Table S1. Coccolith length and width morphometric data for Palusphaera vandelii and P. probertii sp. nov.

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| --- | --- | --- | --- | --- |
| **Species** | **Number of Coccolith Measured** | **Coccolith length (μm)** | **Coccolith width (μm)** | **Image code** |
| *P. vandelii* | 1 | 1.731 | 1.73 | 222-04 |
| *P. vandelii* | 2 | 1.676 | 1.175 | 222-04 |
| *P. vandelii* | 3 | 1.850 | 1.845 | 222-04 |
| *P. vandelii* | 4 | 2.077 | 2.058 | 222-04 |
| *P. vandelii* | 5 | 1.926 | 1.663 | 222-04 |
| *P. vandelii* | 6 | 1.755 | 1.510 | 222-04 |
| *P. vandelii* | 7 | 1.654 | 1.596 | 222-04 |
| *P. vandelii* | 8 | 1.400 | 1.224 | 222-04 |
| *P. vandelii* | 9 | 1.790 | 1.710 | 289-62 |
| *P. vandelii* | 10 | 1.937 | 1.773 | 289-62 |
| *P. vandelii* | 11 | 1.564 | 1.623 | 289-62 |
| *P. vandelii* | 12 | 1.864 | 1.439 | 289-62 |
| *P. vandelii* | 13 | 2.149 | 2.040 | 246-06a 262-20 |
| *P. vandelii* | 14 | 1.842 | 1.804 | 246-06a 262-20 |
| *P. vandelii* | 15 | 1.859 | 1.751 | 246-06a 262-20 |
| *P. vandelii* | 16 | 2.113 | 2.058 | 246-06a 262-20 |
| *P. vandelii* | 17 | 2.068 | 1.818 | 246-06a 262-20 |
| *P. vandelii* | 18 | 2.053 | 1.911 | 246-06a 262-20 |
| *P. vandelii* | 19 | 1.986 | 1.975 | 246-06a 262-20 |
| *P. vandelii* | 20 | 1.898 | 1.612 | 246-06a 262-20 |
| *P. vandelii* | 21 | 1.739 | 1.443 | 246-06a 262-20 |
| *P. vandelii* | 22 | 1.801 | 1.856 | 246-06a 262-20 |
| *P. vandelii* | 23 | 1.882 | 1.880 | 246-06a 262-20 |
| *P. vandelii* | 24 | 2.022 | 1.928 | 247-17 276-30 |
| *P. vandelii* | 25 | 1.904 | 1.880 | 247-17 276-30 |
| *P. vandelii* | 26 | 1.953 | 1.766 | 247-17 276-30 |
| *P. vandelii* | 27 | 1.888 | 1.827 | 247-17 276-30 |
| *P. vandelii* | 28 | 1.945 | 1.893 | 247-17 276-30 |
| *P. vandelii* | 29 | 1.718 | 1.707 | 247-17 276-30 |
| *P. vandelii* | 30 | 1.809 | 1.652 | 247-17 276-30 |
| *P. vandelii* | 31 | 1.927 | 1.905 | 280-14 |
| *P. vandelii* | 32 | 2.175 | 2.162 | 280-14 |
| *P. vandelii* | 33 | 1.842 | 1.723 | 280-14 |
| *P. vandelii* | 34 | 1.967 | 1.709 | 280-14 |
| *P. vandelii* | 35 | 1.970 | 1.847 | 280-14 |
| *P. probertii sp. nov.* | 36 | 1.212 | 1.141 | 118-55 |
| *P. probertii sp. nov.* | 37 | 1.291 | 0.984 | 118-55 |
| *P. probertii sp. nov.* | 38 | 1.238 | 0.785 | 118-55 |
| *P. probertii sp. nov.* | 39 | 1.362 | 0.738 | 118-55 |
| *P. probertii sp. nov.* | 40 | 1.247 | 1.059 | 118-55 |
| *P. probertii sp. nov.* | 41 | 1.154 | 1.013 | 118-55 |
| *P. probertii sp. nov.* | 42 | 1.204 | 0.798 | 118-55 |
| *P. probertii sp. nov.* | 43 | 1.192 | 1.024 | 118-55 |
| *P. probertii sp. nov.* | 44 | 1.274 | 1.111 | 118-55 |
| *P. probertii sp. nov.* | 45 | 1.250 | 1.101 | 118-55 |
| *P. probertii sp. nov.* | 46 | 1.115 | 0.873 | 118-55 |
| *P. probertii sp. nov.* | 47 | 1.066 | 1.030 | 118-55 |
