

Research Article

## A checklist of lichens of Assam, India

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### ABSTRACT

Lichens not only play a major role in plant succession as pioneer species but also provide many ecosystem services. Various anthropogenic activities like habitat destruction, air pollution and over exploitation of lichens for economic uses seem to be the main threats for loss of lichen diversity. Hence, for *in situ* conservation of lichens, it is a prioritised need to document lichen species of a locality. Lichens of Assam are being extensively studied from a taxonomic point of view in recent years. An accurate and updated checklist of lichens is not available so far. Here we expand the knowledge of the lichen of Assam by critically surveyed the literatures and prepared an updated list of total 657 species of Assam.

**Key words:** Assam, biodiversity, checklist, conservation, lichenized Ascomycota, taxonomy

### INTRODUCTION

Lichens are well known as pioneer for establishing ecosystems and for many important ecosystem services they provide. Lichens are playing important role in monitoring pollution levels in developing areas. Now-a-days, lichens are studied for their metabolic pathways that can sequester excess carbon as secondary compounds. The habitat loss, increasing air pollution, changes in the microclimatic conditions and uncontrolled harvest have become the major threats for loss of lichen diversity in India. Moreover, culture method of lichen proved to be uneconomical and re-introduction in to the field has been unsuccessful (Upreti and Nayaka, 2008). Hence, for conservation of lichens in the natural habitats, it is a prioritised need to document lichen species of a locality.

A good number of literatures on lichen diversity of various parts of Assam have been published but an updated and revised checklist of lichens of Assam is still lacking. This is why we critically surveyed the literatures on lichens of Assam and prepared an updated list of total 657 species of Assam. We believe that this list will be helpful to the researchers who are working in the field of Lichenology.

In Assam, Stirton (1881), a Scottish lichenologist, was the pioneer researcher who studied the lichens from tea plants and described 39 lichen species. Santesson (1952) reported a foliicolous species *Bullatina aspidota* (Vain.) Vězda & Poelt as *Gyalectidium aspidotum* (Vain.) R. Sant. and *Aulaxina uniseptata* R. Sant. from the state. Pant & Upreti (1993) reported *Diplochistes rampoddensis* (Nyl.) Zahlbr. from the state. Makhija and Patwardhan (1993) reported two species of lichens namely *Trypethelium rubrocinctum* Makhija & Patw. and *T. subnitidiusculum* Makhija & Patw. as new to science from the state. Divakar and Upreti (2005)

reported a good number of Parmelioid lichens from Assam. Rout *et al.* (2005) reported 24 species of lichens belonging to 12 genera and 8 families from different tree barks from NIT Campus, Silchar. Makhija and Adawadkar (2007) reported *Acanthothecis consocians* (Nyl.) Staiger & Kalb from the state. Makhija & Adawadkar (2007) recorded two species viz. *Graphis furcata* Fée and *G. malacodes* Nyl. from Assam which were new to India. Tewari and Upreti (2008) added *Platygramme australiensis* Staiger to the lichen flora of India from the state. Das (2008) reported 68 species belonging to 12 genera and 11 families from Cachar district of Assam. Sharma and Makhija (2009) reported two species namely *Diorygma junghuhnii* (Mont. & Bosch) Kalb, Staiger & Elix and *D. pruinosum* (Eschw.) Kalb, Staiger & Elix new to Assam and India as well. Jagadeesh Ram *et al.* (2009) reported a new species *Herpothallon isidiatum* Jagad. Ram & G.P. Sinha and a new record *Herpothallon granulare* (Sipman) Aptroot & Lücking for India from the state. Rout *et al.* (2010) enumerated 55 species of lichen belonging to 15 families and 25 genera from Innerline Reserve Forest of Southern Assam. Singha (2011), during doctoral research work, reported 71 species belonging to 32 genera and 15 families growing on betel nut tree from the Cachar district. Out of the 71 species, 5 species and one genus were reported as new to India. *Phyllopsora confusa* Swinscow & Krog, *Phyllopsora isidiotyta* (Vain.) Riddle and *Phyllopsora nemoralis* Timdal & Krog were reported as new to the lichen biota of India from Assam (Mishra *et al.*, 2011). *Fissurina indica* B.O. Saharma, Khadikar & Makhija was described as new to science by Sharma *et al.* (2012) from Assam. Rout *et al.* (2012) studied the epiphytic lichen flora occurring on betel nut palm tree growing in an abandoned tea garden area of southern part of Assam. A total of 37 lichen species

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belonging to 16 genera and 10 families were enumerated in their study. Das *et al.* (2013) reported 53 species belonging to 23 genera and 13 families from seventeen sites of Barak Valley. Daimari *et al.* (2014) studied the distribution of epiphytic lichens from three districts of Assam viz. Baksa, Kamrup and Sonitpur and enumerated 67 species belonging to 12 families and 24 genera. Of the total species, 41 lichen taxa were reported for the first time for Assam. Dey *et al.* (2015) reported 31 species belonging to 16 genera and 11 families of lichens from seven forest sites of Hojai sub-division of Nagaon district, Assam. Among the reported lichens crustose and foliose lichens represented by 16 and 14 species respectively, while a single fruticose lichen *Ramalina hossei* Vain. was recorded for the first time from the area. Choudhury *et al.* (2016) reported 38 species of lichen belonging to 21 genera and 15 families from the archaeological monuments of Sonitpur district, out of which 6 species are new records for the state. Daimari *et al.* (2017) reported 25 species new to the lichen biota of Assam from Sonitpur district. These new records included 16 pyrenocarpous lichens with dominance of members from family Pyrenulaceae (11 spp.) followed by Physciaceae with five species. A total of 104 species of lichen were described by Dey (2016) from Nagaon district of Assam. Gupta and Sinha (2018) published a book in which they described a total of 300 lichen species based on own work and previous works on lichens of Assam such as Stirton (1881), Santesson (1952), Awasthi (1976), Patwardhan and Kulkarni (1977), Patwardhan and Nagarkar (1980), Nagarkar and Patwardhan (1981, 1982), Nagarkar *et al.* (1988), Makhija and Parwardhan (1993), Pant and Upreti (1993), Divakar and Upreti (2005), Rout *et al.* (2005, 2010), Awasthi (2007), Tewari and Upreti (2008), Mishra *et al.* (2011), Sharma *et al.* (2012), Das *et al.* (2013), Daimari *et al.* (2014), and Dey *et al.* (2015). Joshi *et al.* (2018) described *Ocellularia upretii* S. Joshi, Divakar, Lumbsch & Lücking as new to science from Cachar district. Gogoi *et al.* (2019) added 25 lichens to the lichen flora of Assam. Mishra *et al.* (2019) reported 98 lichens new to the lichen biota of Assam and a new record of basidiolichen, *Multiclavula vernalis* (Schw.) Petersen to the lichen biota of India. Gupta *et al.* (2019) described a new species, *Enterographa assamica* Pooja Gupta, S. Joseph & G.P. Sinha from Cachar district of Assam. Gupta *et al.* (2020) reported 3 lichen species new to India from the state. Gogoi *et al.* (2020) reported *Bacidia pycnidata* Czarnota & Coppins, *Malmidea nigromarginata* (Malme) Lücking & Breuss, *Porina malmei* P.M. McCarthy, *P. nuculastrum* (Müll. Arg.) R.C. Harris, *Pyrenula laetior* Müll. Arg. and *P. wrightii* (Müll. Arg.) R.C. Harris for the first time for India from the state. *Letrouitia assamana* S.Y. Kondr., G.K. Mishra & D.K. Upreti is reported as new to science from Assam (Kondratyuk *et al.*, 2020). Ngangom *et al.* (2020) discovered a new lichen species (*Cratiria rubrum* Ngangom, Nayaka & Gogoi) from the state. Behera *et al.* (2021) have enumerated 138 species of lichens from five districts of Assam out of which 37 species are new for the state. Daimari *et al.* (2021) reported *Astrothelium alboverrucoides*, a new record to India and five new additions to the lichen biota of Assam. Recently, Islary *et al.* (2021) reported 26 lichens new to the lichen biota of Assam belonging to 14 genera, 9 families and one under Arthoniales from Ultapani Forest Range under Haltugaon Forest division of Kokrajhar district.

Above mentioned reports suggested that after the publication of 'Lichen flora of Assam' by Gupta and Sinha (2018) there are several explorations undertaken in different parts of the state and many more lichens are added to the list. These reports are scattered and there is a need for compilation of the same. The compilation resulted in a total of 657 species of lichen for the state of Assam.

## METHODOLOGY

The publications containing information about the lichens of Assam were critically investigated and used for compiling the checklist. The taxa identified only up to genus are not considered for listing. Nomenclatures of lichens were updated following index fungorum ([www.indexfungorum.org](http://www.indexfungorum.org)) and classification given by Wijayawardene *et al.* (2020) was followed to arrange the taxa within families.

## RESULTS AND DISCUSSION

A total of 657 species of lichen under 146 genera and 41 families are listed below. This list indicated that the family Graphidaceae is represented by highest number of taxa i.e. 148 species where genus *Graphis* alone counts 70 species. The family Pyrenulaceae also comprises of a large number of species (84 spp.) with *Pyrenula* representing 72 species. Synonyms of 63 species have been updated with current scientific names (Table 1).

District-wise, highest number of lichens has been enumerated from Cachar district (214 spp.) followed by Nagaon district (203 spp.), Sonitpur district (181 spp.) and Dima Hasao district (143 spp.) (Das, 2008; Singha, 2011; Mishra *et al.* 2011, 2019; Daimari *et al.*, 2014; Dey, 2016; Gupta and Sinha, 2018; Gogoi *et al.* 2019, 2020; Ngangom *et al.*, 2020; Behera *et al.*, 2021). Detailed study of lichen diversity in most of the districts and protected areas of Assam is yet to be done.

The species are enlisted family-wise and the list follows the pattern; species name (in bold), locality and reference (in parenthesis).

## LIST OF SPECIES

### ARTHONIACEAE

1. ***Arthonia antillarum*** (Fée) Nyl. (Hojai sub-division; Dey *et al.*, 2015).
2. ***Arthonia arctata*** Stirt. (Cachar district; Gupta & Sinha, 2018).
3. ***Arthonia catenatula*** Nyl. (Cachar district; Das, 2008)
4. ***Arthonia circumalbicans*** Nyl. (Nagaon district; Gupta & Sinha, 2018)
5. ***Arthonia collectiva*** Stirt. (Cachar district; Das, 2008)
6. ***Arthonia dispersula*** Nyl. (Nagaon district; Gupta & Sinha, 2018)
7. ***Arthonia impolitella*** Nyl. (Cachar district; Das, 2008)
8. ***Arthonia medusala*** (Pers.) Nyl. (Nagaon district; Gupta & Sinha, 2018)
9. ***Arthonia polymorpha*** Ach. (Sonitpur district, Daimari *et al.*, 2013)
10. ***Arthonia radiata*** (Pers.) Ach. (Cachar district; Das, 2008)
11. ***Arthonia recedens*** Stirt. (Cachar district; Das, 2008)

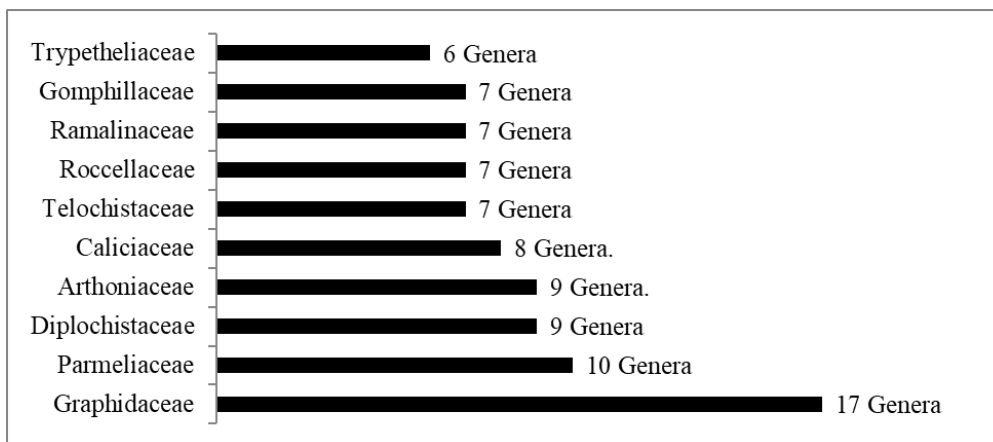


Figure 1. Graph showing top 10 families with number of genera.

