**APPENDIX S4**. Samples used in the GoFlag 451 targeted enrichment experiment.

| **Family** | **Taxona** | **Herbariumb** | **Collection number** | **NCBI accession** | **Sample ID** | **Total DNA**  **(ng)** | **Total library DNA (ng)** | **Total mapped read pairs** | **Total read pairs** | **Proportion reads mapped** | **Loci** | **Conta-minant loci** | **Total length exons (bp)** | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| FERNS |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Aspleniaceae | *Asplenium adiantum-nigrum* L.\* | H | Vare, H. 1766362 | SAMN14843933 | UFG\_393201\_P03\_WE10 | 3412.90 | 1152.14 | 5608 | 196330 | 0.03 | 13 | 0 | 3168 |
| Aspleniaceae | *Asplenium holstii* Hieron. | H | Vare, H. 1766233 | SAMN14888153 | UFG\_393201\_P03\_WF10 | 3121.12 | 1110.16 | 261945 | 1507476 | 0.17 | 327 | 5 | 66194 |
| Athyriaceae | *Diplazium hymenodes* (Mett.) Á. Löve & D. Löve | VT | Fawcett, S. 377 | SAMN14888154 | UFG\_393201\_P03\_WH09 | 1949.39 | 263.94 | 117306 | 561388 | 0.21 | 366 | 8 | 71369 |
| Blechnaceae | *Austroblechnum divergens* (Kunze) Gasper & V. A. O. Dittrich | VT | Fawcett, S. 482 | SAMN14888155 | UFG\_393201\_P03\_WA07 | 830.65 | 586.79 | 433550 | 1704712 | 0.25 | 419 | 5 | 80060 |
| Blechnaceae | *Parablechnum lineatum* (Sw.) Gasper & Salino | VT | Fawcett, S. 477 | SAMN14888156 | UFG\_393201\_P03\_WB07 | 1709.91 | 579.38 | 354589 | 1127088 | 0.31 | 419 | 6 | 79823 |
| Blechnaceae | *Blechnum polypodioides* Raddi | VT | Fawcett, S. 442 | SAMN14888157 | UFG\_393201\_P03\_WC07 | 1630.36 | 747.09 | 342175 | 1035576 | 0.33 | 426 | 4 | 80796 |
| Blechnaceae | *Lorinseria areolata* (L.) C. Presl | SEL | Living accession: 2014-0164A | SAMN14888158 | UFG\_393201\_P03\_WF06 | 2955.08 | 888.05 | 36813 | 284662 | 0.13 | 80 | 0 | 17714 |
| Ophioglossaceae | *Sceptridium multifidum* Nishida ex Tagawa | CBG | Williams, E. 1084 | SAMN14888159 | UFG\_393201\_P03\_WE06 | 1530.48 | 663.95 | 292337 | 1009460 | 0.29 | 402 | 2 | 75763 |
| Cyatheaceae | *Cyathea dombeyi* (Desv.) Lellinger | BONN, STU | Lehnert, M. 1998 | SAMN14888160 | UFG\_393201\_P03\_WH05 | 2485.83 | 1081.82 | 147455 | 629754 | 0.23 | 377 | 2 | 72648 |
| Dennstaedtiaceae | *Dennstaedtia bipinnata* (Cav.) Maxon | VT | Fawcett, S. 470 | SAMN14888161 | UFG\_393201\_P03\_WG07 | 3192.71 | 838.05 | 28644 | 291452 | 0.10 | 69 | 0 | 14115 |
| Dicksoniaceae | *Dicksonia mollis* Holttum | TAIF | Chen, C.W. 4279 | SAMN14888162 | UFG\_393201\_P03\_WA05 | 3274.80 | 1141.04 | 186943 | 863028 | 0.22 | 344 | 6 | 68288 |
| Dicksoniaceae | *Dicksonia sciurus* C. Chr. | TAIF | Chen, C.W. 3355 | SAMN14888163 | UFG\_393201\_P03\_WB05 | 1968.90 | 819.89 | 78118 | 514626 | 0.15 | 185 | 4 | 39677 |
| Dicksoniaceae | *Dicksonia stuebelii* Hieron. | BONN | Tejedor A., s.n. | SAMN14888164 | UFG\_393201\_P03\_WC05 | 3498.11 | 820.43 | 124738 | 721202 | 0.17 | 299 | 6 | 60628 |
| Dicksoniaceae | *Lophosoria quadripinnata* (J. F. Gmel.) C. Chr. (#3) | BONN, STU | Beaverhausen, A. 3812 | SAMN14888165 | UFG\_393201\_P03\_WD05 | 2323.14 | 705.17 | 463510 | 1009476 | 0.46 | 419 | 5 | 79815 |
| Dicksoniaceae | *Lophosoria quadripinnata* (J. F. Gmel.) C. Chr. (#1) | SP | Prado J. & Hirai R. 2139 | SAMN14888166 | UFG\_393201\_P03\_WF05 | 479.77 | 929.17 | 923505 | 1925522 | 0.48 | 427 | 6 | 80762 |
| Dicksoniaceae | *Lophosoria quadripinnata* (J. F. Gmel.) C. Chr. (#2) | E | 20071644 SBAR#50 | SAMN14888167 | UFG\_393201\_P03\_WE05 | 693.48 | 771.94 | 803407 | 1587992 | 0.51 | 425 | 5 | 80528 |
| Dicksoniaceae | *Lophosoria* sp. | BONN, STU | Beaverhausen A. 3811 | SAMN14888168 | UFG\_393201\_P03\_WG05 | 1952.97 | 881.96 | 1653206 | 3574690 | 0.46 | 428 | 5 | 81002 |
| Dryopteridaceae | *Ctenitis nemorosa* (Willd.) Ching\* | VT | Fawcett, S. 362 | SAMN14888169 | UFG\_393201\_P03\_WE07 | 3254.02 | 743.11 | 8778 | 145580 | 0.06 | 26 | 0 | 5679 |
| Dryopteridaceae | *Dryopteris antarctica* (Baker) C. Chr. | H | Vare, H. 1766365 | SAMN14888170 | UFG\_393201\_P03\_WA10 | 3043.53 | 1347.09 | 275195 | 1031696 | 0.27 | 371 | 7 | 72487 |
| Dryopteridaceae | *Dryopteris filipaleata* J. P. Roux | H\* | Fraser-Jenkins 12314 | SAMN14888171 | UFG\_393201\_P03\_WB10 | 3271.68 | 1194.33 | 107548 | 443110 | 0.24 | 226 | 1 | 49482 |
| Dryopteridaceae | *Dryopteris manniana* (Hook.) C. Chr. | H | Vare, H. 1766228 | SAMN14888172 | UFG\_393201\_P03\_WC10 | 1777.46 | 1164.64 | 281638 | 944946 | 0.30 | 397 | 5 | 76790 |
| Dryopteridaceae | *Dryopteris patula* (Sw.) Underw. | NY | Sundue, M. 1104 | SAMN14888173 | UFG\_393201\_P03\_WG06 | 76.56 | 665.14 | 468892 | 1862664 | 0.25 | 431 | 5 | 81778 |
