Fig. 1S. Haplotype networks based on both best scoring MP phylogenies indicating Australian (blue), European (orange). Historical Split herbarium samples are indicated with an asterisk. The size of the circles is proportional to the amount of individuals of that haplotype. The number specifies the haplotype. Localities are indicated on the network (WA: West Australia, NSW: New South Wales, VIC: Victoria, SA: South Australia, MOR: Morocco, POR: Portugal, AZ: Azores, MAD: Madeira, SPA: Spain, CI: Canary Islands, CRO: Croatia, UK: United Kingdom, FR: France)



Table 1S. Specimen table employed for phylogenetic inference, indicating accession numbers par phylogenetic marker.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Taxon** | **LSU** | ***cox*1** | ***cox*3** | ***nad*1** | ***psb*A** | ***rbc*L** |
| ***Canistrocarpus cervicornis***  | GU290229 |   |  LN871906 | GQ425184 | GQ466069 | DQ472047 |
| TCn4 |   | HV619 | D192 | TZ0714C | HV711 |
| 1245 nt |   | 606 nt | 729 nt | 883 nt | 1449 nt |
| ***Canistrocarpus crispatus***  | GQ425150 | GQ425137 | GQ425146 | GQ425176 | GU265787 | GQ425119 |
| HV721 | ODC1444 | ODC1444 | ODC1444 | ODC1545 | HV721 |
| 1224 nt | 610 nt | 648 nt | 734 nt | 882 nt | 1374 nt |
| ***Dictyota acutiloba***  | DQ472111 | GU290238 | GU290242 | GU290247 | EU395602 | DQ472056 |
| ODC888 | ODC888 | ODC888 | ODC888 | ODC888 | ODC888 |
| 1200 nt | 605 nt | 276 nt | 743 nt | 867 nt | 1162 nt |
| ***Dictyota adnata*** | GQ425154 | GQ425134 |  LN871907 | GQ425178 | GU265788 | GQ425106 |
| ODC1485 | SD712204 | ODC1485 | ODC1485 | SD712204 | SD712204 |
| 1115 nt | 548 nt | 647 nt | 714 nt | 883 nt | 1234 nt |
| ***Dictyota bartayresiana*** | GQ425153 | GQ425129 |  LN871908 | GQ425183 | GQ466071 | GQ425107 |
| DR7 | DR7 | ODC1513 | ODC1513 | TZ0802C | ODC1588 |
| 1117 nt | 617 nt | 642 nt | 741 nt | 884 nt | 1280 nt |
| ***Dictyota canaliculata*** | GQ425167 | GQ425132 |  LN871909 | GQ425177 | GQ425190 | GQ425108 |
| SD712709 | ODC1477 | ODC1477 | ODC1477 | ODC1477 | SD712709 |
| 1135 nt | 642 nt | 652 nt | 733 nt | 824 nt | 1284 nt |
| ***Dictyota ceylanica*** | GQ425152 | GQ425122 | GQ425145 | GQ425175 | EU395607 | DQ472067 |
| HV214a | HV214a | ODC1442 | ODC1442 | HV214a | HV214a |
| 1218 nt | 621 nt | 660 nt | 709 nt | 870 nt | 1461 nt |
| ***Dictyota ciliolata*** | GQ425156 | GQ425124 |   | GQ425173 | GQ425192 | GQ425109 |
| D191 | HV632 | D191 | D395 | D191 |
| 1241 nt | 626 nt | 744 nt | 883 nt | 1466 nt |
| ***Dictyota coriacea*** | DQ472109 | GU290234 |  LN871910 | GU290251 | AY422612 | DQ472054 |
| CSUF003 | CSUF003 | HV1940 | CSUF003 | WJ3 | CSUF003 |
| 1231 nt | 621 nt | 649 nt | 739 nt | 961 nt | 1223 nt |
| ***Dictyota crenulata*** | GU290231 |  LN871961 |  LN871911 | GU290252 | GU265782 | GU290253 |
| HV1074 | MX0208 | MX0208 | HV1074 | HV1074 | HV1074 |
| 1046 nt | 590 nt | 646 nt | 733 nt | 871 nt | 1280 nt |
| ***Dictyota cymatophila*** | GQ425162 | GQ425128 |  LN871912 | GQ425179 | GQ425193 | GQ425111 |
