvariella sathei Senthil Rahul Sharma & S.K. Singh, Mycotaxon 119: 470. 2012.

NEW VARIETIES

Asterina thunbergiicola Hansford var. *indica* V.B. Hosagoudar, Jacob Thomas & D.K. Agarwal, Taprobanica 3(1): 16. 2011. (ASTERINACEAE)

NEW DISTRIBUTIONAL RECORDS

GENUS

Pseudoacrodictys Baker & Morghan Jones published by R. Dubey & A.K Pandey in J. Mycol. Pl. Pathol. 42(2): 251. 2012.

SPECIES

Asterina garciniicola Ouyang & Song (ASTERINACEAE) published by V. B. Hosagoudar, Jacob Thomas & D.K Agarwal in Taprobanica 3(1): 42. 2011.

Cercospora habenariicola Meeboon, Hidayat & C. Nakash published by A. Patil, M.S. Patil & B.T. Dangatin, Pl. Pathol. & Quarantine 2(2): 112. 2012.

Coltricia cinnamomea (Pers.) Murr. (THELEPHOFIACEAE) published by Shauket Ahmed Pala, Abdul Hamid Wani, Rouf Hamza Boda & Riyaz Ahmed Mir in Pak. J. Bot. 44(6): 2112. 2012.

Ganoderma applanatum (Pers.) Pat. (GANODERMACEAE) published by Kanad Das & Annemieke Verbeken in Taiwania 57(1): 37. 2012.

Ganoderma chalconeum (Cooke) Steyaert (GANODERMACEAE) published by S. Bhosle, K. Ranadive, G. Bapat, S. Garad, G. Deshpande & J. Vaidya in Mycosphere 1(3): 253. 2010.

Ganoderma lipsiense (Batsch) Atk. (GANODERMACEAE) published by S. Bhosle, K. Ranadive, G. Bapat, S. Garad, G. Deshpande & J. Vaidya in Mycosphere 1(3): 254. 2010.

Ganoderma orbiformum (Fr.) Ryvarden (GANODERMACEAE) published by S. Bhosle, K. Ranadive, G. Bapat, S. Garad, G. Deshpande & J. Vaidya in Mycosphere 1(3): 258. 2010.

Ganoderma perzonatum Murrill (GANODERMACEAE) published by S. Bhosle, K. Ranadive, G. Bapat, S. Garad, G. Deshpande & J. Vaidya in Mycosphere 1(3): 258. 2010.

Ganoderma sessiliforme Murrill (GANODERMACEAE) published by S. Bhosle, K. Ranadive, G. Bapat, S. Garad, G. Deshpande & J. Vaidya in Mycosphere 1(3): 259.

2010.

Ganoderma stipitatum (Murrill) Murrill (GANODERMACEAE) published by S. Bhosle, K. Ranadive, G. Bapat, S. Garad, G. Deshpande & J. Vaidya in Mycosphere 1(3): 259. 2010.

Ganoderma testaceum (Lev.) Pat (GANODERMACEAE) published by S. Bhosle, K. Ranadive, G. Bapat, S. Garad, G. Deshpande & J. Vaidya in Mycosphere 1(3): 259. 2010.

Guepinia helvelloides Fr. (EXIDIACEAE) published by Shauket Ahmed Pala, Abdul Hamid Wani, Rouf Hamza Boda & Riyaz Ahmed Mir in Pak. J. Bot. 44(6): 2113. 2012.

Lactifluus leae (Stubbe & Verbeken) Stubbe (RUSSULACEAE) published by Kanad Das & Annemieke Verbeken in Taiwania 57(1): 37. 2012.

Lactifluus ochrogalactus (Hashiya) Wang. (RUSSULACEAE) published by Kanad Das & Annemieke Verbeken in Taiwania 57(1): 37–48. 2012.

Meliola abrupta Sydow & Sydow (MELIOLACEAE) published by V.B. Hosagoudar, Jacob Thomas & D.K Agarwal in Taprobanica 3(1): 42. 2011.

Meliola bakeri Sydow (MELIOLACEAE) published by V.B. Hosagoudar, Jacob Thomas & D.K Agarwal in Taprobanica 3(1): 42. 2011.

Meliola hugoniae Hanford & Deighton (MELIOLACEAE) published by V.B. Hosagoudar, Jacob Thomas & D.K. Agarwal in Taprobanica 3(1): 43. 2011.

Podosordaria elephantii J.D. Rogers, Y.M. Ju. (XYLARIACEAE) published by K.P. Deepna Latha, P. Manimohan in Mycosphere 3(2): 261.2012.

Sinotermatomyces taiwanensis M. Zang & CM. Chen (TERMITOMYCETACEAE)

published by Abolfazi Pahlevanlo and G.R Janardhana. in J. Mycol. Pl. Pathol. 636(41): 4. 2011.

Thelephora caryophyllea (Schaeff.) Pers. (HYMENOGYMICETACEAE) published by Shauket Ahmed Pala, Abdul Hamid Wani, Rouf Hamza Boda and Riyaz Ahmed Mir in Pak. J. Bot. 44(6): 2112. 2012.