| Dryopteridaceae | *Dryopteris pentheri* (Krasser) C. Chr.\* | H\* | Fraser-Jenkins 12327 (H1573009 Reunion) | SAMN14888174 | UFG\_393201\_P03\_WD10 | 2475.90 | 451.69 | 8347 | 96344 | 0.09 | 21 | 0 | 5151 |
| Dryopteridaceae | *Elaphoglossum aschersonii* Hieron. | NY\* | Moran, R. 7645 | SAMN14888175 | UFG\_393201\_P03\_WF09 | 3059.00 | 1182.42 | 457724 | 1765062 | 0.26 | 413 | 7 | 79085 |
| Dryopteridaceae | *Elaphoglossum bellermannianum* (Klotzsch) T. Moore | HUA, MO, NY | Vasco, A. 506 | SAMN14888176 | UFG\_393201\_P03\_WG09 | 3632.39 | 1226.71 | 657862 | 2560436 | 0.26 | 418 | 4 | 79777 |
| Dryopteridaceae | *Elaphoglossum engelii* (H. Karst.) Christ | HUA, NY | Vasco, A. 794 | SAMN14888177 | UFG\_393201\_P03\_WD09 | 2667.92 | 1103.05 | 95877 | 394770 | 0.24 | 290 | 2 | 58692 |
| Dryopteridaceae | *Elaphoglossum lehmannianum* Christ | MER, NY, VEN | Vasco, A. 806 | SAMN14888178 | UFG\_393201\_P03\_WH08 | 3286.35 | 1053.37 | 167082 | 685608 | 0.24 | 360 | 3 | 70811 |
| Dryopteridaceae | *Elaphoglossum novogranatense* A. Vasco | HUA, NY | Vasco, A. 746 | SAMN14888179 | UFG\_393201\_P03\_WA09 | 3520.62 | 1374.14 | 399613 | 1739426 | 0.23 | 416 | 4 | 79330 |
| Dryopteridaceae | *Elaphoglossum oreophilum* A. Vasco | HUA, MO, NY | Vasco, A. 600 | SAMN14888180 | UFG\_393201\_P03\_WB09 | 3237.62 | 1220.57 | 67101 | 335812 | 0.20 | 198 | 2 | 43039 |
| Dryopteridaceae | *Elaphoglossum ruficomum* Mickel | LPB, NY | Labiak, P. 2896 | SAMN14888181 | UFG\_393201\_P03\_WE09 | 3102.30 | 992.53 | 178541 | 691046 | 0.26 | 367 | 3 | 71182 |
| Dryopteridaceae | *Elaphoglossum yatesii* (Sodiro) Christ\* | NY | Moran, R. 6908 | SAMN14888182 | UFG\_393201\_P03\_WC09 | 3602.49 | 1270.14 | 11845 | 217954 | 0.05 | 27 | 1 | 6248 |
| Dryopteridaceae | *Polystichum lachenense* (Hook.) Bedd. | NY | 27954 | SAMN14888183 | UFG\_393201\_P03\_WH06 | 37.47 | 406.62 | 160427 | 401442 | 0.40 | 340 | 2 | 66897 |
| Dryopteridaceae | *Polystichum monticola* N. C. Anthony & Schelpe | NGB\* | Roux, J.P. 4715 | SAMN14888184 | UFG\_393201\_P03\_WH10 | 1494.00 | 829.97 | 471332 | 943020 | 0.50 | 431 | 3 | 81744 |
| Gleicheniaceae | *Gleichenella pectinata* (Willd.) Ching | VT | Fawcett, S. 444 | SAMN14888185 | UFG\_393201\_P03\_WH07 | 1190.21 | 831.31 | 422081 | 1116308 | 0.38 | 347 | 19 | 65322 |
| Polypodiaceae | *Cochlidium serrulatum* (Sw.) L. E. Bishop | VT | Fawcett, S. 486 | SAMN14888186 | UFG\_393201\_P03\_WD07 | 1514.09 | 849.42 | 431682 | 981350 | 0.44 | 426 | 5 | 80835 |
| Hymenophyllaceae | *Vandenboschia radicans* (Sw.) Copel. | VT | Fawcett, S. 446 | SAMN14888187 | UFG\_393201\_P03\_WF08 | 3250.09 | 1055.04 | 16456 | 718132 | 0.02 | 57 | 0 | 13075 |
| Lindsaeaceae | *Sphenomeris clavata* (L.) Maxon | VT | Fawcett, S. 450 | SAMN14888188 | UFG\_393201\_P03\_WE08 | 1658.53 | 516.67 | 453903 | 1200880 | 0.38 | 402 | 3 | 75154 |
| Lomariopsidaceae | *Lomariopsis sorbifolia* (L.) Fée.\* | VT | Fawcett, S. 376 | SAMN14888189 | UFG\_393201\_P03\_WC08 | 3427.44 | 636.74 | 5016 | 131356 | 0.04 | 11 | 0 | 2105 |
| Marattiaceae | *Danaea nodosa* (L.) Sm. | VT | Fawcett, S. 475 | SAMN14888190 | UFG\_393201\_P03\_WF07 | 186.54 | 493.74 | 297473 | 1516358 | 0.20 | 373 | 7 | 71850 |
| Ophioglossaceae | *Botrychium alaskense* W. H. Wagner & J. R. Grant (#1) | CBG | Williams, E. 1082 | SAMN14888191 | UFG\_393201\_P03\_WD06 | 3699.13 | 979.06 | 51323 | 557906 | 0.09 | 95 | 2 | 22254 |
| Ophioglossaceae | *Botrychium alaskense* W. H. Wagner & J. R. Grant (#2)\* | CBG | Williams, E. 1083 | SAMN14888192 | UFG\_393201\_P03\_WC06 | 3346.62 | 525.99 | 8657 | 296306 | 0.03 | 23 | 1 | 5522 |
| Ophioglossaceae | *Botrychium lanceolatum* (S. G. Gmel.) Ångström\* | CBG | Williams, E. 1081 | SAMN14888193 | UFG\_393201\_P03\_WB06 | 2888.11 | 506.37 | 14694 | 404640 | 0.04 | 29 | 1 | 6907 |
| Ophioglossaceae | *Botrypus virginianus* (L.) Michx. | CBG | Williams, E. 1079 | SAMN14888194 | UFG\_393201\_P03\_WA06 | 736.20 | 820.70 | 503462 | 1831710 | 0.27 | 412 | 5 | 77080 |
| Pteridaceae | *Cheilanthes hastata* Kunze | NGB\* | Nicholson, G. & Roets, D. 882 | SAMN14888195 | UFG\_393201\_P03\_WG10 | 1729.43 | 843.65 | 748616 | 2133598 | 0.35 | 434 | 3 | 81392 |
| Pteridaceae | *Vittaria lineata* (L.) Sm.\* | VT | Fawcett, S. 449 | SAMN14888196 | UFG\_393201\_P03\_WG08 | 3788.96 | 1343.64 | 30236 | 361766 | 0.08 | 16 | 0 | 4066 |
| Thelypteridaceae | *Goniopteris abdita* (Proctor) Salino & T. E. Almeida | VT | Fawcett, S. 457 | SAMN14888197 | UFG\_393201\_P03\_WA08 | 2131.01 | 598.76 | 415693 | 1162478 | 0.36 | 382 | 3 | 74466 |
| Thelypteridaceae | *Goniopteris retroflexa* (L.) Salino & T.E. Almeida | VT | Fawcett, S. 471 | SAMN14888198 | UFG\_393201\_P03\_WB08 | 2992.49 | 1127.19 | 364187 | 952390 | 0.38 | 431 | 3 | 81812 |