| D397 | D406 | D306 | D403 | D306 | D397 |
| 1039 nt | 622 nt | 646 nt | 743 nt | 884 nt | 1136 nt |
| ***Dictyota dichotoma*** | GQ425155 | GQ425131 | AY500368 | AY500368 | GU265784 | DQ472051 |
| D190 | ODC1055 | GenBank | Genbank | ODC1689 | ODC1027 |
| 1230 nt | 649 nt | 668 nt | 836 nt | 961 nt | 1453 nt |
| ***Dictyota fasciola*** | GQ425166 | GQ425133 | GQ425143 | GQ425172 | FJ869847 | GQ425110 |
| ODC1057 | ODC1065 | ODC1065 | ODC1065 | ODC1066 | ODC1065 |
| 1213 nt | 641 nt | 656 nt | 738 nt | 883 nt | 1291 nt |
| ***Dictyota friabilis*** | DQ472120 | GU290237 | GU290244 | GU290249 | GU265786 | DQ472064 |
| ODC898 | DML67250 | ODC898 | ODC898 | HV153 | HV153 |
| 1193 nt | 540 nt | 655 nt | 738 nt | 864 nt | 1424 nt |
| ***Dictyota hamifera*** | DQ472110 | GQ425123 | GQ425141 | GQ425169 | GQ425213 | GQ425112 |
| HV222 | HV222 | HV222 | HV222 | HV222 | DML67438 |
| 1220 nt | 618 nt | 656 nt | 701 nt | 869 nt | 1266 nt |
| ***Dictyota implexa*** | GQ425163 | GQ425135 | GQ425140 | GQ425168 | GQ466076 | GQ425116 |
| ODC1238 | FS271 | LLGO249 | LLGO300 | ODC1238 | Kooistra1 |
| 1242 nt | 644 nt | 660 nt | 741 nt | 886 nt | 1471 nt |
| ***Dictyota intermedia*** | GQ425165 | GQ425127 |  LN871913 |  LN871928 | EU395615 | DQ472086 |
| TC1 | TC1 | TC1 | TC1 | TC1 | TC1 |
| 882 nt | 607 nt | 515 nt | 716nt | 879 nt | 1207 nt |
| ***Dictyota kunthii*** | GU290231 | GU290237 | GU290245 | GU290250 | EU395618 | DQ472057 |
| D104 | D102 | D102 | D102 | D102 | D102 |
| 1217 nt | 598 nt | 623 nt | 739 nt | 867 nt | 1253 nt |
| ***Dictyota liturata*** | GQ425159 |  LN871962 | GQ425144 | GQ425174 | GQ466075 | GQ425113 |
| KZN2282 | MAD0142 | HEC15721 | HEC15721 | HEC15816 | Sole1 |
| 1314 nt | 606 nt | 537 nt | 736 nt | 889 nt | 1441 nt |
| ***Dictyota mediterranea*** | GU290233 | GU290236 | GU290241 | GU290246 | GU265785 | GU290254 |
| SGAD1116 | SGAD1116 | LLGO313 | LLGO224 | D653 | D595 |
| 1251 nt | 641 nt | 663 nt | 747 nt | 876 nt | 1247 nt |
| ***Dictyota mertensii*** | GQ425158 | GQ425130 |  LN871914 | GQ425180 | GQ425215 | GQ425114 |
| HV911 | DR31 | HV911 | DR31 | DR31 | DR32 |
| 1211 nt | 607 nt | 587 nt | 724 nt | 834 nt | 1096 nt |
| ***Dictyota pinnatifida*** | GQ425157 | GQ425126 | GQ425142 | GQ425171 | EU395612 | GQ425115 |
| CLO31302 | HV902 | HV932 | HV932 | HV902 | Sole3 |
| 1212 nt | 611 nt | 619 nt | 745 nt | 880 nt | 1452 nt |
| ***Dictyota rigida*** | GU290232 | GQ425138 |  LN871915 | GQ425181 | GQ466077 | GQ425117 |
| ODC1623 | ODC1657 | ODC1623 | ODC1657 | ODC1657 | ODC1623 |
| 1137 nt | 605 nt | 648 nt | 727 nt | 873 nt | 1280 nt |
| ***Dictyota sandvicensis*** | DQ472118 | GU290239 | GU290241 | GU290248 | GU265783 | DQ472063 |
| ODC896 | ODC889 | ODC889 | ODC889 | ODC889 | ODC896 |
| 1198 nt | 604 nt | 404 nt | 724 nt | 867 nt | 1371 nt |
| ***Dictyota spiralis*** | GQ425161 | GU290235 |  LN871916 |  LN871929 | GQ466078 | DQ472074 |
| ODC1225 | ODC1071 | ODC1225 | ODC1225 | HEC15815 | ODC1029 |
| 1209 nt | 641 nt | 651 nt | 735 nt | 889 nt | 1489 nt |