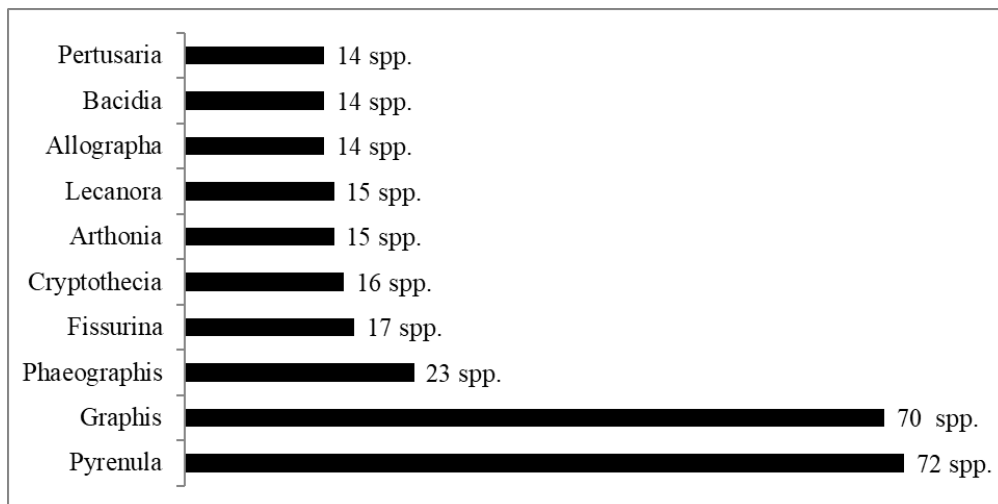


Figure 2. Graph showing top 10 genera with number of species.

12. *Arthonia subgyrosa* Nyl. (Barak Valley; Singha, 2011)
13. *Arthonia subvelata* Nyl. (Cachar district; Gupta & Sinha, 2018)
14. *Arthonia translucens* Stirt. (Stirton, 1881)
15. *Arthonia trilocularis* Müll. Arg. (Nalbari district; Gupta & Sinha, 2018)
16. *Arthothelium abnorme* (Ach.) Müll. Arg. (Barak Valley; Gupta & Sinha, 2018)
17. *Arthothelium chidectoides* (Nyl.) Zahlbr. (Cachar district; Das, 2008)
18. *Arthothelium confertum* (A. L. Smith) Makh. & Patw. (Sonitpur district; Daimari, 2014)
19. *Arthothelium nigrodiscum* Patw. & Makhija (Dima Hasao district; Gupta & Sinha, 2018)
20. *Arthothelium ruanum* (A. Massal.) Körb. (Nagaon district; Gupta & Sinha, 2018)
21. *Arthothelium subruanum* Makhija & Patw. (Cachar district; Das, 2008)
22. *Coniocarpon cinnabarinum* DC. (Cachar district; Das, 2008)
23. *Cryptothecia albomaculans* Jagadeesh & G. P. Sinha (Dima Hasao district; Mishra *et al.*, 2019)
24. *Cryptothecia albomaculatella* Aptroot & Wolseley (Dima Hasao district; Mishra *et al.*, 2019)
25. *Cryptothecia dispersa* Makhija & Patw. (Goalpara district; Behera *et al.*, 2021)
26. *Cryptothecia effusa* (Müll. Arg.) R. Sant. (Barak Valley; Das *et al.*, 2013)
27. *Cryptothecia emergens* Makhija & Patw. (Nagaon district; Dey, 2016)
28. *Cryptothecia farinosa* Jagad Ram, G. P. Sinha & Kr.P. Singh (Dima Hasao district; Mishra *et al.*, 2019)
29. *Cryptothecia faveomaculata* Makhija & Patw. (Dima Hasao district; Gupta & Sinha, 2018)
30. *Cryptothecia lunulata* (Zahlbr.) Makh. & Patw. (Barak Valley; Das *et al.*, 2013)
31. *Cryptothecia monospora* Makhija & Patw. (Goalpara district; Behera *et al.*, 2021)
32. *Cryptothecia punctulata* Makhija & Patw. (Sonitpur district; Daimari, 2014)
33. *Cryptothecia scripta* G. Thor (Jorhat district; Gupta & Sinha, 2018)
34. *Cryptothecia striata* G. Thor (Nagaon district; Gogoi *et al.*, 2019)
35. *Cryptothecia stirtonii* A. L. Sm. (Dima Hasao district; Mishra *et al.*, 2019)
36. *Cryptothecia verruculifera* Jagad. Ram, G. P. Sinha & Kr. P. Singh (Dima Hasao district; Mishra *et al.*, 2019)
37. *Cryptothecia subnidulans* Stirt. (Goalpara district; Behera *et al.*, 2021)
38. *Cryptothecia subtectata* Stirt. (Jorhat district; Gupta & Sinha, 2018)
39. *Cryptothecia albida* (Fée) Frisch & G. Thor (Goalpara district; Behera *et al.*, 2021)
40. *Herpothallon biacidum* Frisch, Elix & G. Thor (Goalpara district; Behera *et al.*, 2021)
41. *Herpothallon echinatum* Aptroot, Lücking & Will-Wolf (Nagaon district; Gogoi *et al.*, 2019)

42. *Herpothallon fertile* Aptroot & Lücking (Nagaon district; Behera *et al.*, 2021)
43. *Herpothallon globosum* G. Thor (Goalpara district; Behera *et al.*, 2021)
44. *Herpothallon granulare* (Sipman) Aptroot & Lücking (Jorhat district; Jagadeesh Ram *et al.*, 2009)
45. *Herpothallon isidiatum* Jagad. Ram & G.P. Sinha (Lakhimpur district; Jagadeesh Ram *et al.*, 2009)
46. *Herpothallon philippinum* (Vain.) Aptroot & Lücking (Nagaon district; Gogoi *et al.*, 2019)
47. *Myriostigma candidum* Kremp. (Kokrajhar district; Islary *et al.*, 2021)
48. *Pachnolepia pruinata* (Torss.) Frisch & G. Thor (Barak Valley; Das *et al.*, 2013)
49. *Stirtonia alboverruca* Makhija & Patw. (Dima Hasao district; Gupta & Sinha, 2018)
50. *Stirtonia dubia* A. L. Sm. (Sonitpur district; Daimari, 2014)
51. *Stirtonia punctiformis* Aptroot & Sipman (Cachar district; Gupta & Sinha, 2018)
52. *Tylophoron nidulans* Stirt. (Stirton, 1881)
- ARTHOPYRENIACEAE**
53. *Arthopyrenia alboatra* (Kremp.) Müll. Arg. (Cachar district; Das, 2008)
54. *Arthopyrenia fraxinii* Mass. (Sonitpur district; Daimari, 2014)
55. *Arthopyrenia indusiata* Müll. Arg. (Cachar district; Das, 2008)
56. *Arthopyrenia keralensis* Upreti & G. Pant (Sonitpur district; Daimari, 2014)
- BRIGANTIAEACEAE**
57. *Brigantiaea leucoxantha* (Sprengel) R. Sant. & Hafellner (Hojai sub-division; Dey *et al.*, 2015)
58. *Letrouitia assamana* S.Y. Kondr., G.K. Mishra & D.K. Upreti (Dima Hasao district; Kondratyuk *et al.*, 2020)
59. *Letrouitia flavocrocea* (Nyl.) Hafellner & Bellem (Dhubri district; Gupta & Sinha, 2018)
60. *Letrouitia muralis* Hafellner (Nagaon district; Gogoi *et al.*, 2019)
61. *Letrouitia transgressa* (Malme) Hafellner & Bellem (Sonitpur district; Daimari *et al.*, 2017)
- CALICIACEAE**
62. *Amandinea punctata* (Hoffm.) Coppins & Scheid. (Cachar district; Das, 2008)
63. *Amandinea submontana* Marbach (Dima Hasao district; Mishra *et al.*, 2019)
64. *Baculifera curtisii* (Tuck.) Marbach (Sonitpur district; Daimari, 2014)
65. *Baculifera entochlora* (J. Steiner) Marbach (Dima Hasao district; Mishra *et al.*, 2019)
66. *Buellia confusa* D.D. Awasthi (Sona Sree Area, near Bhalukpong; Gupta & Sinha, 2018)
67. *Buellia morehensis* Kr.P. Singh & S.R. Singh (Sonitpur district; Daimari, 2014)
68. *Buellia proximata* H. Magn (Jorhat district; Gupta & Sinha, 2018)
69. *Calicium robustellum* Nyl. (Dima Hasao district; Mishra *et al.*, 2019)
70. *Cratiria lauri-cassiae* (Fée) Marbach (Karbi Anglong district; Gupta & Sinha, 2018)
71. *Cratiria obscurior* (Stirt.) Marbach & Kalb (Karbi Anglong district; Gupta & Sinha, 2018)
72. *Cratiria rubrum* Ngangom, Nayaka & Gogoi (Nagaon district; Ngangom *et al.*, 2020)
73. *Dirinaria aegialita* (Afzel Ex Ach.) B.J. More (Hojai sub-division; Dey *et al.*, 2015)
74. *Dirinaria applanata* D.D. Awasthi (Hojai sub-division; Dey *et al.*, 2015)
75. *Dirinaria confluens* (Fr.) D.D. Awasthi (Sonitpur district; Daimari *et al.*, 2017)
76. *Dirinaria consimillis* D.D. Awasthi (Hojai sub-division; Dey *et al.*, 2015)
77. *Dirinaria papillulifera* (Nyl.) D.D. Awasthi (Nagaon district; Gogoi *et al.*, 2019)
78. *Dirinaria picta* (Sw.) Clem & Shear (Sonitpur district; Daimari, 2014)
79. *Pyxine berteriana* (Fée) Imsh. (Baksa district; Daimari *et al.*, 2014)
80. *Pyxine coccifera* (Fée) Nyl. (Barak Valley; Rout *et al.*, 2010)
81. *Pyxine cocoes* (Sw.) Nyl. (Cachar district; Das, 2008)
82. *Pyxine coralligera* Malme (Jorhat district; Gupta & Sinha, 2018)
83. *Pyxine farinosa* Kashiw. (Sonitpur district; Daimari, 2014)
84. *Pyxine meissnerina* Nyl. (Hojai sub-division; Dey *et al.*, 2015)
85. *Pyxine petricola* Nyl. (Guwahati; Daimari *et al.*, 2014)
86. *Pyxine reticulata* (Vain.) Vain. (Hojai sub-division; Dey *et al.*, 2015)
87. *Pyxine retirugella* Nyl. (Nalbari district; Daimari *et al.*, 2014)
88. *Pyxine sorediata* (Ach.) Mont. (Hojai sub-division; Dey *et al.*, 2015)
89. *Pyxine subcinerea* Stirt. (Baksa district; Daimari *et al.*, 2014)
90. *Stigmatochroma adauctum* (Malme) Marbach (Dima Hasao district; Mishra *et al.*, 2019)
- CHRYSOTHRICACEAE**
91. *Chrysothrix candelaris* (L.) J.R. Laundon (Cachar district; Das, 2008)
92. *Chrysothrix chlorina* (Ach.) J.R. Laundon (Sonitpur district; Daimari, 2014)
- CLADONIAEACEAE**
93. *Cladia aggregata* (Sw.) Nyl. (Gupta & Sinha, 2018)
94. *Cladonia fruticulosa* Kremp. (Dima Hasao district; Mishra *et al.*, 2019)
95. *Cladonia scabriuscula* (Delise) Nyl. (Dima Hasao district; Mishra *et al.*, 2019)
96. *Cladonia subradiata* (Vain.) Sandst. (Dima Hasao district; Mishra *et al.*, 2019)
97. *Cladonia cervicornis* (Ach.) Flot. (Dima Hasao district; Mishra *et al.*, 2019)
98. *Lepraria ecorticata* (J.R. Laundon) Kukwa (Goalpara district; Behera *et al.*, 2021)
99. *Lepraria granulata* Slav.-Bay. (Goalpara; Behera *et al.*, 2021)
100. *Lepraria lobificans* Nyl. (Barak Valley; Singha, 2011)
- COENOGONIAEACEAE**
101. *Coenogonium dilucidum* (Kremp.) Kalb & Lücking (Lakhimpur district; Gupta & Sinha, 2018)

102. *Coenogonium interplexum* Nyl. (Lakhimpur district; Gupta & Sinha, 2018)  
 103. *Coenogonium linkii* Ehrenb. (Lakhimpur district; Gupta & Sinha, 2018)  
 104. *Coenogonium minimum* (Müll. Arg.) Lücking (Baksa District; Gupta & Sinha, 2018)

