**Table S1**.Taxa included in diatom plastome analyses and NCBI accession numbers

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| **Species** | **Accession Number** |
| *Leptocylindrus danicus* | NC\_024084 |
| *Proboscia* sp. | MG755771 |
| *Actinocyclus subtilis* | MG755799 |
| *Coscinodiscus radiatus* | NC\_024081 |
| *Rhizosolenia setigera* | MG755793 |
| *Guinardia striata* | MG755796 |
| *Rhizosolenia fallax* | MG755802 |
| *Rhizosolenia imbricata* | NC\_025311 |
| *Lithodesmium undulatum* | NC\_024085 |
| *Eunotogramma sp.* | MG755797 |
| *Roundia cardiophora* | NC\_025312 |
| *Thalassiosira weissflogii* | NC\_025314 |
| *Discostella pseudostelligera* | MG755804 |
| *Thalassiosira oceanica* | NC\_014808 |
| *Cyclotella nana* | NC\_008589 |
| *Cyclotella* sp. L04\_2 | KJ958480 |
| *Cyclotella* sp. WC03\_2 | KJ958481 |
| *Plagiogrammopsis van heurckii* | MG755794 |
| *Trieres sinensis* | NC\_001713 |
| *Triceratium dubium* | MG755801 |
| *Cerataulina daemon* | NC\_025313 |
| *Acanthoceras zachariasii* | MG755808 |
| *Chaetoceros simplex* | NC\_025310 |
| *Attheya longicornis* | MG755798 |
| *Biddulphia tridens* | MG755806 |
| *Biddulphia biddulphiana* | MG755805 |
| *Asterionellopsis glacialis* | NC\_024080 |
| *Plagiogramma staurophorum* | MG755792 |
| *Psammoneis obaidii* | MG755803 |
| *Asterionella formosa* | NC\_024079 |
| *Astrosyne radiata* | MG755807 |
| *Synedra acus* | NC\_016731 |
| *Licmophora sp.* | MG755795 |
| *Eunotia naegelii* | NC\_024928 |
| *Cylindrotheca closterium* | NC\_024082 |
| *Seminavis robusta* | NA |
| *Entomoneis sp.* | MG755800 |
| *Fistulifera* sp. JPCC DA0580 | NC\_015403 |
| *Didymosphenia germinata* | NC\_024083 |
| *Phaeodactylum tricornutum* | NC\_008588 |
| *Triparma laevis* | NC\_027746 |

NA: not available, see Brembu et al. [87].