| Thelypteridaceae | *Macrothelypteris torresiana* (Gaudich.) Ching | VT | Fawcett, S. 394 | SAMN14888199 | UFG\_393201\_P03\_WD08 | 3024.36 | 762.18 | 420359 | 738786 | 0.57 | 417 | 3 | 79986 |
| GYMNOSPERMS |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Araucariaceae | *Agathis robusta* (C. Moore ex F. Muell.) F. M. Bailey | NSW | Nagalingum, N. 43072 | SAMN14888200 | UFG\_393201\_P03\_WH11 | 3305.51 | 1277.95 | 58517 | 176886 | 0.33 | 289 | 0 | 60682 |
| Zamiaceae | *Bowenia spectabilis* Hook. | NSW | Nagalingum, N. 15-01 | SAMN14888201 | UFG\_393201\_P03\_WC12 | 3178.73 | 965.27 | 104301 | 248846 | 0.42 | 161 | 11 | 35517 |
| Cupressaceae | *Callitris monticola* J. Garden | NSW | Allen & N. Nagalingum 43077 | SAMN14888202 | UFG\_393201\_P03\_WF11 | 2966.97 | 1009.08 | 1019338 | 1693380 | 0.60 | 435 | 3 | 83196 |
| Zamiaceae | *Ceratozamia kuesteriana* Regel | NSW | Nagalingum, N. 15-60 | SAMN14888203 | UFG\_393201\_P03\_WD12 | 1975.37 | 1064.09 | 78566 | 407448 | 0.19 | 296 | 7 | 60706 |
| Cycadaceae | *Cycas revoluta* Thunb. | NSW | Nagalingum, N. 15-31 | SAMN14888204 | UFG\_393201\_P03\_WG11 | 3472.82 | 1331.03 | 9094 | 100274 | 0.09 | 49 | 2 | 11525 |
| Zamiaceae | *Dioon mejiae* Standl. & L. O. Williams | NSW | Nagalingum, N. 15-06 | SAMN14888205 | UFG\_393201\_P03\_WE12 | 2410.55 | 1013.28 | 810283 | 1479716 | 0.55 | 378 | 6 | 73419 |
| Ephedraceae | *Ephedra trifurca* Torr. ex S. Watson | ALA | Ickert-Bond, S. 753 | SAMN14888206 | UFG\_393201\_P03\_WH12 | 3572.93 | 887.35 | 33953 | 142600 | 0.24 | 93 | 2 | 17920 |
| Ginkgoaceae | *Ginkgo biloba* L. | NSW | Nagalingum, N. 15-37 | SAMN14888207 | UFG\_393201\_P03\_WB11 | 3350.78 | 1288.51 | 74960 | 220228 | 0.34 | 321 | 4 | 62706 |
| Gnetaceae | *Gnetum gnemon* L. | FLAS | Endara, L. 1647 | SAMN14888208 | UFG\_393201\_P03\_WG12 | 3616.34 | 1264.86 | 56311 | 183166 | 0.31 | 215 | 1 | 44028 |
| Zamiaceae | *Macrozamia johnsonii* D. L. J ones & K. D. Hill | NSW | Nagalingum, N. 15-20 | SAMN14888209 | UFG\_393201\_P03\_WA12 | 2605.34 | 985.96 | 535136 | 1232060 | 0.43 | 363 | 6 | 70271 |
| Pinaceae | *Pinus pinaster* Aiton | NSW | Nagalingum, N. 16-35 | SAMN14888210 | UFG\_393201\_P03\_WC11 | 2711.68 | 1141.63 | 171171 | 675070 | 0.25 | 308 | 1 | 63730 |
| Podocarpaceae | *Podocarpus smithii* de Laub. | NSW | Nagalingum, N. 16-71 | SAMN14888211 | UFG\_393201\_P03\_WA11 | 1847.08 | 1165.82 | 441289 | 997798 | 0.44 | 436 | 2 | 84184 |
| Sciadopityaceae | *Sciadopitys verticillata* (Thunb.) Siebold & Zucc. | NSW | Nagalingum, N. 16-94 | SAMN14888212 | UFG\_393201\_P03\_WD11 | 3004.85 | 1193.03 | 170060 | 539192 | 0.32 | 374 | 4 | 73704 |
| Taxaceae | *Taxus baccata* L. | NSW | Nagalingum, N. 16-96 | SAMN14888213 | UFG\_393201\_P03\_WE11 | 3226.31 | 1426.83 | 133181 | 360754 | 0.37 | 349 | 0 | 70392 |
| Welwitschiaceae | *Welwitschia mirabilis* Hook. f. | FLAS | UF Dept. Biology Greenhouse | SAMN14888214 | UFG\_393201\_P03\_WF12 | 2590.33 | 1005.20 | 834623 | 1551488 | 0.54 | 382 | 5 | 71902 |
| Zamiaceae | *Zamia integrifolia* L. f. ex Aiton | NSW | Nagalingum, N. 15-52 | SAMN14888215 | UFG\_393201\_P03\_WB12 | 3717.84 | 1245.95 | 68993 | 254576 | 0.27 | 211 | 5 | 45253 |
| HORNWORTS |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Anthocerotaceae | *Anthoceros erectus* Kashyap | PSU\* | Chantanaorrapint, S. & Suwanmala, O. 606 | SAMN14888216 | UFG\_393201\_P02\_WG01 | 841.85 | 38.49 | 987676 | 1975380 | 0.50 | 393 | 26 | 74027 |
| Anthocerotaceae | *Anthoceros* tuberculatus Lehm. & Lindenb. | QFA | Villarreal, JC. PA-16-1519 | SAMN14888217 | UFG\_393201\_P02\_WC01 | 424.73 | 105.31 | 673172 | 1579606 | 0.43 | 380 | 294 | 70892 |
| Leiosporocerotaceae | *Leiosporoceros dussii* (Steph.) Hässel | QFA | Villarreal, JC. PA-16-1508 | SAMN14888218 | UFG\_393201\_P02\_WA01 | 826.50 | 130.01 | 2607050 | 3314264 | 0.79 | 341 | 24 | 64831 |
| Notothyladaceae | *Notothylas levieri* Schiffn. | PSU\* | Chantanaorrapint, S. & Suwanmala, O. 607 | SAMN14888219 | UFG\_393201\_P02\_WH01 | 986.41 | 155.95 | 56351 | 380986 | 0.15 | 207 | 15 | 39525 |
| Anthocerotaceae | *Phaeoceros exiguus* (Steph.) J. Haseg. | PSU\* | Chantanaorrapint, S. & Suwanmala, O. 612 | SAMN14888220 | UFG\_393201\_P02\_WA02 | 1287.66 | 33.07 | 162664 | 432480 | 0.38 | 361 | 6 | 69120 |
| Anthocerotaceae | *Phaeoceros himalayensis* Prosk. | PSU\* | Chantanaorrapint, S. & Suwanmala, O. 651 | SAMN14888221 | UFG\_393201\_P02\_WB02 | 1398.28 | 341.65 | 168498 | 373412 | 0.45 | 384 | 5 | 73431 |
| Anthocerotaceae | *Phaeoceros kashyapii* A. K. Asthana & S. C. Srivast. | PSU\* | Chantanaorrapint, S. & Suwanmala, O. 718A | SAMN14888222 | UFG\_393201\_P02\_WH02 | 940.00 | 138.25 | 283799 | 708310 | 0.40 | 391 | 9 | 74350 |