## COLLEMATACEAE

105. *Lathagrium auriforme* (With.) Otálora, P.M. Jørg. & Wedin (Dima Hasao district; Mishra *et al.*, 2019)  
 106. *Leptogium burnetiae* C.W. Dodge (Nagaon district; Behera *et al.*, 2021)  
 107. *Leptogium chloromelum* (Ach.) Nyl. (Dima Hasao district; Mishra *et al.*, 2019)  
 108. *Leptogium cyanescens* (Rabenh.) Körb (Barak Valley; Rout *et al.*, 2010)  
 109. *Leptogium denticulatum* Nyl. (Kokrajhar district; Islary *et al.*, 2021)  
 110. *Leptogium milligranum* Sierz (Sonitpur district; Daimari *et al.*, 2014)  
 111. *Leptogium phyllocarpum* (Pers.) Mont. (Sonitpur district; Daimari *et al.*, 2014)  
 112. *Leptogium saturninum* (Dicks.) Nyl. (Baksa district; Gupta & Sinha, 2018)  
 113. *Leptogium ulvaceum* (Pers.) Vain. (Kokrajhar district; Islary *et al.*, 2021)

## COCCOCARPIACEAE

114. *Coccocarpia erythroxyli* (Spreng.) Swinscow & Krog (Gupta & Sinha, 2018)  
 115. *Coccocarpia palmicola* (Spreng.) Arv. & D.J. Gal- loway (Baksa district; Gupta & Sinha, 2018)  
 116. *Coccocarpia pellita* (Ach.) Müll. Arg. em R. Sant. (Barak Valley; Rout *et al.*, 2010)

## DIPLOSCHISTACEAE

117. *Acanthothecis albescens* (Vain.) Steiger & Kalb (Barak Valley; Rout *et al.*, 2010)  
 118. *Acanthothecis consocians* (Nyl.) Staiger & Kalb (Maniknagar; Makhija & Adawadkar, 2007)  
 119. *Acanthothecis corcovadensis* (Redinger) Steiger & Kalb (Barak Valley; Makhija & Adawadkar, 2007)  
 120. *Acanthothecis leucoxantha* (Müll. Arg.) Steiger & Kalb (Barak Valley; Rout *et al.*, 2010)  
 121. *Asteristion platycarpum* (Tuck.) I. Medeiros, Lücking & Lumbsch (Dey, 2016)  
 122. *Diplochistes rampoddensis* (Nyl.) Zahlbr. (Brahmaputra Valley; Pant & Upreti, 1993)  
 123. *Myriotrema clandestinum* (Fée) Hale (Nagaon district; Gogoi *et al.*, 2019)  
 124. *Myriotrema granulorum* (Leight.) Hale (Cachar district; Das, 2008)  
 125. *Myriotrema microporum* (Mont.) Hale (NC Hilla, Joshi *et al.*, 2018)  
 126. *Myriotrema reclusum* (Kremp.) Hale (Barak Valley; Rout *et al.*, 2010)  
 127. *Myriotrema rugiferum* (Harm.) Hale (Dima Hasao district; Mishra *et al.*, 2019)  
 128. *Nadvornikia hawaiiensis* (Tuck.) Tibell, Beih. (Kokrajhar district; Islary *et al.*, 2021)  
 129. *Ocellularia albocincta* (Hale) Divakar & Mangold (Barak Valley; Rout *et al.*, 2010)  
 130. *Ocellularia andamanica* (Nyl.) Tat. Matsumoto & Deguchi (Cachar district; Das, 2008)  
 131. *Ocellularia conformis* (Fée) Hale (Gupta & Sinha, 2018)  
 132. *Ocellularia diacida* Hale (Kokrajhar district; Islary *et al.*, 2021)

133. *Ocellularia epitrypa* (Nyl.) Hale (Kokrajhar district; Islary *et al.*, 2021)  
 134. *Ocellularia garoana* Patw. & Nagarkar (Nagaon district; Joshi *et al.*, 2018)  
 135. *Ocellularia neoptusariiiformis* Hale (Nagaon district; Behera *et al.*, 2021)  
 136. *Ocellularia papillata* (Leight.) Zahlbr. (Gupta & Sinha, 2018)  
 137. *Ocellularia perforata* (Leight.) Müll. Arg. (Gupta & Sinha, 2018)  
 138. *Ocellularia terebrata* (Ach.) Müll. Arg. (Kokrajhar district; Islary *et al.*, 2021)  
 139. *Ocellularia upretii* S. Joshi, Divakar, Lumbsch & Lücking (Cachar district; Joshi *et al.*, 2018)  
 140. *Ocellularia violacea* Räsänen (Kokrajhar district; Islary *et al.*, 2021)  
 141. *Phaeographopsis indica* (Patw. & Nagarkar) Sipman & Aptroot (Sona Sree Area, near Bhalukpong; Gupta & Sinha, 2018)  
 142. *Rhabdodiscus asiaticus* (Vain.) Rivas Plata, Lücking & Lumbsch (Kokrajhar district; Islary *et al.*, 2021)  
 143. *Rhabdodiscus marivelensis* (Vain.) Rivas Plata, Lücking & Lumbsch (Kokrajhar district; Islary *et al.*, 2021)  
 144. *Stegobolus fissus* (Müll. Arg.) Frisch (Nagaon district; Dey, 2016)

## FISSURINACEAE

145. *Dyplolabia afzelii* (Ach.) A. Massal. (Barak Valley; Rout *et al.*, 2010)  
 146. *Fissurina cingalina* (Nyl.) Staiger (Dima Hasao district; Mishra *et al.*, 2019)  
 147. *Fissurina columbina* (Tuck.) Staiger (Barak Valley; Rout *et al.*, 2010)  
 148. *Fissurina comparilis* (Nyl.) Nyl. (Barak Valley; Rout *et al.*, 2010)  
 149. *Fissurina comparimuralis* Staiger (Cachar district; Das, 2008)  
 150. *Fissurina dumastii* Fée (Cachar district; Gupta & Sinha, 2018)  
 151. *Fissurina dumastoides* (Fink) Staiger (Goalpara district; Behera *et al.*, 2021)  
 152. *Fissurina elaiocarpa* (A.W. Archer) A.W. Archer (Nagaon district; Gupta & Sinha, 2018)  
 153. *Fissurina humilis* (Vain.) Staiger (Barak Valley; Rout *et al.*, 2010)  
 154. *Fissurina incrustans* Fée (Sivasagar district; Gupta & Sinha, 2018)  
 155. *Fissurina indica* B.O. Saharma, Khadikar & Makhija (Maniknagar; Sharma *et al.*, 2012)  
 156. *Fissurina inquinata* C. Knight & Mitt. (Dima Hasao district; Gupta & Sinha, 2018)  
 157. *Fissurina insidiosa* C. Knight & Mitt. (Tinsukia district; Gupta & Sinha, 2018)  
 158. *Fissurina longiramea* Makhija & Adaw. (Sonitpur district; Daimari, 2014)  
 159. *Fissurina rubiginosa* (Fée) Staiger (Sonitpur district; Daimari, 2014)  
 160. *Fissurina rugosa* C. Knight (Kokrajhar district; Islary *et al.*, 2021)

## GOMPHILLACEAE

161. *Asterothyrium microsporium* R. Sant. (Baksa district; Gupta & Sinha, 2018)  
 162. *Aulaxina uniseptata* R. Sant. (Baksa district; Gupta & Sinha, 2018)

163. *Bullatina aspidota* (Vain.) Vězda & Poelt (Gupta & Sinha, 2018)
164. *Echinoplaca marginata* Lücking (Baksa district; Gupta & Sinha, 2018)
165. *Gyalideopsis lithophila* G. Thor & Vězda (Cachar district; Gupta & Sinha, 2018)
166. *Psorotheciopsis patellariodes* (Rehm.) R. Sant. (Lakhimpur district; Gupta & Sinha, 2018)
167. *Tricharia farinora* R. Sant. (Baksa district; Gupta & Sinha, 2018)
168. *Tricharia vainioi* R. Sant. (Kamrup Metropolitan district; Gupta & Sinha, 2018)

#### GRAPHIDACEAE

169. *Allographa celata* (Stirt.) Lücking & Kalb (Gupta & Sinha, 2018)
170. *Allographa chloroalba* (Makhija & Patw.) Lücking & Kalb (Barak Valley; Das *et al.*, 2013)
171. *Allographa contortuplicata* (Müll. Arg.) Lücking & Kalb (Kokrajhar district; Gupta & Sinha, 2018)
172. *Allographa elongata* (Zenker) Lücking & Kalb (Dima Hasao district; Mishra *et al.*, 2019)
173. *Allographa epixantha* (Mont. & Bosch) Lücking & Kalb (Dima Hasao district; Mishra *et al.*, 2019)
174. *Allographa hossei* (Vain.) Lücking & Kalb (Kamrup Metropolitan district; Behera *et al.*, 2021)
175. *Allographa malacoides* (Nyl.) Lücking & Kalb (Nagaon district; Gupta & Sinha, 2018)
176. *Allographa pseudoaquilonia* (Lücking) Lücking & Kalb (Dibrugarh district; Gupta & Sinha, 2018)
177. *Allographa salacinilabiata* (Patw. & C.R. Kulk.) Lücking & Kalb (Kokrajhar district; Islary *et al.*, 2021)
178. *Allographa sayeri* (Müll. Arg.) Lücking & Kalb (Kokrajhar district; Daimari *et al.*, 2021)
179. *Allographa subassimilis* (Müll. Arg.) Lücking & Kalb (Cachar district; Das, 2008)
180. *Allographa subdisserpens* (Nyl.) Lücking & Kalb (Nagaon district; Dey, 2016)
181. *Allographa upduna* Lücking & Kalb (Nagaon district; Dey, 2016)
182. *Allographa xanthospora* (Müll. Arg.) Lücking & Kalb (Sonitpur district; Daimari, 2014)
183. *Carbacanthographis garoana* (Nagarkar & Patw.) Pushpi Singh & Kr. P. Singh (Baksa district; Daimari *et al.*, 2014)
184. *Creographa brasiliensis* A. Massal. (Jorhat district; Gupta & Sinha, 2018)
185. *Diorygma circumfusum* (Stirt.) Kalb, Staiger & Elix (Hojai sub-division; Dey *et al.*, 2015)
186. *Diorygma erythrellum* (Mont. & Bosch) Kalb, Staiger & Elix (Nagaon district; Behera *et al.*, 2021)
187. *Diorygma hieroglyphicellum* Sutjar. & Kalb (Dima Hasao district; Mishra *et al.*, 2019)
188. *Diorygma hieroglyphicum* (Pers.) Staiger & Kalb (Kokrajhar district; Gupta & Sinha, 2018)
189. *Diorygma hololeucum* (Mont. & Bosch) Kalb, Staiger & Elix (Goalpara district; Behera *et al.*, 2021)
190. *Diorygma intermedium* Kalb, Staiger & Elix (Golaghat district; Behera *et al.*, 2021)
191. *Diorygma junghunii* (Mont. & Bosch) Kalb, Staiger & Elix (Kamrup Metropolitan district; Sharma & Makhija, 2009)
192. *Diorygma megaspermum* Makhija, Chitale & B.O. Sharma (Kamrup district; Behera *et al.*, 2021)
193. *Diorygma megasporum* Kalb, Staiger & Elix (Sonitpur district; Daimari *et al.*, 2014)
194. *Diorygma pruinatum* (Eschw.) Kalb, Staiger & Elix (Maniknagar; Sharma & Makhija, 2009)
195. *Diorygma rupicola* B.O. Sharma & Khadikar (Nagaon district; Gogoi *et al.*, 2019)
196. *Diorygma soozanum* (Zahlbr.) M. Nakan. & Kashiw. (Baksa district; Daimari *et al.*, 2014)
197. *Flegographa leprieurii* (Mont.) A. Massal. (Barak Valley; Rout *et al.*, 2010)
198. *Glyphis cicatricosa* Ach. (Jorhat district; Gupta & Sinha, 2018)
199. *Glyphis duriuscula* Stirt. (Sonitpur district; Gupta & Sinha, 2018)
200. *Glyphis scyphulifera* (Ach.) Staiger (Cachar district; Gupta & Sinha, 2018)
201. *Graphina marcescens* (Fée) Müll. Arg. (Cachar district; Das, 2008)
202. *Graphis ajarekarii* Patw. & C. R. Kulk. (Dima Hasao district; Mishra *et al.*, 2019)
203. *Graphis albissima* Müll. Arg. (Dima Hasao district; Mishra *et al.*, 2019)
204. *Graphis alboglaucescens* Adaw. & Makhija (Kokrajhar district; Gupta & Sinha, 2018)
205. *Graphis anfractuosa* (Eschw.) Eschw. (Nagaon district; Gupta & Sinha, 2018)
206. *Graphis aphanemicrospora* (Makhija & Adaw.) J. Kalb & Kalb (Barak Valley; Singha, 2011)
207. *Graphis aphanes* Mont. & Bosch (Nagaon district; Dey, 2016)
208. *Graphis aquilonia* (A.W. Archer) Staiger (Dima Hasao district; Mishra *et al.*, 2019)
209. *Graphis arecae* Vain. (Dima Hasao district; Mishra *et al.*, 2019)
210. *Graphis argentea* Makhija & Adaw. (Nagaon district; Dey, 2016)
211. *Graphis assamensis* Nagarkar & Patw. (Nagaon district; Gupta & Sinha, 2018)
212. *Graphis assimilis* Nyl. (Gupta & Sinha, 2018)
213. *Graphis aurita* Eschw. (Gupta & Sinha, 2018)
214. *Graphis caesiella* Vain. (Cachar district; Gupta & Sinha, 2018)
215. *Graphis balaghatense* (Adaw. & Makhija) J. Kalb & Kalb (Kokrajhar district; Islary *et al.*, 2021)
216. *Graphis brahmanensis* Aptroot (Sonitpur district; Daimari, 2014)
217. *Graphis bungartzii* A.B. Peña, Lücking, Herrera-Camp & R. Miranda (Sonitpur district; Gupta *et al.*, 2020)
218. *Graphis caesiocarpa* Redinger (Dima Hasao district; Mishra *et al.*, 2019)
219. *Graphis capillacea* Stirt. (Barpeta district; Gupta & Sinha, 2018)
220. *Graphis cervinonigra* Zahlbr. (Cachar district; Rout *et al.*, 2012)
221. *Graphis ceylanica* Zahlbr. (Cachar district; Das, 2008)
222. *Graphis chlorotica* A. Massal. (Jorhat district; Gupta & Sinha, 2018)
223. *Graphis cincta* (Pers.) Aptroot (Barpeta district; Gupta & Sinha, 2018)
224. *Graphis coarctata* Stirt. (Barpeta district; Gupta & Sinha, 2018)
225. *Graphis crebra* Vain. (Sonitpur district; Daimari, 2014)
226. *Graphis crocea* (Makhija & Adaw.) Lücking & Kalb (Kokrajhar district; Daimari *et al.*, 2021)