Tylophorus pseudoscaber (Secretan) Smith & Thiers published by Kanad Das, J.R. Sharma & Deepa Mishra in Nelumbo 54: 269. 2012.

VARIETIES

Ganoderma lucidum var. *capense* Lloyd (GANODERMACEAE) published by S. Bhosle, K. Ranadive, G. Bapat, S. Garad, G. Deshpande & J. Vaidya in Mycosphere 1(3). 255. 2010.

Ganoderma lucidum (Curtis: Fr.) P. Karst. var. *lucidum* (GANODERMACEAE) published by S. Bhosle, K. Ranadive, G. Bapat, S. Garad, G. Deshpande & J. Vaidya in Mycosphere 1(3): 255. 2010.

ALGAE

Algae are large and diverse group of simple, typically autotrophic organisms from unicellular to multicellular forms. Though algae are becoming more and more open to exploitation worldwide, knowledge on algae is probably very elementary in India. The Indian algae account for about 18 per cent of the total species of the world.

In the present state of our knowledge India has about 7,245 species of algae.

Many more are yet to be identified and described.

The collated information presented here includes 15 new species (12 from West Bengal, 02 from Karnataka and 01 from Maharashtra); 10 new varieties from West Bengal and 28 species as new distributional records.

NEW SPECIES

Nitzschia taylorii Alakananda, P.B. Hamilton & Karthick, Phytotaxa 54: 15. 2012.
(BACILLARIOPHYCEAE)

Nitzschia williamsii Alakananda, P.B. Hamilton & Karthick, Phytotaxa 54: 15.
2012. (BACILLARIOPHYCEAE)

Oedogonium chowdarii J.P. Keshri, Biblioth. Phycol. 117: 37. 2012.
(OEDOGONIACEAE)

Oedogonium mesoreticulatum J.P. Keshri, Biblioth. Phycol. 117: 62. 2012.
(OEDOGONIACEAE)

Oedogonium midnapurensis J.P. Keshri, Biblioth. Phycol. 117: 42. 2012.
(OEDOGONIACEAE)

Oedogonium pandeyi J.P. Keshri, Biblioth. Phycol. 117: 63. 2012.
(OEDOGONIACEAE)

Oedogonium pseudopachydermum J.P. Keshri, Biblioth. Phycol. 117: 46. 2012.
(OEDOGONIACEAE)

Oedogonium pseudostarmachii J.P. Keshri, Biblioth. Phycol. 117: 34. 2012.
(OEDOGONIACEAE)

Oedogonium skujae J.P. Keshri, Biblioth. Phycol. 117: 52. 2012.

(OEDOGONIACEAE)

Oedogonium suboelandicum J.P. Keshri, Biblioth. Phycol. 117: 53. 2012.

(OEDOGONIACEAE)

Oedogonium subopisthostomum J.P. Keshri, Biblioth. Phycol. 117: 66. 2012.

(OEDOGONIACEAE)

Oedogonium subsuperbum J.P. Keshri, Biblioth. Phycol. 117: 54. 2012.

(OEDOGONIACEAE)

Oedogonium subulatum J.P. Keshri, Biblioth. Phycol. 117: 55. 2012.

(OEDOGONIACEAE)

Pleurosigma lange-bertalotii Karthick & Kociolek, Nova Hedwigia, Beiheft 141: 119-124. 2012. (PLEUROSIGMATACEAE)

Zygnema pateli S.A Patil & A.K Jawale, Ind. Hydrol. 15(1): 110. 2012.

(ZYGNEMATACEAE)

NEW VARIETIES

Oedogonium bharatense Gonzalves & Sonnad var. **minor** J.P. Keshri, Biblioth. Phycol. 117: 27. 2012. (OEDOGONIACEAE)

Oedogonium donnellii Wolle var. **inflatum** J.P. Keshri, Biblioth. Phycol. 117: 61. 2012. (OEDOGONIACEAE)

Oedogonium eminens (Hirn) Tiffany var. **capitellatum** J.P. Keshri, Biblioth. Phycol. 117: 61. 2012. (OEDOGONIACEAE)

Oedogonium lusitanicum Lacerda var. **striatum** J.P. Keshri in Biblioth. Phycol. 117: 41. 2012. (OEDOGONIACEAE)

Oedogonium midnapurensis J.P. Keshri var. **globosum** J.P. Keshri, Biblioth.

Phycol. 117: 42. 2012. (OEDOGONIACEAE)

Oedogonium pusillum Kirchner var. **fusiformis** J.P. Keshri, Biblioth. Phycol. 117: 50. 2012. (OEDOGONIACEAE)

Oedogonium sancti-thome Hirn var. **orientale** J.P. Keshri, Biblioth. Phycol. 117: 51. 2012. (OEDOGONIACEAE)

Oedogonium spechtii Scott & Prescott var. **indicum** J.P. Keshri, Biblioth. Phycol. 117: 75. 2012. (OEDOGONIACEAE)

Oedogonium szemaoense Jao var. **indicum** J.P. Keshri, Biblioth. Phycol. 117: 56. 2012. (OEDOGONIACEAE)

Oedogonium uleanum Hirn var. **capitellatum** J.P. Keshri, Biblioth. Phycol. 117: 32. 2012. (OEDOGONIACEAE)

NEW DISTRIBUTIOANAL RECORD

SPECIES

Apistonema expansum Geitler (CHRYSOPHYCEAE) published by Pratibha Gupta in Indian J. Forest. 35(2): 240. 2012.