| *P. probertii sp. nov.* | 48 | 1.310 | 1.110 | 118-55 |
| *P. probertii sp. nov.* | 49 | 1.007 | 0.931 | 118-55 |
| *P. probertii sp. nov.* | 50 | 1.205 | 1.213 | 118-55 |
| *P. probertii sp. nov.* | 51 | 1.260 | 0.684 | 118-55 |
| *P. probertii sp. nov.* | 52 | 1.375 | 0.905 | 118-55 |
| *P. probertii sp. nov.* | 53 | 1.266 | 0.983 | 118-55 |
| *P. probertii sp. nov.* | 54 | 1.587 | 1.399 | 188-03 |
| *P. probertii sp. nov.* | 55 | 1.288 | 1.083 | 188-03 |
| *P. probertii sp. nov.* | 56 | 1.298 | 1.222 | 188-03 |
| *P. probertii sp. nov.* | 57 | 1.571 | 1.379 | 188-03 |
| *P. probertii sp. nov.* | 58 | 1.399 | 0.798 | 188-03 |
| *P. probertii sp. nov.* | 59 | 1.167 | 0.743 | 188-03 |
| *P. probertii sp. nov.* | 60 | 1.135 | 1.040 | 188-03 |
| *P. probertii sp. nov.* | 61 | 1.341 | 1.404 | 188-03 |
| *P. probertii sp. nov.* | 62 | 1.162 | 1.395 | 188-03 |
| *P. probertii sp. nov.* | 63 | 1.453 | 1.459 | 188-03 |
| *P. probertii sp. nov.* | 64 | 1.411 | 0.929 | 188-03 |
| *P. probertii sp. nov.* | 65 | 1.117 | 1.043 | 188-03 |
| *P. probertii sp. nov.* | 66 | 1.125 | 1.070 | 188-03 |
| *P. probertii sp. nov.* | 67 | 1.397 | 1.033 | 188-03 |
| *P. probertii sp. nov.* | 68 | 1.406 | 1.083 | 288-06 |
| *P. probertii sp. nov.* | 69 | 1.407 | 1.089 | 288-06 |
| *P. probertii sp. nov.* | 70 | 1.370 | 1.169 | 288-06 |
| *P. probertii sp. nov.* | 71 | 1.427 | 1.115 | 288-06 |
| *P. probertii sp. nov.* | 72 | 0.986 | 0.933 | 288-06 |
| *P. probertii sp. nov.* | 73 | 1.198 | 1.012 | 288-06 |
| *P. probertii sp. nov.* | 74 | 1.335 | 1.107 | 288-06 |
| *P. probertii sp. nov.* | 75 | 1.340 | 1.284 | 288-06 |
| *P. probertii sp. nov.* | 76 | 1.363 | 1.145 | 288-06 |
| *P. probertii sp. nov.* | 77 | 1.215 | 1.395 | 288-06 |
| *P. probertii sp. nov.* | 78 | 1.451 | 0.893 | 288-06 |
| *P. probertii sp. nov.* | 79 | 1.388 | 0.903 | 288-06 |
| *P. probertii sp. nov.* | 80 | 1.355 | 0.936 | 288-06 |
| *P. probertii sp. nov.* | 81 | 1.687 | 1.325 | 297-77 |
| *P. probertii sp. nov.* | 82 | 1.628 | 1.382 | 297-77 |
| *P. probertii sp. nov.* | 83 | 1.385 | 1.240 | 297-77 |
| *P. probertii sp. nov.* | 84 | 1.544 | 1.342 | 297-77 |
| *P. probertii sp. nov.* | 85 | 1.574 | 1.040 | 297-77 |
| *P. probertii sp. nov.* | 86 | 1.414 | 1.216 | 297-77 |
| *P. probertii sp. nov.* | 87 | 1.570 | 1.265 | 297-77 |
| *P. probertii sp. nov.* | 88 | 1.621 | 1.114 | 297-77 |
| *P. probertii sp. nov.* | 89 | 1.334 | 1.253 | 297-77 |
| *P. probertii sp. nov.* | 90 | 1.757 | 1.190 | 297-77 |
| *P. probertii sp. nov.* | 91 | 1.551 | 1.431 | 297-77 |
| *P. probertii sp. nov.* | 92 | 1.500 | 1.290 | 297-77 |
| *P. probertii sp. nov.* | 93 | 1.700 | 1.396 | 297-77 |
| *P. probertii sp. nov.* | 94 | 1.399 | 1.243 | 297-77 |
| *P. probertii sp. nov.* | 95 | 1.435 | 1.358 | 297-77 |