227. *Graphis dendrogamma* Nyl. (Kamrup district; Behera *et al.*, 2021)
228. *Graphis duplicata* Ach. (Goalpara district; Behera *et al.*, 2021)
229. *Graphis elegans* (Borrer ex Sm.) Ach. (Sonitpur district; Daimari, 2014)
230. *Graphis endoxantha* Nyl. (Nagaon district; Dey, 2016)
231. *Graphis epimelaena* Müll. Arg. (Karbi Anglong district; Behera *et al.*, 2021)
232. *Graphis filiformis* Adaw. & Makhija (Cachar district; Gupta & Sinha, 2018)
233. *Graphis flavovirens* Makhija & Adaw. (Kokrajhar district; Gupta & Sinha, 2018)
234. *Graphis furcata* Fée (Barpeta district; Gupta & Sinha, 2018)
235. *Graphis glaucescens* Fée (Kokrajhar district; Gupta & Sinha, 2018)
236. *Graphis handelii* Zahlbr. (Tinsukia district; Gupta & Sinha, 2018)
237. *Graphis hyphosa* Staiger (Nagaon district; Dey, 2016)
238. *Graphis immersella* Müll. Arg. (Nagaon district; Gupta & Sinha, 2018)
239. *Graphis illinata* Eachw. (Sonitpur district; Daimari *et al.*, 2014)
240. *Graphis inamoena* Zahlbr. (Cachar district; Das, 2008)
241. *Graphis indica* J. Kalb & Kalb (Goalpara district; Behera *et al.*, 2021)
242. *Graphis insulana* (Müll. Arg.) Lücking & Sipman (Dima Hasao district; Mishra *et al.*, 2019)
243. *Graphis intermediella* Stirt. (Barak Valley; Rout *et al.*, 2010)
244. *Graphis intricata* Eschw. (Tinsukia district; Gupta & Sinha, 2018)
245. *Graphis japonica* (Müll. Arg.) A.W. Archer & Lücking (Kokrajhar district; Islary *et al.*, 2021)
246. *Graphis leptocarpa* Fée (Kamrup Metropolitan district; Daimari *et al.*, 2014)
247. *Graphis librata* C. Knight (Karbi Anglong district; Gupta & Sinha, 2018)
248. *Graphis lineola* Ach. (Dibrugarh district; Gupta & Sinha, 2018)
249. *Graphis nigrocarpa* Adaw. & Makhija (Dima Hasao district; Mishra *et al.*, 2019)
250. *Graphis nigroglaucula* Leighton (Cachar district; Rout *et al.*, 2005)
251. *Graphis palmicola* Makhija & Adaw. (Nagaon district; Dey, 2016)
252. *Graphis paraserpens* Lizano & Lücking (Nagaon district; Dey, 2016)
253. *Graphis perstriatula* Nyl. (Barak Valley; Das *et al.*, 2013)
254. *Graphis persulcata* Stirt. (Cachar district; Das, 2008)
255. *Graphis pertricosia* (Kremp.) A.W. Archer (Nagaon district; Dey, 2016)
256. *Graphis pinicola* Zahlbr. (Dima Hasao district; Mishra *et al.*, 2019)
257. *Graphis proserpens* Vain. (Barak Valley; Rout *et al.*, 2010)
258. *Graphis pyrrocheiloides* Zahlbr. (Cachar district; Gupta & Sinha, 2018)
259. *Graphis schiffnerii* Zahlbr. (Cachar district; Das, 2008)
260. *Graphis scripta* (L.) Ach. (Dima Hasao district; Mishra *et al.*, 2019)
261. *Graphis stenotera* Vain. (Sonitpur district; Daimari, 2014)
262. *Graphis stipitata* A.W. Archer (Nagaon district; Dey, 2016)
263. *Graphis subasahinae* Nagarkar & Patw. (Gupta & Sinha, 2018)
264. *Graphis submarginata* Lücking (Dima Hasao district; Mishra *et al.*, 2019)
265. *Graphis subregularis* A.W. Archer (Dima Hasao district; Mishra *et al.*, 2019)
266. *Graphis subserpentina* Nyl. (Barak Valley; Rout *et al.*, 2010)
267. *Graphis subvirginea* Nyl. (Cachar district; Das, 2008)
268. *Graphis sundarbanensis* Jagad. Ram & G.P. Sinha (Nagaon district; Gogoi *et al.*, 2019)
269. *Graphis supracola* A. W. Archer (Sonitpur district; Daimari, 2014)
270. *Graphis tenella* Ach. (Barpeta district; Gupta & Sinha, 2018)
271. *Graphis vittata* Müll. Arg. (Cachar district; Das, 2008)
272. *Hemithecium nagalandicum* (Kr. P. Singh & G.P. Sinha) Adaw. & Makhija (Goalpara district; Behera *et al.*, 2021)
273. *Hemithecium nakanishianum* (Patw. & C.R. Kulk.) Makhija & Dube (Kamrup district; Behera *et al.*, 2021)
274. *Hemithecium scariosum* Makhija & Adaw. (Kamrup district; Behera *et al.*, 2021)
275. *Leptotrema lepadodes* Tuck. (Nagaon district; Joshi *et al.*, 2018)
276. *Pallidogramme bengalense* B.O. Sharma & Khadilkar (Dima Hasao district; Mishra *et al.*, 2019)
277. *Pallidogramme chapadana* (Redinger) Staiger, Kalb. & Lücking (Dima Hasao district; Mishra *et al.*, 2019)
278. *Pallidogramme chlorocarpoides* (Nyl.) Staiger, Kalb & Lücking (Gupta & Sinha, 2018)
279. *Pallidogramme chrysenderodes* (Nyl.) Kr.P. Singh & Swarnal. (Dima Hasao district; Mishra *et al.*, 2019)
280. *Pallidogramme chrysenderon* (Mont.) Staiger, Kalb & Lücking (Gupta & Sinha, 2018)
281. *Pallidogramme divaricoides* (Räsänen) Pushpi Singh & Kr.P. Singh (Nagaon district; Dey, 2016)
282. *Pallidogramme nilgiriensis* (Kr.P. Singh & D.D. Awasthi) Kr.P. Singh & Swarnalatha (Cachar district; Das, 2008)
283. *Phaeographis caesiodisca* Staiger (Dima Hasao district; Mishra *et al.*, 2019)
284. *Phaeographis caesioradians* (Leight.) A.W. Archer (Stirton, 1881)
285. *Phaeographis colligata* (Stirt.) Zahlbr. (Stirton, 1881)
286. *Phaeographis dendritica* (Ach.) Müll. Arg. (Barak Valley; Rout *et al.*, 2010)
287. *Phaeographis endophaeiza* (Stirt.) Zahlbr. (Nagaon district; Dey, 2016)
288. *Phaeographis epruinosa* (Redinger) Staiger (Cachar district; Das, 2008)
289. *Phaeographis extrusa* (Stirt.) Zahlbr. (Stirton, 1881)
290. *Phaeographis formula* (Stirt.) Pushpi Singh & Kr.P. Singh (Stirton, 1881)
291. *Phaeographis inconspicua* (Fée) Müll. Arg. (Cachar district; Das, 2008)

292. *Phaeographis instrata* (Stirt.) Zahlbr. (Cachar district; Das, 2008)
293. *Phaeographis kalbii* Staiger (Cachar district; Das, 2008)
294. *Phaeographis leightonii* Patw. & C.R. Kulk. (Barak Valley; Rout *et al.*, 2010)
295. *Phaeographis leiogrammodes* (Kremp.) Müll. Arg. (Cachar district; Das, 2008)
296. *Phaeographis lobata* (Eschw.) Müll. Arg. (Cachar district; Rout *et al.*, 2012)
297. *Phaeographis lyellii* (Sm.) Zahlbr. (Sonitpur district; Gupta & Sinha, 2018)
298. *Phaeographis medusififormis* (Kremp.) Müll. Arg. (Cachar district; Rout *et al.*, 2012)
299. *Phaeographis pseudostromatica* Seavey & J. Seavey (Sonitpur district; Gupta *et al.*, 2020)
300. *Phaeographis sculpturata* (Ach.) Staiger (Gupta & Sinha, 2018)
301. *Phaeographis subdividens* (Leight.) Müll. Arg. (Jorhat district; Gupta & Sinha, 2018)
302. *Phaeographis submaculata* Zahlbr. (Sonitpur district; Daimari, 2014)
303. *Phaeographis submarcescens* (Leight.) Zahlbr. (Cachar district; Das, 2008)
304. *Phaeographis subtrigina* (Vain.) Zahlbr. (Cachar district; Rout *et al.*, 2012)
305. *Phaeographis tortuosa* (Ach.) Müll. Arg. (Cachar district; Das, 2008)
306. *Phaeographis vestigioides* Staiger (Cachar district; Das, 2008)
307. *Platygramme australiensis* Staiger (Gupta & Sinha, 2018)
308. *Platygramme caesiopruinosa* (Fée) Fée (Cachar district; Rout *et al.*, 2005)
309. *Platygramme muelleri* (A.W. Archer) Staiger (Barak Valley; Rout *et al.*, 2010)
310. *Platygramme platyloma* (Müll. Arg.) M. Nakan. & Kashiw. (Barak Valley; Rout *et al.*, 2010)
311. *Platygramme pudica* (Mont. & Bosch) M. Nakan. & Kashiw. (Cachar district; Rout *et al.*, 2005)
312. *Platygramme wattiana* (Müll. Arg.) V. Tewari & Upreti (Cachar district; Das, 2008)
313. *Platythecium albolabiatum* (Patw. & C.R. Kulk.) A.W. Archer (Barak Valley; Rout *et al.*, 2010)
314. *Platythecium grammitis* (Fée) Staiger (Cachar district; Das, 2008)
315. *Platythecium sphaerosporellum* (Nyl.) Staiger (Cachar district; Das, 2008)
316. *Sarcographa cinchonarum* Fée (Barak Valley; Rout *et al.*, 2010)
317. *Sarcographa fenicis* (Vain.) Zahlbr. (Sonitpur district; Daimari, 2014)
318. *Sarcographa glyphiza* (Nyl.) Kr.P. Singh & G.P. Sinha (Cachar district; Das, 2008)
319. *Sarcographa heteroclita* (Mont.) Zahlbr. (Sonitpur district; Daimari, 2014)
320. *Sarcographa intricans* (Nyl.) Müll. Arg. (Cachar district; Gupta & Sinha, 2018)
321. *Sarcographa labyrinthica* (Ach.) Müll. Arg. (Nagaon district; Dey, 2016)
322. *Sarcographa maculosa* (Stirt.) Zahlbr. (Nagaon district; Dey, 2016)
323. *Sarcographa medusulina* (Nyl.) Müll. Arg. (Lakhimpur district; Gupta & Sinha, 2018)
324. *Sarcographa subtorquescens* (Nyl.) Zahlbr. (Nagaon district; Gupta & Sinha, 2018)
325. *Sarcographa subtrigosa* (Leight.) Müll. Arg. (Dima Hasao district; Mishra *et al.*, 2019)
326. *Sarcographa tricosa* (Ach.) Müll. Arg. (Kokrajhar district; Gupta & Sinha, 2018)
327. *Sarcographa verrucosa* (Vain.) Zahlbr. (Sonitpur district; Gupta *et al.*, 2020)
328. *Schistophoron tenue* Stirt. (Nagaon district; Dey, 2016)
329. *Thallosema deplanatum* (Nyl.) Staiger (Cachar district; Das, 2008)
330. *Thecaria austroindica* (D.D. Awasthi & Upreti) Kr.P. Singh & G.P. Sinha (Cachar district; Rout *et al.*, 2005)

