**Supplementary Material.**

**Supplementary Material** **Table S1.** GenBank accession numbers and accompanying information for the downloaded sequences used in the study. Specimens with two to three sequences were used in the combined analysis.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Species | ITS GenBank No. | LSU GenBank No. | mtSSU GenBank No. | Source |
| *Amandinea punctata* | AF250780 | AY340536 | AY143399 | Arup *et al.* (2013) |
| *Amundsenia approximata* | KJ789965 | KJ789972 | KJ789974 | Søchting *et al.* (2014) |
| *A. austrocontinentalis* | JX036068 | – | KJ789975 | Søchting *et al.* (2014) |
| *Athallia baltistanica* | KR921581 | – | – | Vondrák *et al.* (2016) |
| *A. baltistanica* | KR902665 | – | – | Vondrák *et al.* (2016) |
| *A. cerinella* | FJ346537 | – | – | Arup (2009) |
| *A. cerinella* | FJ346538 | – | – | Arup (2009) |
| *A. cerinelloides* | KC179339 | KC179147 | KC179477 | Arup *et al.* (2013) |
| *A. cerinelloides* | HM582153 | – | – | Vondrák *et al.* (2012) |
| *A. cerinelloides* | KU926977 | – | – | Vondrák *et al.* (2017) |
| *A. holocarpa* | FJ346539 | – | – | Arup (2009) |
| *A. holocarpa* | FJ346541 | – | – | Arup (2009) |
| *A. holocarpa* | FJ346540 | KC179148 | KC179478 | Arup *et al.* (2013) |
| *A. pyracea* | FJ346553 | KC179149 | KC179479 | Arup *et al.* (2013) |
| *A. scopularis* | KC179340 | KC179150 | KC179480 | Arup *et al.* (2013) |
| *Austroplaca ambitiosa* | KC179081 | KC179151 | KC179481 | Arup *et al.* (2013) |
| *A. cirrochrooides* | KC179082 | KC179152 | KC179482 | Arup *et al.* (2013) |
| *A. darbishirei* | KC179083 | KC179153 | KC179483 | Arup *et al.* (2013) |
| *A. hookeri* | KC179085 | KC179154 | KC179484 | Arup *et al.* (2013) |
| *A. lucens* | KC179087 | KC179155 | KC179485 | Arup *et al.* (2013) |
| *A. millegrana* | KC179088 | KC179156 | KC179486 | Arup *et al.* (2013) |
| *A. soropelta* | KC179089 | KC179157 | KC179487 | Arup *et al.* (2013) |
| *Austroplaca* sp. 1 | KC179093 | KC179160 | KC179490 | Arup *et al.* (2013) |
| *Austroplaca* sp. 2 | KC179090 | KC179158 | KC179488 | Arup *et al.* (2013) |
| *Austroplaca* sp. 3 | KC179092 | KC179159 | KC179489 | Arup *et al.* (2013) |
| *Blastenia ammiospila* | KC179413 | KC179161 | KC179491 | Arup *et al.* (2013) |
| *B. crenularia* | KC179415 | KC179162 | KC179492 | Arup *et al.* (2013) |
| *B. ferruginea* | KC179416 | KC179163 | KC179493 | Arup *et al.* (2013) |
| *Brigantiaea* sp. | KC179419 | KC179164 | KC179494 | Arup *et al.* (2013) |
| *Calogaya arnoldii* s.lat. | KC179343 | KC179166 | KC179497 | Arup *et al.* (2013) |
| *C. decipiens* | KC179344 | KC179167 | KC179498 | Arup *et al.* (2013) |
| *"Caloplaca" atroflava* | KC179424 | KC179171 | KC179504 | Arup *et al.* (2013) |