Elakatothrix virimdis (Snow) Printz (CHLORACOCOCCACEAE) published by Debjyoti Das & Jai Prakash Keshri in Indian Hydrobiology 15(2): 173. 2012.

Monallantus brevicylindrus Pascher (XANTHOPHYCEAE) published by Pratibha Gupta in Indian J. Forest. 35(2): 240. 2012.

Mougeotia corniculata Hansgirg (CHLOROPHYCEAE) published by S.A. Patil & A.K. Jawale in Indian Hydrobiology 15(1): 109. 2012.

Oedogonium americanum Transeau (OEDOGONIACEAE) published by J.P. Keshri

in Biblioth. Phycol. 117: 32. 2012.

Oedogonium areolatum Lagerheim (OEDOGONIACEAE) published by J.P. Keshri in Biblioth. Phycol. 117: 33. 2012.

Oedogonium bohemicum Him (OEDOGONIACEAE) published by J.P. Keshri in Biblioth. Phycol. 117: 28. 2012.

Oedogonium brasiliense Borge (OEDOGONIACEAE) published by J.P. Keshri in Biblioth. Phycol. 117: 70. 2012.

Oedogonium hanchwanense Jao (OEDOGONIACEAE) published by J.P. Keshri in Biblioth. Phycol. 117: 38. 2012.

Oedogonium kwangtungense Ley (OEDOGONIACEAE) published by J.P. Keshri in Biblioth. Phycol. 117: 72. 2012.

Oedogonium louisianense C.E. Taft (OEDOGONIACEAE) published by J.P. Keshri in Biblioth. Phycol. 117: 72. 2012.

Oedogonium paradoxum Jao (OEDOGONIACEAE) published by J.P. Keshri in Biblioth. Phycol. 117: 31. 2012.

Oedogonium pudicum Tiffany (OEDOGONIACEAE) published by J.P. Keshri in Biblioth. Phycol. 117: 31. 2012.

Oedogonium suborbiculare Jao (OEDOGONIACEAE) published by J.P. Keshri in Biblioth. Phycol. 117: 36. 2012.

Oedogonium schweickerdtii Cholnoky (OEDOGONIACEAE) published by J.P. Keshri in Biblioth. Phycol. 117: 52. 2012.

Oedogonium subspirale Mrozinska (OEDOGONIACEAE) published by J.P. Keshri in Biblioth. Phycol. 117: 66. 2012.

Spirogyra gaterslebensis Rieth (CHLOROPHYCEAE) published by S.A Patil & A.K. Jawale in Indian Hydrobiology 15(1): 110. 2012.

Spirogyra semiornata Jao (CHLOROPHYCEAE) published by S.A Patil & A.K. Jawale in Indian Hydrobiology 15(1): 112. 2012.

Synura splendida Korshikov (SYNURACEAE) published by Pratibha Gupta in Indian J. Forest. 35(2): 240. 2012.

Zygnema cyanosporum Cleve (CHLOROPHYCEAE) published by S.A Patil & A.K. Jawale in Indian Hydrobiology 15(1): 109. 2012.

VARIETIES

Oedogonium kozminskii Prescott var. **targaonense** Islam & P. Sarma (OEDOGONIACEAE) published by J.P. Keshri in Biblioth. Phycol. 117: 71. 2012.

Oedogonium acrosporum De Bary var. **minor** Roll (OEDOGONIACEAE) published by J.P. Keshri in Biblioth. Phycol. 117: 69. 2012.

Oedogonium pungens Him var. **inflatum** Jao (OEDOGONIACEAE) published by J.P. Keshri in Biblioth. Phycol. 117: 64. 2012.

Oedogonium crispum (Hassall) Wittrock var. **amplius** (Taylor) Islam & P. Sarma (OEDOGONIACEAE) published by J.P. Keshri in Biblioth. Phycol. 117: 29. 2012.

Oedogonium undulatum (Brebisson) A. Braun var. **americanum** Transeau (OEDOGONIACEAE) published by J.P. Keshri in Biblioth. Phycol. 117: 76. 2012.

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MICROBES

Out of the estimated 50,000–3,000,000 species of bacteria and archaea, only about 8136 species have been described globally. About 986 species have been isolated from India. It is necessary to understand the diversity of bacteria and archaea present in a great variety of Indian environments, and understand their role in nature.

In the present state of our knowledge, Indian microbes represent about 11 % of the total species of the world.

The collated information presented here includes 01 new genus and 19 new species of microbes from India (05 from Andhra Pradesh, 04 each from Maharashtra and Uttar Pradesh, 02 each from Gujarat and Tamil Nadu, 01 each from Haryana, Punjab and West Bengal).

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