#### HAEMATOMMATACEAE

331. *Haematomma accolens* (Stirt.) Hillmann (Stirton, 1881)
332. *Haematomma puniceum* (Ach.) A. Massal. (Dima Hasao district; Mishra *et al.*, 2019)

#### HYDNACEAE

333. *Multiclavula vernalis* (Schw.) Petersen (Dima Hasao district; Mishra *et al.*, 2019)

#### LECANOGRAPHACEAE

334. *Alyxoria apomelaena* (A. Massal.) Ertz (Nagaon district; Gogoi *et al.*, 2019)
335. *Alyxoria culmigena* (Lib.) Ertz (Nagaon district; Gogoi *et al.*, 2019)
336. *Alyxoria varia* (Pers.) Ertz & Tehler (Nagaon district; Gogoi *et al.*, 2019)
337. *Zwackhia bonplandii* (Fée) Ertz (Nagaon district; Gogoi *et al.*, 2019)
338. *Zwackhia prosodea* (Afzel.) Ertz (Barak Valley; Rout *et al.*, 2010)
339. *Zwackhia viridis* (Ach.) Poetsch & Schied. (Nagaon district; Gogoi *et al.*, 2019)
340. *Lecanographa rufa* (Müll. Arg.) Ertz (Nagaon district; Gogoi *et al.*, 2019)

#### LECANORACEAE

341. *Lecanora achroa* Nyl. (Hojai sub-division; Dey *et al.*, 2015)
342. *Lecanora alba* Lumbsch (Goalpara district; Behera *et al.*, 2021)
343. *Lecanora allophana* (Ach.) Nyl. (Kamrup Metropolitan district; Daimari *et al.*, 2014)
344. *Lecanora argentata* (Ach.) Degel. (Sonitpur district; Daimari, 2014)
345. *Lecanora austrointumescens* Lumbsch & Elix (Dima Hasao district; Mishra *et al.*, 2019)
346. *Lecanora cenisia* Ach. (Kamrup Metropolitan district; Daimari *et al.*, 2014)
347. *Lecanora chlarotera* Nyl. (Nagaon district; Dey, 2016)
348. *Lecanora flavidofusca* Müll. Arg. (Lakhimpur district; Gupta & Sinha, 2018)
349. *Lecanora helva* Stizenb. (Sonitpur district; Daimari, 2014)
350. *Lecanora interjecta* Müll. Arg. (Dibrugarh district; Gupta & Sinha, 2018)
351. *Lecanora leprosa* Fée (Sonitpur district; Daimari *et al.*, 2014)
352. *Lecanora perplexa* Brodo (Baksa district; Daimari *et al.*, 2014)
353. *Lecanora rugosella* Zahlbr. (Kamrup Metropolitan district; Gupta & Sinha, 2018)
354. *Lecanora saligna* (Schröd.) Zahlbr. (Kamrup Metropolitan district; Daimari *et al.*, 2014)



355. *Lecanora subimmersa* (Fée) Vain. (Sonitpur district; Choudhury *et al.*, 2016)
356. *Lecanora tropica* Zahlbr. (Baksa district; Daimari *et al.*, 2014)
357. *Lecanora vulpina* (Tuck.) Hafellner & Bellem. (Dima Hasao district; Mishra *et al.*, 2019)
358. *Lecidella elaeochroma* (Ach.) M. Choisy (Dima Hasao district; Mishra *et al.*, 2019)
359. *Lecidella enteroleucella* (Nyl.) Hertel (Goalpara district; Behera *et al.*, 2021)
360. *Omphalodina pseudistera* (Nyl.) S.Y. Kondr., L. Lőkös & Farkas (Kamrup district; Behera *et al.*, 2021)
361. *Polyozosia dispersa* (Pers.) S.Y. Kondr., L. Lőkös & Farkas (Goalpara district; Behera *et al.*, 2021)
- LEPROCAULACEAE**
362. *Leprocaulon coriense* (Hue) Lendemmer & B.P. Hodk. (Sonitpur district; Choudhury *et al.*, 2014)
- LOBARIACEAE**
363. *Pseudocyphellaria aurata* (Ach.) Vain. (Dima Hasao district; Mishra *et al.*, 2019)
- MALMIDEACEAE**
364. *Malmidea atlantica* (M. Cáceras & Lücking) (Goalpara district; Behera *et al.*, 2021)
365. *Malmidea nigromarginata* (Malme) Lücking & Breuss (Nagaon district; Gogoi *et al.*, 2020)
366. *Malmidea papillosa* Weerakoon & Aptroot (Dima Hasao district; Mishra *et al.*, 2019)
367. *Malmidea granifera* (Ach.) Kalb, Rivas Plata & Lumbsch (Sonitpur district; Daimari *et al.*, 2017)
368. *Malmidea piperis* (Spreng.) Kalb, Rivas Plata & Lumbsch (Kokrajhar district; Daimari *et al.*, 2021)
369. *Malmidea variabilis* Kalb (Goalpara district; Behera *et al.*, 2021)
- MONOBLASTIACEAE**
370. *Anisomeridium albidum* (Nyl.) R.C. Harris (Goalpara district; Behera *et al.*, 2021)
371. *Anisomeridium tamarandi* (Fée) R.C. Harris (Barak Valley; Singha, 2011)
- MYCOCALICIACEAE**
372. *Sphinctrina tubaeformis* A. Massal. (Stirton, 1881)
373. *Sphinctrina gomphilloides* Nyl. (Nagaon district; Dey, 2016)
- MYCOPORACEAE**
374. *Mycoporum awasthii* (Makhija & Patw.) Kr.P. Singh & G.P. Sinha (Dima Hasao district; Mishra *et al.*, 2019)
- OCHROLECHIACEAE**
375. *Ochrolechia subpallescens* Verseghy (Karbi Anglong; Gupta & Sinha, 2018)
376. *Ochrolechia subviridis* (Høeg.) Erichsen (Cachar district; Das, 2008)
- OPEGRAPHACEAE**
377. *Opegrapha dimidiata* Müll. Arg. (Sonitpur district; Daimari, 2014)
378. *Opegrapha discolor* Vain. (Nagaon district; Gogoi *et al.*, 2019)
379. *Opegrapha longula* Nyl. (Cachar district; Das, 2008)
380. *Opegrapha microspora* (Nagarkar & Patw.) Upreti (Sonitpur district; Daimari, 2014)
381. *Opegrapha simplicior* (Nyl.) Nyl. (Sonitpur district; Daimari, 2014)
382. *Opegrapha subvulgata* Nyl. (Barak Valley; Rout *et al.*, 2010)
383. *Opegrapha vulgata* (Ach.) Ach. (Nagaon district; Gogoi *et al.*, 2019)
- PARMELIACEAE**
384. *Anzia ornatooides* Yoshim. (Kokrajhar district; Islary *et al.*, 2021)
385. *Bulbothrix isidiza* (Nyl.) Hale (Sona Shree Area, near Bhalukpong; Gupta & Sinha, 2018)
386. *Bulbothrix setschwanensis* (Zahlbr.) Hale (Cachar district; Das, 2008)
387. *Bulbothrix tabacina* (Mont. & Bosch) Hale (Dima Hasao district; Mishra *et al.*, 2019)
388. *Canoparmelia pustulescens* (Kurok.) Elix (Dima Hasao district; Mishra *et al.*, 2019)
389. *Flavoparmelia caperata* (L.) Hale (Haflong; Divakar & Upreti, 2005)
390. *Myelochroa aurulenta* (Tuck.) Elix & Hale (Nagaon district; Dey, 2016)
391. *Parmelinella wallichiana* (Taylor) Elix & Hale (Gupta & Sinha, 2018)
392. *Parmotrema austrosinense* (Zahlbr.) Hale (Hojai sub-division; Dey *et al.*, 2015)
393. *Parmotrema cooperi* (J. Steiner & Zahlbr.) Sérus. (Dima Hasao district; Mishra *et al.*, 2019)
394. *Parmotrema hababianum* (Gyeln.) Hale (Dima Hasao district; Mishra *et al.*, 2019)
395. *Parmotrema crinitoides* J.C. Wei (Nagaon district; Gogoi *et al.*, 2019)
396. *Parmotrema cristiferum* (Taylor) Hale (Gupta & Sinha, 2018)
397. *Parmotrema erhizinosum* (D. D. Awasthi) Hale ex De priest & B. W. Hale (Hojai sub-division; Dey *et al.*, 2015)
398. *Parmotrema mesotropum* (Müll. Arg.) Hale (Sonitpur district; Daimari, 2014)
399. *Parmotrema nilgherrense* (Nyl.) Hale (Goalpara district; Behera *et al.*, 2021)
400. *Parmotrema praesorediosum* (Nyl.) Hale (Hojai sub-division; Dey *et al.*, 2015)
401. *Parmotrema robustum* (Degel.) Hale (Divakar & Upreti, 2005)
402. *Parmotrema saccatilibum* (Taylor) Hale (Hojai sub-division; Dey *et al.*, 2015)
403. *Parmotrema sancti-angelii* (Lynge) Hale (Divakar & Upreti, 2005)
404. *Parmotrema tinctorum* (Despr. ex Nyl.) Hale (Hojai sub-division; Dey *et al.*, 2015)
405. *Parmotrema zollingeri* (Hepp) Hale (Divakar & Upreti, 2005)
406. *Protoparmelia hesperia* (Kantivilas & Elix) Kantivilas, Papong & Lumbsch (Gupta & Sinha, 2018)
407. *Relicina malaccensis* (Nyl.) Kirika, Divakar & Lumbch (Barak Valley; Rout *et al.*, 2010)
408. *Usnea pulvinata* Fr. (Dima Hasao district; Mishra *et al.*, 2019)
- PELTULACEAE**
409. *Peltula obscurans* (Nyl.) Gyelnik (Sonitpur district; Choudhury *et al.*, 2016)

410. *Peltula tortuosa* (Nees) Wetmore (Sonitpur district; Choudhury *et al.*, 2016)

#### PERTUSARIACEAE

411. *Pertusaria cinchonae* Müll. Ach. (Sonitpur district; Daimari *et al.*, 2014)  
 412. *Pertusaria coccodes* (Ach.) Nyl. (Barak Valley; Rout *et al.*, 2010)  
 413. *Pertusaria coronata* (Ach.) Th. Fr. (Nagaon district; Dey, 2016)  
 414. *Pertusaria depressa* (Fée) Mont & Bosch (Cachar district; Gupta & Sinha, 2018)  
 415. *Pertusaria dermatodes* Nyl. (Cachar district; Gupta & Sinha, 2018)  
 416. *Pertusaria granulata* (Eschw.) Müll. Arg. (Dima Hasao district; Mishra *et al.*, 2019)  
 417. *Pertusaria leioplaca* (Ach.) DC. (Sonitpur district; Daimari, 2014)  
 418. *Pertusaria leioplacella* Nyl. (Dima Hasao district; Mishra *et al.*, 2019)  
 419. *Pertusaria maculata* Kr. P. Singh & G.P. Sinha (Dima Hasao district; Mishra *et al.*, 2019)  
 420. *Pertusaria pertusella* Müll. Arg. (Sonitpur district; Daimari, 2014)  
 421. *Pertusaria punctata* Nyl. (Dima Hasao district; Mishra *et al.*, 2019)  
 422. *Pertusaria quassiae* (Fée) Nyl. (Barak Valley; Rout *et al.*, 2010)  
 423. *Pertusaria rigida* Müll. Arg. (Dima Hasao district; Mishra *et al.*, 2019)  
 424. *Pertusaria subochracea* Stirt. (Dima Hasao district; Mishra *et al.*, 2019)

#### PHLYCTIDIACEAE

425. *Phlyctis himalayensis* (Nyl.) D.D. Awasthi (Dima Hasao district; Mishra *et al.*, 2019)  
 426. *Phlyctis karnatakana* S. Joshi & D.K. Upreti (Dima Hasao district; Mishra *et al.*, 2019)  
 427. *Phlyctis polyphora* Stirt. (Stirton, 1881)