| *C. cerina* | KC179425 | KC179168 | KC179499 | Arup *et al.* (2013) |
| *C. cerina* | HM538546 | – | – | Šoun *et al.* (2011) |
| *C. cerina* | HM538547 | – | – | Šoun *et al.* (2011) |
| *C. cerina* | HM538548 | – | – | Šoun *et al.* (2011) |
| *C. cerina* | HM538542 | – | – | Šoun *et al.* (2011) |
| *C. cerina* | HM538543 | – | – | Šoun *et al.* (2011) |
| *C. cerina* | HM538544 | – | – | Šoun *et al.* (2011) |
| *C. cerina* | HM538545 | – | – | Šoun *et al.* (2011) |
| *C. cerina* | HM538485 | – | – | Šoun *et al.* (2011) |
| *C. cerina* | EU365861 | – | – | Vondrák *et al.* (2008) |
| *C. cerina* | HM538486 | – | – | Šoun *et al.* (2011) |
| *C. cerina* | HM538539 | – | – | Šoun *et al.* (2011) |
| *C. cerina* | HM538540 | – | – | Šoun *et al.* (2011) |
| *C. cerina* | HM538541 | – | – | Šoun *et al.* (2011) |
| *C. cerina* | AF353958 | – | – | Arup & Grube (1999) |
| *C. cerina* | EU681283 | – | – | Fedorenko *et al.* (2009) |
| *C. cerina* | HM538475 | – | – | Šoun *et al.* (2011) |
| *C. cerina* | HM538476 | – | – | Šoun *et al.* (2011) |
| *C. cerina* | HM538477 | – | – | Šoun *et al.* (2011) |
| *C. cerina* | HM538478 | – | – | Šoun *et al.* (2011) |
| *C. cerina* | HM538471 | – | – | Šoun *et al.* (2011) |
| *C. cerina* | HM538472 | – | – | Šoun *et al.* (2011) |
| *C. cerina* | HM538473 | – | – | Šoun *et al.* (2011) |
| *C. cerina* | HM538474 | – | – | Šoun *et al.* (2011) |
| *C. chlorina* | KC179426 | KC179169 | KC179500 | Arup *et al.* (2013) |
| *C. chlorina* | EU365858 | – | – | Vondrák *et al.* (2008) |
| *C. chlorina* | HM538518 | – | – | Šoun *et al.* (2011) |
| *C. chlorina* | HM538520 | – | – | Šoun *et al.* (2011) |
| *"C." demissa* | AF353960 | KC179172 | KC179505 | Arup *et al.* (2013) |
| *"C." erythrocarpa* | KC179427 | KC179173 | KC179506 | Arup *et al.* (2013) |
| *C. fluviatilis* | MG954127 | – | – | Vondrák *et al.* (2019) |
| *C. fluviatilis* | MG954128 | – | – | Vondrák *et al.* (2019) |
| *C. hanneshertelii* | HM538483 | – | – | Šoun *et al.* (2011) |
| *C. isidiigera* | HM538532 | – | – | Šoun *et al.* (2011) |
| *C. isidiigera* | HM538534 | – | – | Šoun *et al.* (2011) |
| *C. isidiigera* | HM538538 | – | – | Šoun *et al.* (2011) |
| *C. monacensis* | HM538506 | – | – | Šoun *et al.* (2011) |
| *C. monacensis* | HM538507 | – | – | Šoun *et al.* (2011) |
| *C. monacensis* | HM538508 | – | – | Šoun *et al.* (2011) |
| *C. monacensis* | HM538502 | – | – | Šoun *et al.* (2011) |
| *C. pinicola* | HM538479 | – | – | Šoun *et al.* (2011) |
| *C.* aff. *pinicola* | HM538480 | – | – | Šoun *et al.* (2011) |
| *C.* aff. *pinicola* | HM538482 | – | – | Šoun *et al.* (2011) |
| *C. sterilis* | HM538528 | – | – | Šoun *et al.* (2011) |