| Anthocerotaceae | *Phaeoceros perpusillus* Chantanaorr. | PSU\* | Chantanaorrapint, S. & Suwanmala, O. 717 | SAMN14888223 | UFG\_393201\_P02\_WG02 | 857.79 | 72.67 | 678109 | 1641438 | 0.41 | 406 | 22 | 76826 |
| Anthocerotaceae | *Phaeoceros* sp. 1 | PSU\* | Chantanaorrapint, S. & Suwanmala, O. 716A | SAMN14888224 | UFG\_393201\_P02\_WE02 | 320.46 | 19.33 | 592553 | 972772 | 0.61 | 396 | 9 | 75096 |
| Anthocerotaceae | *Phaeoceros* sp. 2 | PSU\* | Chantanaorrapint, S. & Suwanmala, O. 716B | SAMN14888225 | UFG\_393201\_P02\_WF02 | 471.21 | 9.22 | 197300 | 428104 | 0.46 | 264 | 4 | 50604 |
| Anthocerotaceae | *Phaeoceros* sp. 3 | PSU\* | Chantanaorrapint, S. & Suwanmala, O. 604 | SAMN14888226 | UFG\_393201\_P02\_WF01 | 1574.70 | 235.23 | 438957 | 1578922 | 0.28 | 398 | 18 | 75532 |
| Anthocerotaceae | *Phaeoceros* sp. 4 | FLAS | Endara, L. 1648 | SAMN14888227 | UFG\_393201\_P02\_WD01 | 786.66 | 132.61 | 1277271 | 2036552 | 0.63 | 406 | 146 | 76637 |
| Dendrocerotaceae | *Phaeomegaceros fimbriatus* (Gottsche) R. J. Duff, J. C. Villarreal, Cargill & Renzaglia | QFA | Villarreal, JC. PA-16-1515 | SAMN14888228 | UFG\_393201\_P02\_WB01 | 1562.12 | 135.17 | 1432524 | 3092390 | 0.46 | 411 | 373 | 77379 |
| Phymatocerotaceae | *Phymatoceros* sp. | PSU\* | Chantanaorrapint, S. & Suwanmala, O. 507 | SAMN14888229 | UFG\_393201\_P02\_WE01 | 1950.43 | 497.77 | 268072 | 1066974 | 0.25 | 384 | 13 | 72913 |
| LIVERWORTS |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Plagiochilaceae | *Acrochila biserialis* (Lehm. & Lindenb.) Grolle | F\* | Pocs 0060B | SAMN14888230 | UFG\_393201\_P02\_WC08 | 31.86 | 177.20 | 285863 | 1339204 | 0.21 | 348 | 12 | 63927 |
| Adelanthaceae | *Adelanthus lindenbergianus* (Lehm.) Mitt.\* | F\* | Larraín, J. 37213 | SAMN14888231 | UFG\_393201\_P02\_WA05 | 59.62 | 18.18 | 5434 | 157262 | 0.03 | 22 | 2 | 4117 |
| Aneuraceae | *Aneura pinguis* (L.) Dumort.\* | F\* | Larraín, J. 38674 | SAMN14888232 | UFG\_393201\_P02\_WE07 | 2293.70 | 91.52 | 542 | 422898 | 0.00 | 4 | 0 | 718 |
| Cephaloziaceae | *Anomoclada portoricensis* (Hampe & Gottsche) Váňa | F\* | Pocs 00226A | SAMN14888233 | UFG\_393201\_P02\_WD08 | 58.93 | 98.27 | 586044 | 1264532 | 0.46 | 411 | 11 | 75626 |
| Antheliaceae | *Anthelia juratzkana* (Limpr.) Trevis.\* | F\* | Brinda et al. 5235 | SAMN14888234 | UFG\_393201\_P02\_WB08 | 1033.18 | 21.17 | 7160 | 104136 | 0.07 | 39 | 3 | 7492 |
| Balantiopsidaceae | *Balantiopsis splendens* (Steph.) J. J. Engel & G. L. Merr. | F\* | Larraín, J. 36405 | SAMN14888235 | UFG\_393201\_P02\_WA03 | 1505.89 | 134.62 | 640087 | 1405682 | 0.46 | 407 | 10 | 74880 |
| Lepidoziaceae | *Bazzania bescherellei* (Steph.) Tixier | F\* | Larraín, J. 36062 | SAMN14888236 | UFG\_393201\_P02\_WF06 | 35.10 | 197.98 | 1082916 | 2491358 | 0.43 | 400 | 135 | 72907 |
| Scapaniaceae | *Blepharidophyllum densifolium* (Hook.) Ångström ex C. Massal. | F\* | Larraín, J. 37219a | SAMN14888237 | UFG\_393201\_P02\_WB05 | 87.88 | 259.98 | 836291 | 1717818 | 0.49 | 405 | 12 | 74305 |
| Lejeuneaceae | *Ceratolejeunea cornuta* (Lindenb.) Schiffner | F\* | Larraín, J. 35741 | SAMN14888238 | UFG\_393201\_P02\_WG05 | 404.05 | 13.74 | 88052 | 576306 | 0.15 | 144 | 19 | 25747 |
| Jungermanniaceae | *Chandonanthus hirtellus* (F. Weber) Mitt. | F\* | Pocs 04121AC | SAMN14888239 | UFG\_393201\_P02\_WF08 | 4.93 | 92.63 | 807406 | 1573130 | 0.51 | 408 | 84 | 75154 |
| Chonecoleaceae | *Clasmatocolea humilis* (Hook. f. & Taylor) Grolle\* | F\* | Larraín, J. 37644 | SAMN14888240 | UFG\_393201\_P02\_WB03 | 1063.54 | 1.96 | 760 | 37132 | 0.02 | 4 | 0 | 751 |
| Adelanthaceae | *Cryptochila grandiflora* (Lindenb. & Gottsche) Grolle | F\* | Larraín, J. 26449B | SAMN14888241 | UFG\_393201\_P02\_WF03 | 23.09 | 229.77 | 827442 | 1860230 | 0.44 | 401 | 13 | 73998 |
| Marchantiaceae | *Dumortiera hirsuta* (Sw.) Nees | F\* | Larraín, J. 38146 | SAMN14888242 | UFG\_393201\_P02\_WC07 | 1086.29 | 640.64 | 504742 | 1169378 | 0.43 | 389 | 10 | 71645 |
| Frullaniaceae | *Frullania fertilis* De Not. | F\* | Larraín, J. 38372 | SAMN14888243 | UFG\_393201\_P02\_WD04 | 1765.22 | 721.60 | 127753 | 575830 | 0.22 | 305 | 10 | 56858 |
| Lepidolaenaceae | *Gackstroemia schwabei* (Herzog) Grolle | F\* | Larraín, J. 26591 | SAMN14888244 | UFG\_393201\_P02\_WG04 | 598.32 | 448.70 | 563471 | 1580652 | 0.36 | 393 | 15 | 72542 |
| Acrobolbaceae | *Goebelobryum unguiculatum* (Hook. f. & Taylor) Grolle | F\* | Larraín, J. 35837 | SAMN14888245 | UFG\_393201\_P02\_WE06 | 377.57 | 23.55 | 311832 | 671958 | 0.46 | 361 | 13 | 66516 |
| Jungermanniaceae | *Jamesoniella colorata* (Lehm.) Steph.\* | F\* | Larraín, J. 37744 | SAMN14888246 | UFG\_393201\_P02\_WC04 | 19.84 | 69.34 | 4606 | 644526 | 0.01 | 23 | 1 | 4517 |