#### PHYSICIACEAE

428. *Heterodermia albidiflava* (Kurok.) D.D. Awasthi (Dima Hasao district; Mishra *et al.*, 2019)  
 429. *Heterodermia diademata* (Taylor) D.D. Awasthi (Hojai sub-division; Dey *et al.*, 2015)  
 430. *Hyperphyscia adglutinata* (Flörke) H. Mayrhofer & Poelt (Hojai sub-division; Dey *et al.*, 2015)  
 431. *Hyperphyscia minor* (Fée) Kalb. (Dima Hasao district; Mishra *et al.*, 2019)  
 432. *Phaeophyscia endococcina* (Körb.) Moberg (Dima Hasao district; Mishra *et al.*, 2019)  
 433. *Phaeophyscia hispidula* (Ach.) Essl. (Nagaon district; Gogoi *et al.*, 2019)  
 434. *Phaeophyscia pyrrophora* (Poelt) D. D. Awasthi & M. Joshi (Sonitpur district; Daimari *et al.*, 2014)  
 435. *Physcia crista* Nyl. (Sonitpur district; Daimari *et al.*, 2014)  
 436. *Physcia dilatata* Nyl. (Cachar district; Das, 2008)  
 437. *Physcia dimidiata* (Arnold) Nyl. (Sonitpur district; Choudhury *et al.*, 2016)  
 438. *Physcia dubia* (Hoffm.) Lettau (Dima Hasao district; Mishra *et al.*, 2019)  
 439. *Physcia tribacioides* Nyl. (Dima Hasao district; Mishra *et al.*, 2019)  
 440. *Polyblastidium microphyllum* (Kurok.) Kalb (Sonitpur district; Choudhury *et al.*, 2016)  
 441. *Rinodina oxydata* (A. Massal.) A. Massal. (Nagaon district; Gogoi *et al.*, 2019)

#### PILOCARPACEAE

442. *Byssoloma chlorinum* (Vain.) Zahlbr. (Lakhimpur district; Gupta & Sinha, 2018)  
 443. *Calopadia fusca* Vězda (Baksa district; Gupta & Sinha, 2018)  
 444. *Calopadia subcoerulescens* (Zahlbr.) Vězda (Baksa district; Gupta & Sinha, 2018)  
 445. *Fellhanera bouteillei* (Desm.) Vězda (Lakhimpur district; Gupta & Sinha, 2018)  
 446. *Fellhanera semecarpi* (Vain.) Vězda (Kamrup Metropolitan district; Gupta & Sinha, 2018)

#### PYRENULACEAE

447. *Anthracotheceium assamiense* (Stirton) A. Singh (Hojai sub-division; Dey *et al.*, 2015)  
 448. *Anthracotheceium austroindicum* Ajay Singh (Sonitpur district; Daimari, 2014)  
 449. *Anthracotheceium borbonicum* (Nyl.) Müll. Arg. (Hojai sub-division; Dey *et al.*, 2015)  
 450. *Anthracotheceium cristatellum* Nagarkar & Patw. (Cachar district; Das, 2008)  
 451. *Anthracotheceium interlatens* (Nyl.) Aptroot (Dima Hasao district; Mishra *et al.*, 2019)  
 452. *Anthracotheceium macrosporum* (Hepp) Müll. Arg. (Cachar district; Gupta & Sinha, 2018)  
 453. *Anthracotheceium maculatum* Nagarkar & Patw. (Sonitpur district; Daimari, 2014)  
 454. *Anthracotheceium prasinum* (Eschw.) R.C. Harris (Tinsukia district; Gupta & Sinha, 2018)  
 455. *Anthracotheceium thwaitesii* (Leight.) Müll. Arg. (Barak Valley; Singha, 2011)  
 456. *Anthracotheceium variolosum* (Pers.) Müll. Arg. (Cachar district; Das, 2008)  
 457. *Lithothelium obtectum* (Müll. Arg.) Aptroot (Kokrajhar district; Islay *et al.*, 2021)  
 458. *Melanothecopsis coactella* (Stirt.) C.W. Dodge (Cachar district; Das, 2008)  
 459. *Pyrenula acutalis* R.C. Harris (Sivasagr district; Gupta & Sinha, 2018)  
 460. *Pyrenula adacta* Fée (Cachar district; Das, 2008)  
 461. *Pyrenula andina* Aptroot (Dima Hasao district; Mishra *et al.*, 2019)  
 462. *Pyrenula anomala* (Ach.) Vain. (Jorhat district; Gupta & Sinha, 2018)  
 463. *Pyrenula approximata* Vain. (Cachar district; Cachar district; Rout *et al.*, 2005)  
 464. *Pyrenula arthoniotheca* Upreti (Cachar district; Rout *et al.*, 2005)  
 465. *Pyrenula aspistea* (Ach.) Ach. (Sonitpur district; Daimari, 2014)  
 466. *Pyrenula astroidea* (Fée) R.C. Harris (Cachar district; Cachar district; Rout *et al.*, 2005)  
 467. *Pyrenula bilirana* Vain. (Baksa district; Daimari *et al.*, 2014)  
 468. *Pyrenula brunnea* Fée (Barak Valley; Rout *et al.*, 2010)  
 469. *Pyrenula cayennensis* Müll. Arg. (Cachar district; Das, 2008)  
 470. *Pyrenula chlorospila* Arnold (Nagaon district; Dey, 2016)  
 471. *Pyrenula circumfiniens* Vain. (Gupta & Sinha, 2018)  
 472. *Pyrenula citrififormis* R.C. Harris (Cachar district; Das, 2008)  
 473. *Pyrenula complanata* (Mont.) Trevis. (Sivasagr district; Gupta & Sinha, 2018)

474. *Pyrenula confinis* (Nyl.) R.C. Harris (Sonitpur district; Daimari, 2014)
475. *Pyrenula costaricensis* Müll. Arg. (Cachar district; Das, 2008)
476. *Pyrenula cuyabensis* (Malme) R.C. Harris (Sonitpur district; Daimari, 2014)
477. *Pyrenula decumbens* (Müll. Arg.) Upreti (Sonitpur district; Daimari, 2014)
478. *Pyrenula defossa* Müll. Arg. (Cachar district; Das, 2008)
479. *Pyrenula deplanata* Müll. Arg. (Cachar district; Das, 2008)
480. *Pyrenula duplicans* (Nyl.) Aptroot (Karbi Anglong district; Gupta & Sinha, 2018)
481. *Pyrenula finitima* Müll. Arg. (Barak Valley; Das *et al.*, 2013)
482. *Pyrenula fuscoolivacea* Vain. (Cachar district; Das, 2008)
483. *Pyrenula glabrescense* Vain. (Sonitpur district; Daimari, 2014)
484. *Pyrenula globifera* (Eschw.) Aptroot (Barak Valley; Singha, 2011)
485. *Pyrenula himalayana* Upreti (Sonitpur district; Daimari, 2014)
486. *Pyrenula immersa* Müll. Arg. (Sonitpur district; Daimari, 2014)
487. *Pyrenula immissa* (Stirt.) Zahlbr. (Cachar district; Gupta & Sinha, 2018)
488. *Pyrenula impressa* Müll. Arg. (Cachar district; Das, 2008)
489. *Pyrenula interducta* (Nyl.) Zahlbr. (Cachar district; Gupta & Sinha, 2018)
490. *Pyrenula introducta* (Stirt.) Zahlbr. (Cachar district; Das, 2008)
491. *Pyrenula laetior* Müll. Arg. (Nagaon district; Gogoi *et al.*, 2020)
492. *Pyrenula lineatostroma* Aptroot (Sonitpur district; Daimari, 2014)
493. *Pyrenula leucostoma* Ach. (Sonitpur district; Daimari *et al.* 2017)
494. *Pyrenula leucotrypa* (Nyl.) Upreti (Barak Valley; Rout *et al.*, 2010)
495. *Pyrenula macularis* (Zahlbr.) R. C. Harris (Baksa district; Daimari *et al.*, 2014)
496. *Pyrenula mamillana* (Ach.) Trevis. (Jorhat district; Gupta & Sinha, 2018)
497. *Pyrenula maravalensis* Vain. (Nagaon district; Dey, 2016)
498. *Pyrenula mastophoriza* (Nyl.) Zahlbr. (Sonitpur district; Daimari *et al.*, 2017)
499. *Pyrenula mastophorizans* Müll. Arg. (Sonitpur district; Daimari, 2014)
500. *Pyrenula mastophoroides* (Nyl.) Zahlbr. (Dima Hasao district; Mishra *et al.*, 2019)
501. *Pyrenula microspora* (Nagarkar & Patw.) Upreti (Sonitpur district; Daimari, 2014)
502. *Pyrenula minarum* Vain. (Cachar district; Das, 2008)
503. *Pyrenula nanospora* (Ajay Singh) Upreti (Sonitpur district; Daimari, 2014)
504. *Pyrenula nitida* (Weigel) Ach. (Cachar district; Gupta & Sinha, 2018)
505. *Pyrenula nodulata* (Stirt.) Zahlbr. (Baksa district; Daimari *et al.*, 2014)
506. *Pyrenula novemseptata* Vain. (Nagaon district; Dey, 2016)
507. *Pyrenula nuda* Ajay Singh & Upreti (Sonitpur district; Daimari, 2014)
508. *Pyrenula ochraceoflava* (Nyl.) R.C. Harris (Sonitpur district; Daimari *et al.*, 2017)
509. *Pyrenula ochraceoflavens* (Nyl.) R.C. Harris (Sonitpur district; Daimari, 2014)
510. *Pyrenula oculata* Ajay Singh & Upreti (Dima Hasao district; Mishra *et al.*, 2019)
511. *Pyrenula oculifera* Vain. (Sonitpur district; Daimari, 2014)
512. *Pyrenula oxysporiza* Zahlbr. (Cachar district; Das, 2008)
513. *Pyrenula pinguis* Fée (Cachar district; Das, 2008)
514. *Pyrenula parvinuclea* (Meyn & Flot.) Aptroot (Gupta & Sinha, 2018)
515. *Pyrenula pyrenuloides* (Mont.) R.C. Harris (Cachar district; Gupta & Sinha, 2018)
516. *Pyrenula quassiaecola* Fée (Jorhat district; Gupta & Sinha, 2018)
517. *Pyrenula ravenelii* (Tuck.) R. C. Harris (Dima Hasao district; Mishra *et al.*, 2019)
518. *Pyrenula scutata* (Stirt.) Zahlbr. (Baksa district; Gupta & Sinha, 2018)
519. *Pyrenula subacutalis* Upreti (Cachar district; Das, 2008)
520. *Pyrenula subaggregata* (Nyl.) Müll. Arg. (Sonitpur district; Daimari, 2014)
521. *Pyrenula subducta* (Nyl.) Müll. Arg. (Dima Hasao district; Mishra *et al.*, 2019)
522. *Pyrenula subelliptica* (Tuck.) R.C. Harris (Nagaon district; Gupta & Sinha, 2018)
523. *Pyrenula subglabrata* (Nyl.) Müll. Arg. (Nagaon district; Dey, 2016)
524. *Pyrenula subglabriuscula* Vain. (Cachar district; Das, 2008)
525. *Pyrenula sublaevigata* (Patw. & Makhija) Upreti (Sonitpur district; Daimari, 2014)
526. *Pyrenula submastophora* Ajay Singh & Upreti (Sonitpur district; Daimari, 2014)
527. *Pyrenula subnitidella* (Nyl.) Müll. Arg. (Sonitpur district; Daimari, 2014)
528. *Pyrenula subumbilicata* (C. Knight) Aptroot (Karbi Anglong district; Gupta & Sinha, 2018)
529. *Pyrenula wrightii* (Müll. Arg.) R.C. Harris (Nagaon district; Gogoi *et al.*, 2020)
530. *Pyrenula zeylanica* Upreti & Ajay Singh (Karbi Anglong district; Gupta & Sinha, 2018)

## RAMALINACEAE

531. *Bacidia alutacea* (Kremp.) Zahlbr. (Dima Hasao district; Mishra *et al.*, 2019)
532. *Bacidina apiahica* (Müll. Arg.) Vězda (Lakhimpur district; Gupta & Sinha, 2018)
533. *Bacidia convexula* (Müll. Arg.) Zahlbr. (Baksa district; Gupta & Sinha, 2018)
534. *Bacidia inundata* (Fr.) Korb. (Cachar district; Gupta & Sinha, 2018)
535. *Bacidia laurocerasi* (Delise ex Duby) Zahlbr. (Sonitpur district; Daimari, 2014)
536. *Bacidia millegrana* (Taylor) Müll. Arg. (Sonitpur district; Daimari *et al.*, 2014)
537. *Bacidia nigrofusca* (Müll. Arg.) Zahlbr. (Dima Hasao district; Mishra *et al.*, 2019)
538. *Bacidia nigrosticta* Zahlbr. (Baksa district; Gupta & Sinha, 2018)
539. *Bacidia phaeolomoides* (Müll. Arg.) Zahlbr. (Sonitpur district; Daimari, 2014)
540. *Bacidia pycnidiata* Czarnota & Coppins (Tezpur; Gogoi *et al.*, 2020)