| *C. sterilis* | HM538530 | – | – | Šoun *et al.* (2011) |
| *C. sterilis* | HM538531 | – | – | Šoun *et al.* (2011) |
| *C. stillicidiorum* | HM538569 | – | – | Šoun *et al.* (2011) |
| *C. stillicidiorum* | HM538570 | – | – | Šoun *et al.* (2011) |
| *C. stillicidiorum* | HM538573 | – | – | Šoun *et al.* (2011) |
| *C. stillicidiorum* | HM538470 | – | – | Šoun *et al.* (2011) |
| *C. stillicidiorum* | HM538466 | – | – | Šoun *et al.* (2011) |
| *C. stillicidiorum* | HM538468 | – | – | Šoun *et al.* (2011) |
| *C. stillicidiorum* | HM538461 | – | – | Šoun *et al.* (2011) |
| *C. stillicidiorum* | EU365860 | – | – | Vondrák *et al.* (2008) |
| *C. stillicidiorum* | HM538462 | – | – | Šoun *et al.* (2011) |
| *C. stillicidiorum* | HM538456 | – | – | Šoun *et al.* (2011) |
| *C. stillicidiorum* | HM538459 | – | – | Šoun *et al.* (2011) |
| *C. stillicidiorum* | HM538558 | – | – | Šoun *et al.* (2011) |
| *C. stillicidiorum* | HM538559 | – | – | Šoun *et al.* (2011) |
| *C. stillicidiorum* | HM538560 | – | – | Šoun *et al.* (2011) |
| *C. stillicidiorum* | HM538561 | – | – | Šoun *et al.* (2011) |
| *C. stillicidiorum* | HM538562 | – | – | Šoun *et al.* (2011) |
| *C. stillicidiorum* | HM538565 | – | – | Šoun *et al.* (2011) |
| *C. stillicidiorum* | HM538567 | – | – | Šoun *et al.* (2011) |
| *C. stillicidiorum* | HM538568 | – | – | Šoun *et al.* (2011) |
| *C. stillicidiorum* | HM538550 | – | – | Šoun *et al.* (2011) |
| *C. stillicidiorum* | HM538556 | – | – | Šoun *et al.* (2011) |
| *C. stillicidiorum* | HM538557 | – | – | Šoun *et al.* (2011) |
| *C. stillicidiorum* | HM538554 | – | – | Šoun *et al.* (2011) |
| *C. stillicidiorum* | HM538551 | – | – | Šoun *et al.* (2011) |
| *C. stillicidiorum* | HM538552 | – | – | Šoun *et al.* (2011) |
| *C. stillicidiorum* | HM538574 | – | – | Šoun *et al.* (2011) |
| *C. stillicidiorum* | HM538575 | – | – | Šoun *et al.* (2011) |
| *C. stillicidiorum* | HM538576 | – | – | Šoun *et al.* (2011) |
| *C. stillicidiorum* | HM538577 | – | – | Šoun *et al.* (2011) |
| *C. subalpina* | EU365854 | – | – | Vondrák *et al.* (2008) |
| *C. subalpina* | EU365853 | – | – | Vondrák *et al.* (2008) |
| *C. subalpina* | EU365855 | – | – | Vondrák *et al.* (2008) |
| *"C." teicholyta* | KC179431 | KC179176 | KC179510 | Arup *et al.* (2013) |
| *C. thracopontica* | EU365848 | – | – | Vondrák *et al.* (2008) |
| *C. thracopontica* | HM538525 | – | – | Šoun *et al.* (2011) |
| *C. thracopontica* | HM538527 | – | – | Šoun *et al.* (2011) |
| *C. thracopontica* | HM538524 | – | – | Šoun *et al.* (2011) |
| *C.* aff. *thracopontica* | HM538523 | – | – | Šoun *et al.* (2011) |
| *C. turkuensis* | HM538487 | – | – | Šoun *et al.* (2011) |
| *C. turkuensis* | HM538489 | – | – | Šoun *et al.* (2011) |