| Pallavicinaceae | *Jensenia decipiens* (Mitt.) Grolle | F\* | Larraín, J. 37825 | SAMN14888247 | UFG\_393201\_P02\_WG07 | 18.46 | 133.68 | 547070 | 1759926 | 0.31 | 361 | 19 | 66617 |
| Trichocoleaceae | *Leiomitra elegans* (Lehm.) Hässel de Menéndez | F\* | Larraín, J. 26924 | SAMN14888248 | UFG\_393201\_P02\_WB07 | 102.36 | 623.43 | 244803 | 1002712 | 0.24 | 374 | 27 | 68278 |
| Lejeuneaceae | *Lejeunea anisophylla* Mont. | F\* | Larraín, J. 35316 | SAMN14888249 | UFG\_393201\_P02\_WA07 | 76.76 | 324.36 | 120865 | 883266 | 0.14 | 151 | 31 | 27849 |
| Pseudolepicoleaceae | *Lepicolea rigida* (De Not.) G. A. M. Scott | F\* | Larraín, J. 26518 | SAMN14888250 | UFG\_393201\_P02\_WC05 | 50.86 | 308.49 | 86245 | 1085714 | 0.08 | 254 | 5 | 49214 |
| Lepidoziaceae | *Lepidozia chordulifera* Taylor | F\* | Larraín, J. 26748 | SAMN14888251 | UFG\_393201\_P02\_WH03 | 16.89 | 161.84 | 80674 | 616938 | 0.13 | 224 | 7 | 44119 |
| Jungermanniaceae | *Lophozia excisa* (Dicks.) Dumort. | F\* | Larraín, J. 38588 | SAMN14888252 | UFG\_393201\_P02\_WF05 | 403.26 | 913.18 | 2273435 | 3639930 | 0.62 | 417 | 186 | 76584 |
| Aytoniaceae | *Mannia triandra* (Scop.) Grolle | F\* | Brinda et al. 6000 | SAMN14888253 | UFG\_393201\_P02\_WG08 | 1360.40 | 105.56 | 165874 | 1151312 | 0.14 | 345 | 25 | 64215 |
| Marchantiaceae | *Marchantia* sp. | F\* | Larraín, J. 37574 | SAMN14888254 | UFG\_393201\_P02\_WH04 | 1323.69 | 675.17 | 1766143 | 2379170 | 0.74 | 407 | 10 | 74826 |
| Lejeuneaceae | *Mastigolejeunea auriculata* (Wilson & Hook.) Schiffner | F\* | Larraín, J. 35461 | SAMN14888255 | UFG\_393201\_P02\_WD06 | 131.01 | 177.71 | 370846 | 951296 | 0.39 | 248 | 27 | 45241 |
| Jungermanniaceae | *Mesoptychia badensis* (Gottsche ex Rabenh.) L. Soederstr. & Vana\* | F\* | Brinda 6464 | SAMN14888256 | UFG\_393201\_P02\_WE08 | 2264.37 | 16.17 | 17234 | 170342 | 0.10 | 3 | 101 | 605 |
| Metzgeriaceae | *Metzgeria decrescens* Steph.\* | F\* | Larraín, J. 27039B | SAMN14888257 | UFG\_393201\_P02\_WG06 | 51.94 | 11.69 | 3420 | 118766 | 0.03 | 13 | 1 | 2363 |
| Adelanthaceae | *Odontoschisma navicularis* (Steph.) Grolle | F\* | Larraín, J. 35892 | SAMN14888258 | UFG\_393201\_P02\_WD07 | 1.18 | 35.20 | 335021 | 891094 | 0.38 | 398 | 5 | 73537 |
| Plagiochilaceae | *Pedinophyllopsis abdita* (Sull.) R. M. Schust. & Inoue | F\* | Larraín, J. 37607 | SAMN14888259 | UFG\_393201\_P02\_WE04 | 665.89 | 85.34 | 294004 | 1155834 | 0.25 | 373 | 15 | 67979 |
| Aytoniaceae | *Plagiochasma cordatum* Lehm. & Lindenb. | PSU\* | Chantanaorrapint, S. & Suwanmala, O. 678 | SAMN14888260 | UFG\_393201\_P02\_WD02 | 1945.06 | 341.65 | 83211 | 421472 | 0.20 | 254 | 10 | 49066 |
| Plagiochilaceae | *Plagiochila exigua* (Taylor) Taylor | F\* | Pocs 05026B | SAMN14888261 | UFG\_393201\_P02\_WA06 | 42.59 | 309.52 | 163326 | 954240 | 0.17 | 295 | 103 | 55242 |
| Porellaceae | *Porella recurva* (Taylor) Kuhnem. | F\* | Larraín, J. 26650 | SAMN14888262 | UFG\_393201\_P02\_WB04 | 1149.80 | 608.17 | 164642 | 406308 | 0.41 | 364 | 4 | 68521 |
| Ptilidiaceae | *Ptilidium ciliare* #1 (L.) Hampe | F\* | Larraín, J. 33007 | SAMN14888263 | UFG\_393201\_P02\_WD05 | 1968.44 | 675.67 | 76261 | 382086 | 0.20 | 220 | 8 | 43504 |
| Ptilidiaceae | *Ptilidium ciliare* #2 (L.) Hampe | FLAS | Moss Dimensions Team 153 | SAMN14888264 | UFG\_393201\_P02\_WB11 | 136.43 | 384.74 | 971927 | 1699332 | 0.57 | 405 | 13 | 74072 |
| Radulaceae | *Radula novocaledoniensis* K. Yamada | F\* | Larraín, J. 35812 | SAMN14888265 | UFG\_393201\_P02\_WB06 | 58.44 | 388.15 | 186622 | 1144476 | 0.16 | 334 | 12 | 61897 |
| Aytoniaceae | *Reboulia hemisphaerica* (L.) Raddi | F\* | Larraín, J. 36056 | SAMN14888266 | UFG\_393201\_P02\_WC06 | 709.30 | 550.63 | 464860 | 1405798 | 0.33 | 381 | 14 | 69718 |
| Aneuraceae | *Riccardia spegazziniana* A. Massal. | F\* | Larraín, J. 36876 | SAMN14888267 | UFG\_393201\_P02\_WF04 | 800.98 | 24.02 | 5038 | 68976 | 0.07 | 26 | 3 | 5091 |
| Ricciaceae | *Riccia atromarginata* Levier | F\* | Pocs 03024D | SAMN14888268 | UFG\_393201\_P02\_WH06 | 194.32 | 447.38 | 29978 | 723718 | 0.04 | 146 | 7 | 28223 |
| Adelanthaceae | *Syzygiella jacquinotii* (Mont.) Hentschel, K. Feldberg, Váňa & Heinrichs | F\* | Larraín, J. 37233 | SAMN14888269 | UFG\_393201\_P02\_WD03 | 1091.02 | 354.36 | 379862 | 1181604 | 0.32 | 395 | 9 | 73222 |
| Geocalycaceae | *Saccogynidium vasculosum* (Hook. f. & Taylor) Grolle | F\* | Larraín, J. 34239 | SAMN14888270 | UFG\_393201\_P02\_WH07 | 66.12 | 40.24 | 173513 | 446496 | 0.39 | 337 | 7 | 62412 |
| Schistochilaceae | *Schistochila acuminata* Steph. | F\* | Larraín, J. 37847 | SAMN14888271 | UFG\_393201\_P02\_WE05 | 812.29 | 354.36 | 580686 | 1635594 | 0.36 | 406 | 6 | 74294 |