541. *Bacidia rubella* (Hoffm.) Massal. (Dima Hasao district; Mishra *et al.*, 2019)
542. *Bacidia rufescens* (Müll. Arg.) Zahlbr. (Sonitpur district; Daimari, 2014)
543. *Bacidia spadicea* (Ach.) Zahlbr. (Barpeta district; Gupta & Sinha, 2018)
544. *Bacidia submedialis* (Nyl.) Zahlbr. (Sonitpur district; Daimari, 2014)
545. *Bacidina medialis* (Tuck. ex Nyl.) Kistenich, Tindal Bendiksby & S. Ekman (Cachar district; Das, 2008)
546. *Biatora subduplex* (Nyl.) Printzen (Nagaon district; Dey, 2016)
547. *Megalaria pulvere* (Borrer) Hafellner & E. Schreiner (Cachar district; Das, 2008)
548. *Mycobilimbia hunana* (Zahlbr.) Awasthi (Sonitpur *Phyllopsora confusa* Swinscow & Krog (Dima Hasao district; Mishra *et al.*, 2011)
553. *Phyllopsora* district; Choudhury *et al.*, 2016)
549. *Phyllopsora corallina* (Eschw.) Müll. Arg. (Dima Hasao district; Mishra *et al.*, 2019)
550. *Phyllopsora furfuracea* (Pers.) Zahlbr. (Dima Hasao district; Mishra *et al.*, 2019)
551. *Phyllopsora buettneri* (Müll. Arg.) Zahlbr. (Barak Valley; Rout *et al.*, 2010)
552. *himalayensis* G.K. Mishra, Upreti & Nayaka (Dima Hasao district; Mishra *et al.*, 2019)
554. *Phyllopsora isidiotyla* (Vain.) Riddle (Dima Hasao district; Mishra *et al.*, 2011)
555. *Phyllopsora nemoralis* Tindal & Krog (Dima Hasao district; Mishra *et al.*, 2011)
556. *Ramalina hossei* Vain. (Hojai sub-division; Dey *et al.*, 2015)

#### RAMBOLDIACEAE

557. *Ramboldia haematites* (Fée) Kalb, Lumbsch & Elix (Dima Hasao district; Mishra *et al.*, 2019)
558. *Ramboldia russula* (Ach.) Kalb, Lumbsch & Elix (Nagaon district; Dey, 2016)

#### ROCCCELLACEAE

559. *Chiodecton andamanicum* Jagad. Ram (Dima Hasao district; Mishra *et al.*, 2019)
560. *Chiodecton congestulum* Nyl. (Dima Hasao district; Mishra *et al.*, 2019)
561. *Chiodecton leptosporum* Müll. Arg. (Barak Valley; Das *et al.*, 2013)
562. *Cresponea chloroconia* (Tuck.) Egea & Torrente (Nagaon district; Dey, 2016)
563. *Cresponea flava* (Vain.) Egea & Torrente (Sonitpur district; Daimari, 2014)
564. *Enterographa assamica* Pooja Gupta, S. Joseph & G.P. Sinha (Sonai; Gupta *et al.*, 2019)
565. *Enterographa compunctula* (Nyl.) Redinger (Dima Hasao district; Mishra *et al.*, 2019)
566. *Enterographa divergens* (Müll. Arg.) Redinger (Dibrugarh district; Gupta & Sinha, 2018)
567. *Enterographa mesomela* Sparrius, Saipunk. & Wolseley (Sonitpur district; Daimari, 2014)
568. *Enterographa tropica* Sparrius (Sonitpur district; Daimari, 2014)
569. *Graphidastra byssiseda* (Müll. Arg.) G. Thor (Dima Hasao district; Mishra *et al.*, 2019)
570. *Lecanactis patellaroides* (Nyl.) Vain. (Barak Valley; Das *et al.*, 2013)
571. *Mazosia melanophthalma* (Müll. Arg.) R. Sant. (Kamrup Metropolitan district; Gupta & Sinha, 2018)

572. *Pseudoschismatomma rufescens* (Pers.) Ertz. & Tehler (Cachar district; Das, 2008)

#### STRIGULACEAE

573. *Phyllocharis orbicularis* (Fr.) S.H. Jiang, Lücking & Sérus. (Kamrup Metropolitan district; Gupta & Sinha, 2018)
574. *Puiggariella nemathora* (Mont.) S.H. Jiang, Lücking & J.C. Wei (Kamrup Rural district; Gupta & Sinha, 2018)
575. *Strigula antillarum* (Fée) Müll. Arg. (Kamrup Rural district; Gupta & Sinha, 2018)
576. *Strigula concreta* (Fée) R. Sant. (Baksa district; Gupta & Sinha, 2018)
577. *Strigula hypothallina* R.C. Harris (Jorhat district; Gupta & Sinha, 2018)
578. *Strigula maculata* (Cooke & Masee) R. Sant. (Kamrup Rural district; Gupta & Sinha, 2018)
579. *Strigula nitidula* Mont. (Baksa district; Gupta & Sinha, 2018)
580. *Strigula phyllogena* (Müll. Arg.) R.C. Harris (Baksa district; Gupta & Sinha, 2018)
581. *Strigula smaragdula* Fr. (Lakhimpur district; Gupta & Sinha, 2018)
582. *Strigula subelegans* Vain. (Lakhimpur district; Gupta & Sinha, 2018)

#### TELOCHISTACEAE

583. *Athallia pyracea* (Ach.) Arup, Frödén & Søchting (Sonitpur district; Daimari, 2014)
584. *Brownliella cinnabarina* (Ach.) S.Y. Kondr., Kärnefelt, A. Thell, Elix, Jung Kim, A.S. Kondr. & Hur (Sonitpur district; Choudhury *et al.*, 2016)
585. *Caloplaca herbidella* (Arnold) H. Magn. (Dima Hasao district; Mishra *et al.*, 2019)
586. *Caloplaca kashmirensis* Y. Joshi & Upreti (Dima Hasao district; Mishra *et al.*, 2019)
587. *Caloplaca pseudisteroides* Y. Joshi & Upreti (Nagaon district; Gogoi *et al.*, 2019)
588. *Flavoplaca citrina* (Hoffm.) Arup, Frödén & Søchting (Nagaon district; Gogoi *et al.*, 2019)
589. *Mikhtomia flavorubescens* (Huds.) S.Y. Kondr. & J.-S. Hur (Dima Hasao district; Mishra *et al.*, 2019)
590. *Mikhtomia gordejewii* (Tomin) S. Y. Kondr., Kärnefelt, Elix, A. Thell (Dima Hasao district; Mishra *et al.*, 2019)
591. *Oxneriopsis bassiae* (Ach.) S.Y. Kondr., Upreti & Hur (Dima Hasao district; Mishra *et al.*, 2019)
592. *Squamulea subsoluta* (Nyl.) Arup, Søchting & Frödén (Sonitpur district; Choudhury *et al.*, 2016)

#### THELOTREMATAACEAE

593. *Astrochapsa platycarpella* (Vain.) Parmen, Lücking & Lumbsch (Karbi Anglong district; Behera *et al.*, 2021)
594. *Chapsa hiata* (Hale) Sipman (Nagaon district; Dey, 2016)
595. *Chapsa indica* A. Massal. (Bhalukpong Area; Gupta & Sinha, 2018)
596. *Chapsa discoidea* (Stirt.) Lücking (Dima Hasao district; Mishra *et al.*, 2019)
597. *Chapsa leprocarpa* (Nyl.) Frisch (Dima Hasao district; Mishra *et al.*, 2019)
598. *Leucodecton anamalaiense* (Patw. & C.R. Kulk.) Rivas Plata & Lücking (Barak Valley; Rout *et al.*, 2010)

599. *Leucodecton glaucescens* (Nyl.) Frisch. (Kamrup Metropolitan district; Daimari *et al.*, 2014)  
 600. *Leucodecton occultum* (Eschw.) Frisch (Guwahati; Joshi *et al.*, 2018)  
 601. *Phaeotrema pachysporum* (Nyl.) Zahlbr. (Nagaon district; Joshi *et al.*, 2018)  
 602. *Thelotrema allosporoides* Nyl. (Golapara district; Behera *et al.*, 2021)  
 603. *Thelotrema lacteum* Kremp. (Gupta & Sinha, 2018)  
 604. *Thelotrema lepademersum* Nagarkar, Sethy & Patw. (Nagaon district; Joshi *et al.*, 2018)  
 605. *Thelotrema lepadinum* (Ach.) Ach. (Kokrajhar district; Islary *et al.*, 2021)  
 606. *Thelotrema porinoides* Mont. & Bosch (Kokrajhar district; Islary *et al.*, 2021)  
 607. *Thelotrema subtile* Tuck. (Hojai sub-division; Dey *et al.*, 2015)  
 608. *Thelotrema tetrasporum* (Stirt.) D.D. Awasthi (Stirton, 1881)  
 609. *Thelotrema velatum* Müll. Arg. (Nagaon district; Dey, 2016)

### TRICHOTHELIACEAE

610. *Clathroporina anoptella* (Strit.) Zahlbr. (Cachar district; Das, 2008)  
 611. *Porina americana* Fée (Bongaigaon district; Gupta & Sinha, 2018)  
 612. *Porina bellendenica* Müll. Arg. (Goalpara district; Behera *et al.*, 2021)  
 613. *Porina belonospora* (Nyl.) Müll. Arg. (Kokrajhar district; Daimari *et al.*, 2021)  
 614. *Porina dolichophora* (Nyl.) Müll. Arg. (Barak Valley; Rout *et al.*, 2010)  
 615. *Porina internigrans* (Nyl.) Müll. Arg. (Gupta & Sinha, 2018)  
 616. *Porina interstes* (Nyl.) Harm. (Nagaon district; Gogoi *et al.*, 2019)  
 617. *Porina karnatakensis* Makhija, Adaw. & Patw. (Lakhimpur district; Gupta & Sinha, 2018)  
 618. *Porina malmei* P.M. McCarthy (Tezpur; Gogoi *et al.*, 2020)  
 619. *Porina mastoidella* Müll. Arg. (Nagaon district; Gogoi *et al.*, 2019)  
 620. *Porina nuculastrum* (Müll. Arg.) R.C. Harris (Nagaon district; Gogoi *et al.*, 2020)  
 621. *Porina subcutanea* Ach. (Kokrajhar district; Islary *et al.*, 2021)  
 622. *Porina subhibernica* Upreti (Barak Valley; Das *et al.*, 2013)  
 623. *Porina subsanctirosae* Makhija, Adaw. & Patw. (Dima Hasao district, Gupta & Sinha, 2018)  
 624. *Porina tetracerae* (Ach.) Müll. Arg. (Nagaon district; Dey, 2016)

### TRYPETHELIACEAE

625. *Astrothelium alboverruroides* Aptroot (Kokrajhar district; Daimari *et al.*, 2021)  
 626. *Astrothelium eustomum* (Mont.) Müll. Arg. (Striton, 1881)  
 627. *Astrothelium macrosporum* (Makhija & Patw.) Aptroot & Lücking (Cachar district; Das, 2008)  
 628. *Astrothelium meristosporum* (Mont. & Bosch) Aptroot & Lücking (Barak Valley; Rout *et al.*, 2010)  
 629. *Astrothelium pupula* (Ach.) Aptroot & Lücking (Karbi Anglong district; Gupta & Sinha, 2018)