| ***Dilophus fastigiatus*** | DQ472123 | GQ425125 |   | GQ425170 | EU395614 | DQ472068 |
| D96 | D96 |   | D96 | D96 | D96 |
| 1198 nt | 529 nt |   | 753 nt | 867 nt | 1448 nt |
| ***Rugulopteryx okamurae*** | GQ425149 | GQ425120 | GQ425147 | GQ425185 | AY748322 | AB096888 |
| D194 | FS280 | FS280 | FS280 | D194 | D194 |
| 1145 nt | 612 nt | 662 nt | 746 nt | 879 nt | 1017 nt |
| ***Scoresbyella profunda*** |  LN871870 | GQ425121 | GQ425148 | GQ425186 | EU395620 |  LN871950 |
| DIC44 | DIC44 | DIC44 | DIC44 | DIC44 | DIC44 |
| 607 nt | 607 nt | 518 nt | 498 nt | 867 nt | 1316 nt |
| ***Dictyota cyanoloma*** | JQ061094 | JQ061101 |  LN871918 | JQ061114 | GU255591 | JQ061123 |
| D544 | D544 | D544 | D544 | D1567 | D544 |
| 1020 nt | 600 nt | ?? Ana | 734 nt | 842 nt | 1284 nt |
| ***Dictyota* sp8** |  LN871872 |  LN871964 |  LN871920 |  LN871931 |  LN871941 |  LN871952 |
| HV2563 | HV2563 | HV2563 | HV2563 | HV2563 | HV2563 |
| 1039 nt | 545 nt | 660 nt | 778 nt | 907 nt | 1316 nt |
| ***Dictyota stolonifera*** | GQ425160 | GQ425139 |  LN871917 |  LN871938 |  LN871949 | DQ472072 |
| TZ0488 | TZ0488 | TZ0488 | TZ0488 | TZ0488 | HV819 |
| 835 nt | 598 nt | 641 nt | 731 nt | 882 nt | 1187 nt |
| ***Dictyota diemensis*** |  LN871873 |  LN871965 |  LN871921 |  LN871932 |  LN871942 |  LN871953 |
| LT108 | LT108 | LT108 | LT108 | LT108 | LT108 |
| 1004 nt | 623 nt | 639 nt | 698 nt | 969 nt | 1151 nt |
| ***Dictyota dichotoma3*** |  LN871874 |  LN871966 |  LN871922 |  LN871933 |  LN871943 |  LN871954 |
| HV2522 | HV2522 | HV2522 | HV2522 | HV2522 | HV2522 |
| 1187 nt | 391 nt | 639 nt | 710 nt | 969 nt | 1113 nt |
| ***Dictyota* sp7** | LN871875 |  LN871967 |  LN871923 |  LN871934 |  LN871944 | DQ472066 |
| KZN2308 | KZN2308 | KZN2308 | KZN2308 | KZN2308 | KZN2308 |
| 1099 nt | 603 nt | 613 nt | 726 nt | 871 nt | 1193 nt |
| ***Dictyota* sp3** |  LN871876 |  LN871968 |  LN871924 |  LN871935 |  LN871945 |  LN871956 |
| HEC15817 | HEC15817 | HEC15817 | HEC15817 | HEC15817 | HEC15817 |
| 577 nt | 607 nt | 648 nt | 724 nt | 743 nt | 1167 nt |
| ***Dictyota* sp21** |  LN871877 |  LN871969 |  LN871925 |  LN871936 |  LN871946 |  LN871957 |
| MX360 | MX360 | MX360 | MX360 | MX360 | MX360 |
| 562 nt | 605 nt | 651 nt | 645 nt | 842 nt | 1097 nt |
| ***Dictyota koreana*** |  LN871878 |   |  LN871926 |  LN871937 |  LN871947 |  LN871958 |
| HV1894 |   | HV1894 | HV1894 | HV1894 | HV1894 |
| 594 nt |   | 650 nt | 724 nt | 969 nt | 753 nt |
| ***Dictyota alternifida*** |  LN871879 |  LN871970 |  LN871927 |  LN871939 |  LN871948 |  LN871959 |
| LT0051 | LT0051 | LT0051 | LT0051 | LT0051 | LT0051 |
| 634 nt | 493 nt | 650 nt | 689 nt | 969 nt | 753 nt |

Table 2S. Links to photographical evidence of *D. cyanoloma* occurrences

|  |  |  |
| --- | --- | --- |
| **Region** | **link** | **observator** |
| Greece | <http://algae-group.blogspot.be/2013_03_01_archive.html> | Frithjof C. Küpper |
| Sicily | <http://www.seaphoto.it/db/it/portfolio/archivio-foto/category/3-alghe> | Ferdinando Meli |