| Targioniaceae | *Targionia hypophylla* L. (#1) | F\* | Pocs 04029J | SAMN14888272 | UFG\_393201\_P02\_WC02 | 63.86 | 48.73 | 209233 | 506806 | 0.41 | 338 | 31 | 62965 |
| Targioniaceae | *Targionia hypophylla* L. (#2) | PSU\* | Chantanaorrapint, S. & Suwanmala, O. 668 | SAMN14888273 | UFG\_393201\_P02\_WA08 | 2615.04 | 275.77 | 498664 | 1056906 | 0.47 | 394 | 9 | 72329 |
| Herbertaceae | *Triandrophyllum* sp. | F\* | Larraín, J. 37419 | SAMN14888274 | UFG\_393201\_P02\_WA04 | 67.30 | 234.93 | 94031 | 608080 | 0.15 | 275 | 6 | 53390 |
| Acrobolbaceae | *Acrobolbus urvilleanus* (Mont.) Trevis | F\* | Larraín, J. 27111 | SAMN14888275 | UFG\_393201\_P02\_WH05 | 191.86 | 440.85 | 127112 | 640582 | 0.20 | 358 | 7 | 66009 |
| LYCOPHYTES |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lycopodiaceae | *Austrolycopodium magellanicum* (P. Beauv.) Holub | HUA, VT | Testo, W. 966 | SAMN14888276 | UFG\_393201\_P03\_WF03 | 959.74 | 804.10 | 745662 | 1319374 | 0.57 | 418 | 5 | 78051 |
| Lycopodiaceae | *Dendrolycopodium dendroideum* (Michx.) A. Haines | VT | Testo, W. 405 | SAMN14888277 | UFG\_393201\_P03\_WG03 | 263.94 | 1236.30 | 1042660 | 2380654 | 0.44 | 420 | 4 | 78243 |
| Lycopodiaceae | *Diphasiastrum digitatum* (Dill.) Holub | VT | Testo, W. 404 | SAMN14888278 | UFG\_393201\_P03\_WH03 | 1267.22 | 869.68 | 420511 | 742458 | 0.57 | 412 | 5 | 76929 |
| Lycopodiaceae | *Diphasium scariosum* (Forst.) Rothm. | VT | Sundue, M. 3648 | SAMN14888279 | UFG\_393201\_P03\_WA04 | 2621.04 | 865.05 | 296178 | 618202 | 0.48 | 362 | 6 | 69380 |
| Lycopodiaceae | *Huperzia miyoshiana* (Makino) Ching | DUKE | Rothfels, C. 4483 | SAMN14888280 | UFG\_393201\_P03\_WE04 | 1389.38 | 492.18 | 796076 | 1660358 | 0.48 | 425 | 3 | 79408 |
| Isoetaceae | *Isoetes echinospora* Durieu | S | Hammarsjö nb03 1913 | SAMN14888281 | UFG\_393201\_P03\_WD03 | 323.02 | 693.16 | 546206 | 981034 | 0.56 | 413 | 5 | 76907 |
| Isoetaceae | *Isoetes lacustris* L. | S | Haraldsson, et al # nb06 1362 | SAMN14888282 | UFG\_393201\_P03\_WE03 | 1444.35 | 88.64 | 524633 | 813542 | 0.64 | 406 | 3 | 76093 |
| Lycopodiaceae | *Lycopodium clavatum* L. | MEXU, VT | Matos 2462 | SAMN14888283 | UFG\_393201\_P03\_WH04 | 2419.67 | 927.93 | 67754 | 238872 | 0.28 | 191 | 1 | 41340 |
| Lycopodiaceae | *Lycopodium clavatum* subsp. *contiguum* (Klotzsch) B. Øllg. | CR, VT | Testo, W. 695 | SAMN14888284 | UFG\_393201\_P03\_WC04 | 124.51 | 598.13 | 745957 | 1577866 | 0.47 | 422 | 8 | 78731 |
| Lycopodiaceae | *Lycopodium lagopus* (Laest. ex C. Hartm.) G. Zinserl. ex Kuzen. | VT | Testo, W. 597 | SAMN14888285 | UFG\_393201\_P03\_WD04 | 2273.38 | 933.64 | 295808 | 547212 | 0.54 | 394 | 6 | 74647 |
| Lycopodiaceae | *Palhinhaea tomentosa* (Alderw.) Holub | VT | Sundue, M. 3718 | SAMN14888286 | UFG\_393201\_P03\_WG04 | 1116.54 | 963.38 | 897491 | 2588352 | 0.35 | 382 | 16 | 70235 |
| Lycopodiaceae | *Phlegmariurus lauterbachii* (E. Pritz. ex K. Schum. & Lauterb.) A. R. Field & Bostock | Z | Karger 2560 | SAMN14888287 | UFG\_393201\_P03\_WF04 | 2320.49 | 1093.94 | 224406 | 914080 | 0.25 | 364 | 2 | 69496 |
| Lycopodiaceae | *Pseudodiphasium volubile* (G. Forst.) Holub | VT | Sundue, M. 3614 | SAMN14888288 | UFG\_393201\_P03\_WB04 | 914.25 | 754.80 | 954597 | 1476690 | 0.65 | 423 | 4 | 79184 |
| Selaginellaceae | *Selaginella estrellensis* Hieron. | SEL | Living accession: 1986-0492A | SAMN14888289 | UFG\_393201\_P03\_WC03 | 554.61 | 978.25 | 2617590 | 3956478 | 0.66 | 396 | 9 | 73419 |
| Selaginellaceae | *Selaginella plana* (Desv. ex Poir.) Hieron. | VT | Fawcett, S. 481 | SAMN14888290 | UFG\_393201\_P03\_WA03 | 1750.79 | 534.31 | 961168 | 1699118 | 0.57 | 325 | 23 | 60615 |
| Selaginellaceae | *Selaginella selaginoides* (L.) P. Beauv. ex Mart. & Schrank | S | Haraldsson, Kerstin & Asplund, Gunvor # nb06 1335 | SAMN14888291 | UFG\_393201\_P03\_WB03 | 502.52 | 386.58 | 4212119 | 5559842 | 0.76 | 324 | 25 | 60381 |
| MOSSES |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Polytrichaceae | *Atrichum angustatum* (Brid.) Bruch & Schimp. | Culture collection Rensing Lab | CCRL69 (NC991): Jesson, L. | SAMN14888292 | UFG\_393201\_P03\_WB01 | 1866.14 | 705.01 | 1342788 | 2018568 | 0.67 | 398 | 2 | 72792 |
| Polytrichaceae | *Atrichum undulatum* (Hedw.) P. Beauv. | Culture collection Rensing Lab | CCRL70: Beike A.K. | SAMN14888293 | UFG\_393201\_P03\_WC01 | 2421.98 | 833.74 | 2583119 | 3315080 | 0.78 | 405 | 5 | 73574 |
| Aulacomniaceae | *Aulacomnium acuminatum* (Lindb. & Arnell) Kindb. | FLAS | Moss Dimensions Team 125 | SAMN14888294 | UFG\_393201\_P02\_WA09 | 399.33 | 1007.00 | 3687765 | 4418854 | 0.83 | 415 | 9 | 76018 |