| *C. turkuensis* | HM538490 | – | – | Šoun *et al.* (2011) |
| *C. ulmorum* | HM538509 | – | – | Šoun *et al.* (2011) |
| *C. ulmorum* | HM538510 | – | – | Šoun *et al.* (2011) |
| *C. ulmorum* | HM538511 | – | – | Šoun *et al.* (2011) |
| *Cerothallia luteoalba* | KC179099 | KC179177 | KC179511 | Arup *et al.* (2013) |
| *C. yorkensis* | KC179101 | KC179178 | KC179513 | Arup *et al.* (2013) |
| *Dufourea alexerbaai* | KC179350 | KC179179 | KC179514 | Arup *et al.* (2013) |
| *D. angustata* | KC179351 | KC179180 | KC179515 | Arup *et al.* (2013) |
| *D. bonae-spei* | KC179353 | KC179181 | KC179516 | Arup *et al.* (2013) |
| *D. dissectula* | KC179355 | KC179182 | KC179517 | Arup *et al.* (2013) |
| *D. flammea* | KC179357 | KC179183 | KC179518 | Arup *et al.* (2013) |
| *D. karrooensis* | KC179358 | KC179184 | KC179519 | Arup *et al.* (2013) |
| *D. ligulata* | KC179359 | KC179185 | KC179520 | Arup *et al.* (2013) |
| *Fauriea chujaensis* | KX793097 | KX793100 | KX793103 | Kondratyuk *et al.* (2016) |
| *F. orientochinensis* 1 | KX793096 | KX793099 | KX793102 | Kondratyuk *et al.* (2016) |
| *F. orientochinensis* 2 | KX793095 | KX793098 | KX793101 | Kondratyuk *et al.* (2016) |
| *Flavoplaca citrina* | DQ173224 | KC179186 | KC179521 | Arup *et al.* (2013) |
| *F. citrina* | KT934387 | – | – | Vondrák & Malíček (2015) |
| *F. marina* | AF353946 | KC179187 | KC179522 | Arup *et al.* (2013) |
| *F. microthallina* | KC179368 | KC179188 | KC179523 | Arup *et al.* (2013) |
| *F. oasis* | FJ346546 | KC179189 | KC179524 | Arup *et al.* (2013) |
| *F. oasis* | MG954199 | – | – | Vondrák *et al.* (2019) |
| *Flavoplaca* sp. | KC179370 | KC179190 | KC179525 | Arup *et al.* (2013) |
| *Gondwania cribrosa* | KC179102 | KC179192 | KC179526 | Arup *et al.* (2013) |
| *G. regalis* | KC179103 | KC179193 | KC179527 | Arup *et al.* (2013) |
| *Gyalolechia arizonica* | KC179433 | KC179195 | KC179529 | Arup *et al.* (2013) |
| *G. aurea* | KC179434 | KC179196 | KC179530 | Arup *et al.* (2013) |
| *G. flavorubescens* | KC179439 | KC179197 | KC179531 | Arup *et al.* (2013) |
| *G. flavovirescens* | AF353966 | KC179198 | KC179532 | Arup *et al.* (2013) |
| *G. fulgens* | KC179440 | KC179199 | KC179533 | Arup *et al.* (2013) |
| *G. gomerana* | KC179441 | KC179200 | KC179534 | Arup *et al.* (2013) |
| *G. stantonii* | KC179445 | KC179201 | KC179535 | Arup *et al.* (2013) |
| *G. stipitata* | KC179446 | KC179202 | KC179536 | Arup *et al.* (2013) |
| *Haloplaca* sp. | KC179295 | KC179203 | KC179537 | Arup *et al.* (2013) |
| *Josefpoeltia parva* | KC179296 | KC179204 | KC179539 | Arup *et al.* (2013) |
| *J. sorediosa* | KC179297 | KC179205 | KC179540 | Arup *et al.* (2013) |