630. *Astrothelium subnitidiusculum* (Makhija & Patw.) Aptroot & Lücking (Balapara; Makhija & Patwardhan, 1993)  
 631. *Bathelium madreporiforme* (Eschw.) Trevis. (Nagaon district; Dey, 2016)  
 632. *Marcelaria benguelensis* (Müll. Arg.) Aptroot (Cachar district; Gupta & Sinha, 2018)  
 633. *Nigrothelium bullatum* Lücking, Upreti & Lumbsch (Dima Hasao district; Mishra *et al.*, 2019)  
 634. *Nigrothelium tropicum* (Ach.) Lücking, M.P. Nelsen & Aptroot (Nagaon district; Gupta & Sinha, 2018)  
 635. *Polymeridium refertum* (Stirt.) Aptroot (Sonitpur district; Daimari, 2014)  
 636. *Polymeridium suffusum* (C. Knight) Aptroot (Dima Hasao district; Mishra *et al.*, 2019)  
 637. *Polymeridium albopruinosum* (Makhija & Patw.) Aptroot (Barak Valley; Das *et al.*, 2013)  
 638. *Trypethelium assimile* Stirt. (Striton, 1881)  
 639. *Trypethelium ceylonicum* Makhija & Patw. (Dima Hasao district; Gupta & Sinha, 2018)  
 640. *Trypethelium eluteriae* Spreng. (Jorhat district; Gupta & Sinha, 2018)  
 641. *Trypethelium endosulphureum* Makhija & Patw. (Striton, 1881)  
 642. *Trypethelium inamoenum* Müll. Arg. (Barak Valley; Rout *et al.*, 2010)  
 643. *Trypethelium luteum* (Taylor) (Cachar district; Gupta & Sinha, 2018)  
 644. *Trypethelium ochroleucum* (Eschw.) Nyl. (Jorhat district; Gupta & Sinha, 2018)  
 645. *Trypethelium platystomum* Mont. (Barpeta district; Gupta & Sinha, 2018)  
 646. *Trypethelium rubrocinctum* Makhija & Patw. (Guwahati-Shillong Road; Makhija & Patwardhan, 1993)  
 647. *Trypethelium variolosum* Ach. (Sonitpur district; Daimari, 2014)  
 648. *Trypethelium ubianense* (Vain.) Zahlbr. (Baksa district; Daimari *et al.*, 2014)  
 649. *Viridothelium indutum* (Stirt.) Aptroot & Lücking (Striton, 1881)

### VARIOLARIACEAE

650. *Lepra amara* (Ach.) Hafellner (Barak Valley; Rout *et al.*, 2010)  
 651. *Lepra albescens* (Huds.) Hafellner (Dima Hasao district; Mishra *et al.*, 2019)  
 652. *Lepra leucosorodes* (Nyl.) I. Schmitt., B.G. Hodk. & Lumbsch (Cachar district; Das, 2008)

### Taxa incertae sedis

653. *Bactrospora arthonioides* Egea & Torrente (Kokrajhar district; Islary *et al.*, 2021)  
 654. *Bactrospora metabola* (Nyl.) Egea & Torrente (Kokrajhar district; Islary *et al.*, 2021)  
 655. *Synarthonia bicolor* Müll. Arg. (Nagaon district; Gogoi *et al.*, 2019)  
 656. *Synarthonia inconspicua* (Stirt.) Van den Broeck & Ertz (Dima Hasao district; Gupta & Sinha, 2018)  
 \*657. *Phaeographina contexta* (Pers.) Müll. Arg. (Cachar district; Das, 2008)

\*Current status of this species is not known.

**Table 1.** Lichen species reported from Assam and their synonymised names.

Sl. No.	Current Name	Synonymised Name
1	<i>Allographa celata</i> (Stirt.) Lücking & Kalb	<i>Graphis celata</i> Stirt.
2	<i>Allographa chloroalba</i> (Makhija & Patw.) Lücking & Kalb	<i>Graphis chloroalba</i> Makhija & Adaw.
3	<i>Allographa contortuplicata</i> (Müll. Arg.) Lücking & Kalb	<i>Graphis contortuplicata</i> Müll. Arg.
4	<i>Allographae longata</i> (Zenker) Lücking & Kalb	<i>Graphis elongate</i> Zenker
5	<i>Allographae pixantha</i> (Mont. & Bosch) Lückin & Kalb	<i>Hemithecium epixanthum</i> (Mont. & Bosch) Chitale & Makhija
6	<i>Allographa hossei</i> (Vain.) Lücking & Kalb	<i>Graphis hossei</i> Vain.
7	<i>Allographa malacodes</i> (Nyl.) Lücking & Kalb	<i>Graphis malacodes</i> Nyl.
8	<i>Allographa pseudoaquilonia</i> (Lücking) Lücking & Kalb	<i>Graphis pseudoaquilonia</i> Lücking
9	<i>Allographa salacinilabiata</i> (Patw. & C.R. Kulk.) Lücking & Kalb	<i>Hemithecium salacinilabiatum</i> (Patw. & C.R. Kulk.) Chitale & Makhija
10	<i>Allographa sayeri</i> (Müll. Arg.) Lücking & Kalb	<i>Graphis sayeri</i> Müll. Arg.
11	<i>Allographa subassimilis</i> (Müll. Arg.) Lücking & Kalb	<i>Graphis subassimilis</i> Müll. Arg.
12	<i>Allographa subdisserpens</i> (Nyl.) Lücking & Kalb	<i>Graphis subdisserpens</i> Nyl.
13	<i>Allographa upduna</i> Lücking & Kalb	<i>Hemithecium isidiatum</i> Upreti & Dubey
14	<i>Allographax anthospora</i> (Müll. Arg.) Lücking & Kalb	<i>Graphis xanthospora</i> Müll. Arg.
15	<i>Amandinea punctata</i> (Hoffm.) Coppins & Scheid.	<i>Buellia punctata</i> (Hoffm.) A. Massal.
16	<i>Arthothelium ruanum</i> (A. Massal.) Körb.	<i>Arthothelium dispersum</i> Mudd.
17	<i>Asteristion platycarpum</i> (Tuck.) I. Medeiros, Lücking & Lumbsch	<i>Thelotrema platycarpum</i> Tuck.
18	<i>Astrothelium macrosporum</i> (Makhija & Patw.) Aptroot & Lücking	<i>Trypethelium macrosporum</i> Makhija & Patw.
19	<i>Astrothelium meristosporum</i> (Mont. & Bosch) Aptroot & Lücking	<i>Laurerama eristospora</i> (Mont. & Bosch) Zahlbr.
20	<i>Astrothelium pupula</i> (Ach.) Aptroot & Lücking	<i>Pseudopyrenula pupula</i> (Ach.) Müll. Arg.
21	<i>Astrothelium subnitidiusculum</i> (Makhija & Patw.) Aptroot & Lücking	<i>Trypethelium subnitidiusculum</i> Makhija & Patw.
22	<i>Athallia pyracea</i> (Ach.) Arup, Frödén & Søchting	<i>Caloplaca pyracea</i> (Ach.) Zwackh.
23	<i>Brownliella cinnabarina</i> (Ach.) S.Y. Kondr., Kärnefelt, A. Thell, Elix, Jung Kim, A.S. Kondr. & Hur	<i>Caloplaca cinnabarina</i> (Ach.) Zahlbr.
24	<i>Bullatina aspidota</i> (Vain.) Vězda & Poelt	<i>Calenia aspidota</i> (Vain.) Vězda
25	<i>Caloplaca herbidella</i> (Arnold) H. Magn.	<i>Blastenia herbidella</i> (Hue) Servit
26	<i>Carbacanthographis garoana</i> (Nagarkar & Patw.) Pushpi Singh & Kr. P. Singh	<i>Graphis garoana</i> Nagarkar & Patw.
27	<i>Coniocarpon cinnabarinum</i> DC.	<i>Arthonia tumidula</i> Leight.
28	<i>Creographa brasiliensis</i> A. Massal.	<i>Phaeographis brasiliensis</i> (A. Massal.) Kalb & Matthes-Leicht
29	<i>Flegographa leprieurii</i> (Mont.) A. Massal.	<i>Sarcographa leprieurii</i> (Mont.) Müll. Arg.
30	<i>Graphina marcescens</i> (Fée) Müll. Arg.	<i>Carbacanthographis marcescens</i> (Fée) Staiger & Kalb.

Table 1 continued in next page

31	<i>Graphis crocea</i> (Makhija & Adaw.) Lücking & Kalb	<i>Hemithecium croceum</i> Makhija & Adaw.
32	<i>Graphis balaghatensis</i> (Adaw. & Makhija) J. Kalb & Kalb	<i>Hemithecium balaghatense</i> Adaw. & Makhija
33	<i>Leptotrema lepadodes</i>	<i>Thelotrema lepadodes</i>
34	<i>Leucodectonan amalaiense</i> (Patw. & C.R. Kulk.) Rivas Plata & Lücking	<i>Myriotrema anamalaiense</i> (Patw. & C.R. Kulk.) Hale
35	<i>Marcelaria benguelensis</i> (Müll. Arg.) Aptroot	<i>Laurera subbenghalensis</i> (Müll. Arg.) Zahlbr.
36	<i>Megalaria pulverea</i> (Borrer) Hafellner & E. Schreiner	<i>Catillaria pulverea</i> (Borrer) Lettau
37	<i>Mycoporum awasthii</i> (Makhija & Patw.) Kr.P. Singh & G.P. Sinha	<i>Cryptothecia awasthii</i> Makhija & Patw.
38	<i>Nigrothelium tropicum</i> (Ach.) Lücking, M.P. Nelsen & Aptroot	<i>Trypethelium tropicum</i> (Ach.) Müll. Arg.
39	<i>Ocellularia albocincta</i> (Hale) Divakar & Mangold	<i>Myriotrema albocinctum</i> Hale
40	<i>Ocellularia andamanica</i> (Nyl.) Tat. Matsumoto & Deguchi	<i>Myriotrema andamanicum</i> (Nyl.) Hale
41	<i>Ocellularia epitrypa</i> (Nyl.) Hale	<i>Rhabdodiscus epitrypus</i> (Nyl.) Vain.
42	<i>Omphalodina pseudistera</i> (Nyl.) S.Y. Kondr., L. Lökös & Farkas	<i>Lecanorap sudistera</i> Nyl.
43	<i>Oxneriopsis bassiae</i> (Ach.) S.Y. Kondr., Upreti & Hur	<i>Gyalolechia bassiae</i> (Ach.) Søchting, Frödén & Arup ex Ahti
44	<i>Pachnolepia pruinata</i> (Torss.) Frisch & G. Thor	<i>Arthonia impolita</i> (Hoffm.) Borrer
45	<i>Pallidogramme divaricoides</i> (Räsänen) Pushpi Singh & Kr.P. Singh	<i>Hemithecium divaricoides</i> (Räsänen) V. Tewari & Upreti
46	<i>Pallidogramme nilgiriensis</i> (Kr.P. Singh & D.D. Awasthi) Kr.P. Singh & Swarnalatha	<i>Phaeographina nilgiriensis</i> Kr.P. Singh & D.D. Awasthi
47	<i>Pertusaria leioplaca</i> (Ach.) DC.	<i>Pertusaria alpina</i> Hepp ex Ahles
48	<i>Phaeographis firmula</i> (Stirt.) Pushpi Singh & K.P. Singh	<i>Phaeographina firmula</i> (Stirt.) Zahlbr.
49	<i>Phaeographis lyellii</i> (Sm.) Zahlbr.	<i>Leiorreuma lyellii</i> (Sm.) Staiger
50	<i>Phaeotrema pachysporum</i> (Nyl.) Zahlbr.	<i>Thelotrema pachysporum</i> Nyl.
51	<i>Phyllocharis orbicularis</i> (Fr.) S.H. Jiang, Lücking & Sérus.	<i>Strigula orbicularis</i> Fr.
52	<i>Polymeridium albopruinosum</i> (Makhija & Patw.) Aptroot	<i>Trypethelium albopruinosum</i> Makhija & Patw.
53	<i>Polymeridium refertum</i> (Stirt.) Aptroot	<i>Trypethelium refertum</i> Stirt.
54	<i>Polyzosiadispersa</i> (Pers.) S.Y. Kondr., L. Lökös & Farkas	<i>Lecanoradispersa</i> (Pers.) Röhl.
55	<i>Pseudoschismatomma rufescens</i> (Pers.) Ertz. & Tehler	<i>Opegrapha rufescens</i> Pers.
56	<i>Puiggariella nemathora</i> (Mont.) S.H. Jiang, Lücking & J.C. Wei	<i>Strigulanemathora</i> Mont.
57	<i>Sarcographa intricans</i> (Nyl.) Müll. Arg.	<i>Phaeographis intricans</i> (Nyl.) Staiger
58	<i>Squamulea subsoluta</i> (Nyl.) Arup, Søchting & Frödén	<i>Caloplaca subsoluta</i> (Nyl.) Zahlbr.
59	<i>Synarthonia inconspicua</i> (Stirt.) Van den Broeck & Ertz	<i>Arthonia inconspicua</i> Stirt.
60	<i>Thelotrema allosporoides</i> Nyl.	<i>Ocellularia allosporoides</i> (Nyl.) Patw. & Kulk.
61	<i>Thelotrema velatum</i> Müll. Arg.	<i>Chapsavelata</i> (Müll. Arg.) M. Cáceres & Lücking
62	<i>Viridothelium indutum</i> (Stirt.) Aptroot & Lücking	<i>Trypethelium indutum</i> Stirt.
63	<i>Zwackhia prosodea</i> (Afzel.) Ertz	<i>Opegrapha prosodea</i> Afzel.

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