| Aulacomniaceae | *Aulacomnium androgynum* (Hedw.) Schwägr. | Culture collection Rensing Lab | CCRL771: Beike A.K. | SAMN14888295 | UFG\_393201\_P03\_WD01 | 396.96 | 1176.81 | 5986206 | 6725502 | 0.89 | 417 | 2 | 76178 |
| Aulacomniaceae | *Aulacomnium palustre* (Hedw.) Schwägr. | FLAS | Moss Dimensions Team 363 | SAMN14888296 | UFG\_393201\_P02\_WH08 | 231.64 | 853.79 | 5753664 | 6550852 | 0.88 | 417 | 3 | 76525 |
| Aulacomniaceae | *Aulacomnium turgidum* (Wahlenb.) Schwägr. | FLAS | Moss Dimensions Team 126 | SAMN14888297 | UFG\_393201\_P02\_WB09 | 472.58 | 921.54 | 5638969 | 6612900 | 0.85 | 418 | 3 | 76458 |
| Ditrichaceae | *Ceratodon purpureus* (Hedw.) Brid. | NYS | Miller, N.G.18,934 | SAMN14888298 | UFG\_393201\_P03\_WG02 | 1798.47 | 403.72 | 1622780 | 2438000 | 0.67 | 416 | 2 | 76486 |
| Dicranaceae | *Dicranella heteromalla* (Hedw.) Schimp. | Culture collection Rensing Lab | CCRL82: Beike A.K. | SAMN14888299 | UFG\_393201\_P03\_WE01 | 1050.15 | 163.81 | 939520 | 1395520 | 0.67 | 417 | 3 | 76267 |
| Dicranaceae | *Dicranum acutifolium* (Lindb. & Arnell) C. E. O. Jensen | FLAS | Moss Dimensions Team 394 | SAMN14888300 | UFG\_393201\_P02\_WF10 | 1358.79 | 909.83 | 6687466 | 8758348 | 0.76 | 416 | 10 | 76480 |
| Dicranaceae | *Dicranum elongatum* Schleich. ex Schwägr. | FLAS | Moss Dimensions Team 395 | SAMN14888301 | UFG\_393201\_P02\_WH10 | 559.23 | 603.47 | 2041066 | 2793428 | 0.73 | 414 | 22 | 76222 |
| Dicranaceae | *Dicranum fragilifolium* Lindb. | FLAS | Moss Dimensions Team 396 | SAMN14888302 | UFG\_393201\_P02\_WD10 | 910.44 | 579.45 | 2287613 | 3205920 | 0.71 | 414 | 9 | 76254 |
| Dicranaceae | *Dicranum montanum* Hedw. | FLAS | Moss Dimensions Team 397 | SAMN14888303 | UFG\_393201\_P02\_WA11 | 1833.46 | 834.93 | 2394528 | 3300318 | 0.73 | 415 | 5 | 76517 |
| Dicranaceae | *Dicranum polysetum* Sw. | FLAS | Moss Dimensions Team 398 | SAMN14888304 | UFG\_393201\_P02\_WC10 | 1907.24 | 704.54 | 141852 | 517710 | 0.27 | 283 | 2 | 55751 |
| Dicranaceae | *Dicranum scoparium* Hedw. | FLAS | Moss Dimensions Team 399 | SAMN14888305 | UFG\_393201\_P02\_WG10 | 1755.41 | 544.09 | 787325 | 1983888 | 0.40 | 409 | 6 | 75524 |
| Dicranaceae | *Dicranum undulatum* Schrad. ex Brid. | FLAS | Moss Dimensions Team 400 | SAMN14888306 | UFG\_393201\_P02\_WE10 | 1483.37 | 719.10 | 4084744 | 5362868 | 0.76 | 416 | 10 | 76364 |
| Encalyptaceae | *Encalypta vulgaris* Hedw. | Culture collection Rensing Lab | CCRL84: Frahm J.-P. | SAMN14888307 | UFG\_393201\_P03\_WF01 | 48.50 | 342.88 | 6587108 | 7641178 | 0.86 | 418 | 2 | 76956 |
| Funariaceae | *Entosthodon smithhurstii* (Broth. & Geh.) Paris | Culture collection Rensing Lab | CCRL91: Goffinet B. | SAMN14888308 | UFG\_393201\_P03\_WG01 | 729.39 | 413.78 | 6275109 | 7438474 | 0.84 | 421 | 2 | 78879 |
| Fissidentaceae | *Fissidens bryoides* Hedw. | Culture collection Rensing Lab | CCRL92: Beike A.K. | SAMN14888309 | UFG\_393201\_P03\_WH01 | 817.95 | 194.23 | 3140664 | 3581912 | 0.88 | 414 | 5 | 75567 |
| Funariaceae | *Funaria hygrometrica* Hedw. | Culture collection Rensing Lab | CCRL6: Frahm J.-P. | SAMN14888310 | UFG\_393201\_P03\_WA01 | 259.90 | 626.77 | 2240300 | 2780802 | 0.81 | 420 | 2 | 78044 |
| Hylocomiaceae | *Hylocomium splendens* (Hedw.) Schimp. | FLAS | Moss Dimensions Team 14 | SAMN14888311 | UFG\_393201\_P02\_WG09 | 325.28 | 1143.49 | 435445 | 686456 | 0.63 | 417 | 3 | 76634 |
| Hypnaceae | *Hypnum lindbergii* Mitt. | FLAS | Moss Dimensions Team 401 | SAMN14888312 | UFG\_393201\_P02\_WF11 | 1768.80 | 710.99 | 3292582 | 4423302 | 0.74 | 420 | 7 | 77286 |
| Leucobryaceae | *Leucobryum glaucum* (Hedw.) Ångstr. | Culture collection Rensing Lab | CCRL94: Beike A.K. | SAMN14888313 | UFG\_393201\_P03\_WA02 | 51.25 | 455.05 | 3731367 | 4484574 | 0.83 | 421 | 4 | 77772 |
| Grimmiaceae | *Racomitrium canescens* (Hedw.) Bednarek-Ochyra & Ochyra | FLAS | S. McDaniel MossDim2016. 12.20.Racspp | SAMN14888314 | UFG\_393201\_P02\_WH09 | 301.26 | 756.52 | 505609 | 1148668 | 0.44 | 412 | 0 | 76013 |
| Funariaceae | *Physcomitrella patens* (Hedw.) Bruch & Schimp. | Culture collection Rensing Lab | CCRL16: Gransden | SAMN14888315 | UFG\_393201\_P03\_WH02 | 877.53 | 395.45 | 2588376 | 3047860 | 0.85 | 420 | 4 | 78551 |
| Mniaceae | *Plagiomnium undulatum* (Hedw.) T. J. Kop. | Culture collection Rensing Lab | CCRL105: Beike A.K. | SAMN14888316 | UFG\_393201\_P03\_WB02 | 73.90 | 464.42 | 3866506 | 4929996 | 0.78 | 418 | 4 | 76215 |
| Hylocomiaceae | *Pleurozium schreberi* (Willd. ex Brid.) Mitt. | FLAS | Moss Dimensions Team 71 | SAMN14888317 | UFG\_393201\_P02\_WB10 | 563.66 | 881.06 | 822851 | 1391112 | 0.59 | 417 | 4 | 76398 |