| *Lendemeriella borealis* | MG954129 | – | – | Vondrák *et al.* (2019) |
| *L. borealis* | KX216688 | – | – | Frolov & Konoreva (2016) |
| *L. borealis* | KX216687 | – | – | Frolov & Konoreva (2016) |
| *L. borealis* | KX216686 | – | – | Frolov & Konoreva (2016) |
| *L. exsecuta* | MG954227 | – | – | Vondrák *et al.* (2019) |
| *L. exsecuta* | MG954211 | – | – | Vondrák *et al.* (2019) |
| *L. exsecuta* | MG954224 | – | – | Vondrák *et al.* (2019) |
| *L. exsecuta* | MG954226 | – | – | Vondrák *et al.* (2019) |
| *L. exsecuta* | MG954130 | – | – | Vondrák *et al.* (2019) |
| *L. exsecuta* | MG954131 | – | – | Vondrák *et al.* (2019) |
| *L. exsecuta* | MG954223 | – | – | Vondrák *et al.* (2019) |
| *L. exsecuta* | MG954225 | – | – | Vondrák *et al.* (2019) |
| *L. nivalis* | MG954222 | – | – | Vondrák *et al.* (2019) |
| *L. sorocarpa* | MG954132 | – | – | Vondrák *et al.* (2019) |
| *L. sorocarpa* | MG773658 | – | – | Vondrák *et al.* (2018) |
| *L. tornoensis* | MG954220 | – | – | Vondrák *et al.* (2019) |
| *L. tornoensis* | MG954221 | – | – | Vondrák *et al.* (2019) |
| *Leproplaca obliterans* | KC179449 | KC179207 | KC179541 | Arup *et al.* (2013) |
| *L. xantholyta* | KC179451 | KC179208 | KC179542 | Arup *et al.* (2013) |
| *Letrouitia vulpina* | KC179452 | KC179209 | KC179543 | Arup *et al.* (2013) |
| *Megalospora tuberculosa* | KC179453 | AY584650 | AY584623 | Arup *et al.* (2013) |
| *Orientophila dodongensis* | KC179373 | KC179211 | KC179545 | Arup *et al.* (2013) |
| *O. loekoesii* | KC179374 | – | – | Arup *et al.* (2013) |
| *O. subscopularis* | KC179375 | – | – | Arup *et al.* (2013) |
| *Orientophila* sp. | KC179372 | KC179210 | KC179544 | Arup *et al.* (2013) |
| *Pachypeltis invadens* | KC179108 | KC179212 | KC179548 | Arup *et al.* (2013) |
| *Pachypeltis* sp. 1 | KC179109 | KC179213 | KC179549 | Arup *et al.* (2013) |
| *Pachypeltis* sp. 2 | KC179110 | KC179214 | KC179550 | Arup *et al.* (2013) |
| *Parvoplaca tiroliensis* | KC179116 | KC179216 | KC179552 | Arup *et al.* (2013) |
| *Parvoplaca* sp. | KC179113 | KC179215 | KC179551 | Arup *et al.* (2013) |
| *Physcia aipolia* | AF250803 | AY300857 | AY143406 | Arup *et al.* (2013) |
| *Polycauliona celaria* | KC179379 | KC179217 | KC179553 | Arup *et al.* (2013) |
| *P. coralloides* | KC179380 | KC179218 | KC179554 | Arup *et al.* (2013) |
| *P. ignea* | KC179382 | KC179219 | KC179555 | Arup *et al.* (2013) |
| *P. luteominia* | KC179387 | KC179220 | KC179556 | Arup *et al.* (2013) |
| *P. phlogina* | DQ173235 | KC179221 | KC179557 | Arup *et al.* (2013) |
| *P. polycarpa* | KC179389 | KC179222 | KC179558 | Arup *et al.* (2013) |
| *P. rosei* | KC179390 | KC179223 | KC179559 | Arup *et al.* (2013) |
| *P. stellata* | KC179400 | KC179229 | KC179566 | Arup *et al.* (2013) |
| *P. tenax* | KC179401 | KC179230 | KC179567 | Arup *et al.* (2013) |
| *P. tenuiloba* | KC179402 | KC179231 | KC179568 | Arup *et al.* (2013) |
| *P. thamnodes* | KC179403 | KC179232 | KC179569 | Arup *et al.* (2013) |
| *P. verruculifera* | KC179404 | KC179233 | KC179570 | Arup *et al.* (2013) |
| *Polycauliona* sp. 1 | KC179392 | KC179224 | KC179560 | Arup *et al.* (2013) |
| *Polycauliona* sp. 2 | KC179393 | KC179225 | KC179561 | Arup *et al.* (2013) |
| *Polycauliona* sp. 3 | KC179394 | KC179226 | KC179562 | Arup *et al.* (2013) |
| *Polycauliona* sp. 4 | KC179396 | KC179227 | KC179563 | Arup *et al.* (2013) |
| *Polycauliona* sp. 5 | KC179397 | KC179228 | KC179564 | Arup *et al.* (2013) |
| *Pyrenodesmia variabilis* | AF353963 | KC179234 | KC179572 | Arup *et al.* (2013) |
| *Rufoplaca scotoplaca* | KC179457 | KC179235 | KC179573 | Arup *et al.* (2013) |
| *R. tristiuscula* | KC179460 | KC179237 | KC179575 | Arup *et al.* (2013) |
| *Rufoplaca* sp. | KC179458 | KC179236 | KC179574 | Arup *et al.* (2013) |
| *Rusavskia elegans* | KC179406 | KC179238 | KC179576 | Arup *et al.* (2013) |
| *R. sorediata* | AY453647 | KC179239 | KC179577 | Arup *et al.* (2013) |
| *Scutaria andina* | KC179298 | KC179242 | KC179581 | Arup *et al.* (2013) |
| *Seirophora lacunosa* | KC179465 | KC179243 | KC179582 | Arup *et al.* (2013) |
| *S. scorigena* | KC179466 | KC179244 | KC179583 | Arup *et al.* (2013) |
| *Shackletonia hertelii* | KC179118 | KC179240 | KC179579 | Arup *et al.* (2013) |
| *S. sauronii* | KC179120 | KC179241 | KC179580 | Arup *et al.* (2013) |
| *Sirenophila bermaguiana* | KC179299 | KC179245 | KC179584 | Arup *et al.* (2013) |
| *S. eos* | KC179300 | KC179246 | KC179585 | Arup *et al.* (2013) |
| *S. gallowayii* | KC179301 | KC179247 | KC179586 | Arup *et al.* (2013) |
| *S. jackelixii* | KC179303 | KC179248 | KC179587 | Arup *et al.* (2013) |
| *S. maccarthyi* | KC179304 | KC179249 | KC179588 | Arup *et al.* (2013) |
| *Sirenophila* sp. | KC179306 | KC179250 | KC179589 | Arup *et al.* (2013) |
| *Solitaria chrysophthalma* | KC179408 | KC179251 | KC179590 | Arup *et al.* (2013) |
| *Squamulea squamosa* | KC179125 | KC179252 | KC179591 | Arup *et al.* (2013) |
| *S. subsoluta* | AF353954 | KC179253 | KC179592 | Arup *et al.* (2013) |
| *Stellarangia elegantissima* | KC179310 | KC179254 | KC179593 | Arup *et al.* (2013) |
| *Teloschistes flavicans* | KC179317 | KC179255 | KC179594 | Arup *et al.* (2013) |
| *T. hypoglaucus* | KC179319 | KC179256 | KC179595 | Arup *et al.* (2013) |
| *Teloschistopsis bonae-spei* | KC179322 | KC179257 | KC179596 | Arup *et al.* (2013) |
| *T. eudoxa* | KC179324 | KC179258 | KC179597 | Arup *et al.* (2013) |