| Polytrichaceae | *Polytrichum commune* Hedw. | FLAS | Moss Dimensions Team 384 | SAMN14888318 | UFG\_393201\_P02\_WD09 | 478.59 | 496.27 | 867818 | 1391264 | 0.62 | 405 | 4 | 73114 |
| Polytrichaceae | *Polytrichum juniperinum* Hedw. | FLAS | Moss Dimensions Team 389 | SAMN14888319 | UFG\_393201\_P02\_WC09 | 488.44 | 766.78 | 1112429 | 1955284 | 0.57 | 407 | 7 | 73883 |
| Polytrichaceae | *Polytrichum strictum* Menzies ex Brid. | FLAS | Moss Dimensions Team 106 | SAMN14888320 | UFG\_393201\_P02\_WE09 | 504.78 | 612.27 | 2460723 | 3177384 | 0.77 | 408 | 9 | 73821 |
| Hypnaceae | *Ptilium crista-castrensis* (Hedw.) De Not. | FLAS | Moss Dimensions Team 42 | SAMN14888321 | UFG\_393201\_P02\_WC11 | 1263.30 | 881.61 | 3479835 | 4312976 | 0.81 | 418 | 2 | 76830 |
| Grimmiaceae | *Racomitrium lanuginosum* (Hedw.) Brid. | FLAS | S. McDaniel MossDim | SAMN14888322 | UFG\_393201\_P02\_WA10 | 1132.36 | 631.54 | 1164994 | 1773390 | 0.66 | 421 | 3 | 77410 |
| Brachytheciaceae | *Rhynchostegium murale* (Hedw.) Schimp. | Culture collection Rensing Lab | CCRL109: Beike A.K. | SAMN14888323 | UFG\_393201\_P03\_WC02 | 1199.21 | 502.56 | 3711502 | 4126782 | 0.90 | 418 | 4 | 76729 |
| Hylocomiaceae | *Rhytidiadelphus triquetrus* (Hedw.) Warnst. | FLAS | S. McDaniel MossDim | SAMN14888324 | UFG\_393201\_P02\_WE11 | 912.63 | 818.42 | 3285077 | 4740388 | 0.69 | 419 | 11 | 77057 |
| Hylocomiaceae | *Rhytidium rugosum* (Ehrh. ex Hedw.) Kindb. | FLAS | Moss Dimensions Team 164 | SAMN14888325 | UFG\_393201\_P02\_WD11 | 1048.07 | 951.56 | 2783364 | 3726078 | 0.75 | 417 | 10 | 76820 |
| Sphagnaceae | *Sphagnum alaskense* R. E. Andrus & Janssens | FLAS | Moss Dimensions Team 402 | SAMN14888326 | UFG\_393201\_P02\_WG11 | 1215.03 | 942.25 | 2580712 | 3139982 | 0.82 | 409 | 8 | 74232 |
| Sphagnaceae | *Sphagnum angustifolium* (Warnst.) C. E. O. Jensen | FLAS | Moss Dimensions Team 403 | SAMN14888327 | UFG\_393201\_P02\_WH12 | 1487.07 | 280.37 | 687925 | 1065912 | 0.65 | 406 | 3 | 73391 |
| Sphagnaceae | *Sphagnum arcticum* Flatberg & Frisvoll | FLAS | Moss Dimensions Team 404 | SAMN14888328 | UFG\_393201\_P02\_WD12 | 1692.13 | 687.53 | 1407820 | 1993264 | 0.71 | 407 | 11 | 73394 |
| Sphagnaceae | *Sphagnum compactum* Lam. & DC. | FLAS | Moss Dimensions Team 405 | SAMN14888329 | UFG\_393201\_P02\_WA12 | 2305.02 | 762.38 | 1942253 | 2357978 | 0.82 | 410 | 9 | 74171 |
| Sphagnaceae | *Sphagnum fimbriatum* Wilson | FLAS | Moss Dimensions Team 406 | SAMN14888330 | UFG\_393201\_P02\_WC12 | 811.37 | 792.65 | 2368258 | 3061904 | 0.77 | 408 | 9 | 73539 |
| Sphagnaceae | *Sphagnum fuscum* (Schimp.) H. Klinggr. | FLAS | Moss Dimensions Team 407 | SAMN14888331 | UFG\_393201\_P02\_WE12 | 1497.46 | 672.72 | 1019764 | 1297964 | 0.79 | 405 | 7 | 73042 |
| Sphagnaceae | *Sphagnum girgensohnii* Russow | FLAS | Moss Dimensions Team 408 | SAMN14888332 | UFG\_393201\_P02\_WG12 | 1965.67 | 624.58 | 621644 | 989484 | 0.63 | 406 | 7 | 73302 |
| Sphagnaceae | *Sphagnum magellanicum* Brid. | FLAS | Moss Dimensions Team 409 | SAMN14888333 | UFG\_393201\_P02\_WH11 | 1518.82 | 707.89 | 294837 | 440046 | 0.67 | 393 | 4 | 71812 |
| Sphagnaceae | *Sphagnum russowii* Warnst. | FLAS | Moss Dimensions Team 410 | SAMN14888334 | UFG\_393201\_P02\_WF12 | 1839.23 | 736.51 | 2402028 | 3441872 | 0.70 | 408 | 11 | 73544 |
| Sphagnaceae | *Sphagnum squarrosum* Crome | FLAS | Moss Dimensions Team 411 | SAMN14888335 | UFG\_393201\_P02\_WB12 | 2320.72 | 778.79 | 1519007 | 2116438 | 0.72 | 408 | 8 | 74296 |
| Takakiaceae | *Takakia lepizioides* S. Hatt. & Inoue | Culture collection Rensing Lab | CCRL113: Li, X. & Hu, R. | SAMN14888336 | UFG\_393201\_P03\_WD02 | 1073.13 | 469.11 | 2045612 | 2783936 | 0.73 | 384 | 16 | 70853 |
| Thuidiaceae | *Thuidium tamariscinum* (Hedw.) Schimp. | Culture collection Rensing Lab | CCRL114: Beike A.K. | SAMN14888337 | UFG\_393201\_P03\_WE02 | 1843.74 | 1020.12 | 4321099 | 4846942 | 0.89 | 416 | 3 | 76752 |
| Brachytheciaceae | *Tomentypnum nitens* (Hedw.) Loeske | FLAS | Moss Dimensions Team 169 | SAMN14888338 | UFG\_393201\_P02\_WF09 | 157.10 | 992.09 | 528434 | 990910 | 0.53 | 410 | 4 | 75567 |
| Pottiaceae | *Tortula truncata* (Hedw.) Mitt. | Culture collection Rensing Lab | CCRL115: Frahm J.-P. | SAMN14888339 | UFG\_393201\_P03\_WF02 | 1160.19 | 142.26 | 3639771 | 4387540 | 0.83 | 418 | 3 | 75165 |

aAn asterisk (\*) by the taxon name indicates that we recovered fewer than 45 loci from the sample, and therefore sequences from that sample were excluded from the phylogenetic analyses (Fig. 4, Appendix S7).

bAn asterisk (\*) by the herbarium name indicates that we sampled tissue from a herbarium specimen; otherwise, we sampled fresh tissue dried in silica. Herbarium acronyms are per Index Herbariorum (http://sweetgum.nybg.org/science/ih/).