| *Teuvoahtiana altoandina* | KC179094 | KC179170 | KC179503 | Arup *et al.* (2013) |
| *"Teuvoahtiana"* sp. 1 | KC179096 | KC179174 | KC179507 | Arup *et al.* (2013) |
| *"Teuvoahtiana"* sp. 2 | KC179098 | KC179175 | KC179508 | Arup *et al.* (2013) |
| *Usnochroma carphinea* | KC179468 | KC179259 | KC179598 | Arup *et al.* (2013) |
| *U. scoriophila* | KC179469 | KC179260 | KC179599 | Arup *et al.* (2013) |
| *Variospora aurantia* | KC179470 | KC179261 | KC179600 | Arup *et al.* (2013) |
| *V. aurantia* | AY233219 | – | – | Gaya *et al.* (2003) |
| *V. dolomiticola* | KC179471 | KC179262 | KC179601 | Arup *et al.* (2013) |
| *V. flavescens* | KC179473 | KC179263 | KC179602 | Arup *et al.* (2013) |
| *V. flavescens* | EU639601 | – | – | Gaya *et al.* (2008) |
| *V. glomerata* | KC179474 | KC179264 | KC179603 | Arup *et al.* (2013) |
| *V. velana* | KC179476 | KC179265 | KC179605 | Arup *et al.* (2013) |
| *Villophora isidioclada* | KC179325 | KC179266 | KC179606 | Arup *et al.* (2013) |
| *Villophora* sp. | KC179328 | KC179267 | KC179607 | Arup *et al.* (2013) |
| *Wetmoreana decipioides* | KC179333 | KC179269 | KC179608 | Arup *et al.* (2013) |
| *W. texana* | KC179337 | KC179273 | KC179612 | Arup *et al.* (2013) |
| *Wetmoreana* sp. 1 | KC179334 | KC179270 | KC179609 | Arup *et al.* (2013) |
| *Wetmoreana* sp. 2 | KC179335 | KC179271 | KC179610 | Arup *et al.* (2013) |
| *Wetmoreana* sp. 3 | KC179336 | KC179272 | KC179611 | Arup *et al.* (2013) |
| *Xanthocarpia crenulatella* | KC179126 | KC179274 | KC179613 | Arup *et al.* (2013) |
| *X. epigaea* | KC179127 | KC179275 | KC179614 | Arup *et al.* (2013) |
| *X. marmorata* | KC179131 | KC179276 | KC179615 | Arup *et al.* (2013) |
| *Xanthomendoza borealis* | KC179133 | KC179278 | KC179617 | Arup *et al.* (2013) |
| *X. fallax* | AF353955 | KC179279 | KC179618 | Arup *et al.* (2013) |
| *X. hasseana* | KC179136 | KC179280 | KC179619 | Arup *et al.* (2013) |
| *X. mendozae* | KC179138 | KC179281 | KC179620 | Arup *et al.* (2013) |
| *X. poeltii* | KC179142 | KC179282 | KC179622 | Arup *et al.* (2013) |
| *X. trachyphylla* | KC179143 | KC179283 | KC179623 | Arup *et al.* (2013) |
| *X. ulophyllodes* | KC179144 | KC179284 | KC179624 | Arup *et al.* (2013) |
| *X. weberi* | KC179145 | KC179285 | KC179625 | Arup *et al.* (2013) |
| *Xanthopeltis rupicola* | KC179146 | KC179286 | KC179626 | Arup *et al.* (2013) |
| *Xanthoria calcicola* | AF353944 | KC179287 | KC179627 | Arup *et al.* (2013) |
| *X.* cf. *stiligera* | KC179409 | KC179288 | KC179628 | Arup *et al.* (2013) |
| *X. parietina* | KC179411 | KC179289 | KC179629 | Arup *et al.* (2013) |
| *X. resendei* | AF101285 | KC179290 | KC179630 | Arup *et al.* (2013) |

References

**Arup U** (2009) The *Caloplaca holocarpa* group in the Nordic countries, except Iceland. *Lichenologist* **41**, 111–130.

**Arup U and Grube M** (1999) Where does *Lecanora demissa* (Ascomycota, *Lecanorales*) belong? *Lichenologist* **31**, 419–430.

**Arup U, Søchting U and Fröden P** (2013) A new taxonomy of the family *Teloschistaceae*. *Nordic Journal of Botany* **31**, 16–83.

**Fedorenko NM, Stenroos S, Thell A, Kärnefelt I and Kondratyuk SY** (2009) A phylogenetic analysis of xanthorioid lichens (*Teloschistaceae*, Ascomycota) based on ITS and mtSSU sequences. *Bibliotheca Lichenologica* **100**, 49–84.

**Frolov I and Konoreva L** (2016) New records of crustose *Teloschistaceae* (lichens, Ascomycota) from the Murmansk region of Russia. *Polish Polar Research* **37**, 421–434.

**Gaya E, Lutzoni F, Zoller S and Navarro-Rosinés P** (2003) Phylogenetic study of *Fulgensia* and allied *Caloplaca* and *Xanthoria* species (*Teloschistaceae*, lichen-forming Ascomycota). *American Journal of Botany* **90**, 1095–1103.

**Gaya E, Navarro-Rosinés P, Llimona X, Hladun N and Lutzoni F** (2008) Phylogenetic reassessment of the *Teloschistaceae* (lichen-forming Ascomycota, Lecanoromycetes). *Mycological research* **112**, 528–546.

**Kondratyuk SY, Lőkös L, Kim JA, Kondratiuk AS, Jeong M-H, Jang SH, Oh S-O, Wang XY and Hur J-S** (2016) *Fauriea*, a new genus of the lecanoroid caloplacoid lichens (*Teloschistaceae*, lichen-forming ascomycetes). *Acta Botanica Hungarica* **58**, 303–318.

**Søchting U, Garrido-Benavent I, Seppelt R, Castello M, Pérez-Ortega S, de los Ríos Murillo A, Frödén P and Arup U** (2014) *Charcotiana* and *Amundsenia*, two new genera in *Teloschistaceae* (lichenized Ascomycota, subfamily *Xanthorioideae*) hosting two new species from continental Antarctica, and *Austroplaca frigida*, a new name for a continental Antarctic species. *Lichenologist* **46**, 763–782.

**Šoun J, Vondrák J, Søchting U, Hrouzek P, Khodosovtsev A and Arup U** (2011) Taxonomy and phylogeny of the *Caloplaca cerina* group in Europe. *Lichenologist* **43**, 113–135.

**Vondrák J and Malíček J** (2015) *Teloschistaceae* of the localities Velká kotlina and Petrovy kameny v Hrubý Jeseník Mts. *Bryonora* **56**, 45–55. (In Czech).

**Vondrák J, Šoun J, Hrouzek P, Říha P, Kubásek J, Palice Z and Søchting U** (2008) *Caloplaca subalpina* and *C*. *thracopontica*, two new saxicolous species from the *Caloplaca cerina* group (*Teloschistaceae*). *Lichenologist* **40**, 375–386.

**Vondrák J, Khodosovtsev A, Šoun J and Vondráková O** (2012) Two new European species from the heterogeneous *Caloplaca holocarpa* group (*Teloschistaceae*). *Lichenologist* **44**, 73–89.

**Vondrák J, Halıcı MG, Güllü M and Demirel R** (2016) Contributions to the genus *Athallia* and its diversity in Turkey. *Turkish Journal of Botany* **40**, 319–328.

**Vondrák J, Ismailov A and Urbanavichus G** (2017) Lichens of the family *Teloschistaceae* in Dagestan, an eastern part of the Caucasian biodiversity hot-spot. *Nova Hedwigia* **104**, 483–498.

**Vondrák J, Malíček J, Palice Z, Bouda F, Berger F, Sanderson N, Acton A, Pouska V and Kish R** (2018) Exploiting hot-spots; effective determination of lichen diversity in a Carpathian virgin forest. *PLoS ONE* **13**, e0203540.

**Vondrák J, Frolov I, Davydov EA, Yakovchenko L, Malíček J, Svoboda S and Kubásek J** (2019) The lichen family *Teloschistaceae* in the Altai-Sayan region (Central Asia). *Phytotaxa* **396**, 1–66.