

Supplementary Material 7

Plastid phylogenomics reveals evolutionary relationships in the mycoheterotrophic orchid genus *Dipodium* and provides insights into plastid gene degeneration

Stephanie Goedderz*, Mark A. Clements, Stephen J. Bent, James A. Nicholls, Vidushi S. Patel, Darren M. Crayn, Philipp M. Schlüter, Katharina Nargar*

* Correspondence:

Stephanie Goedderz: stephanie.goedderz@jcu.edu.au

Katharina Nargar: katharina.nargar@csiro.au

Circular plastome maps of 24 newly generated *Dipodium* plastomes.

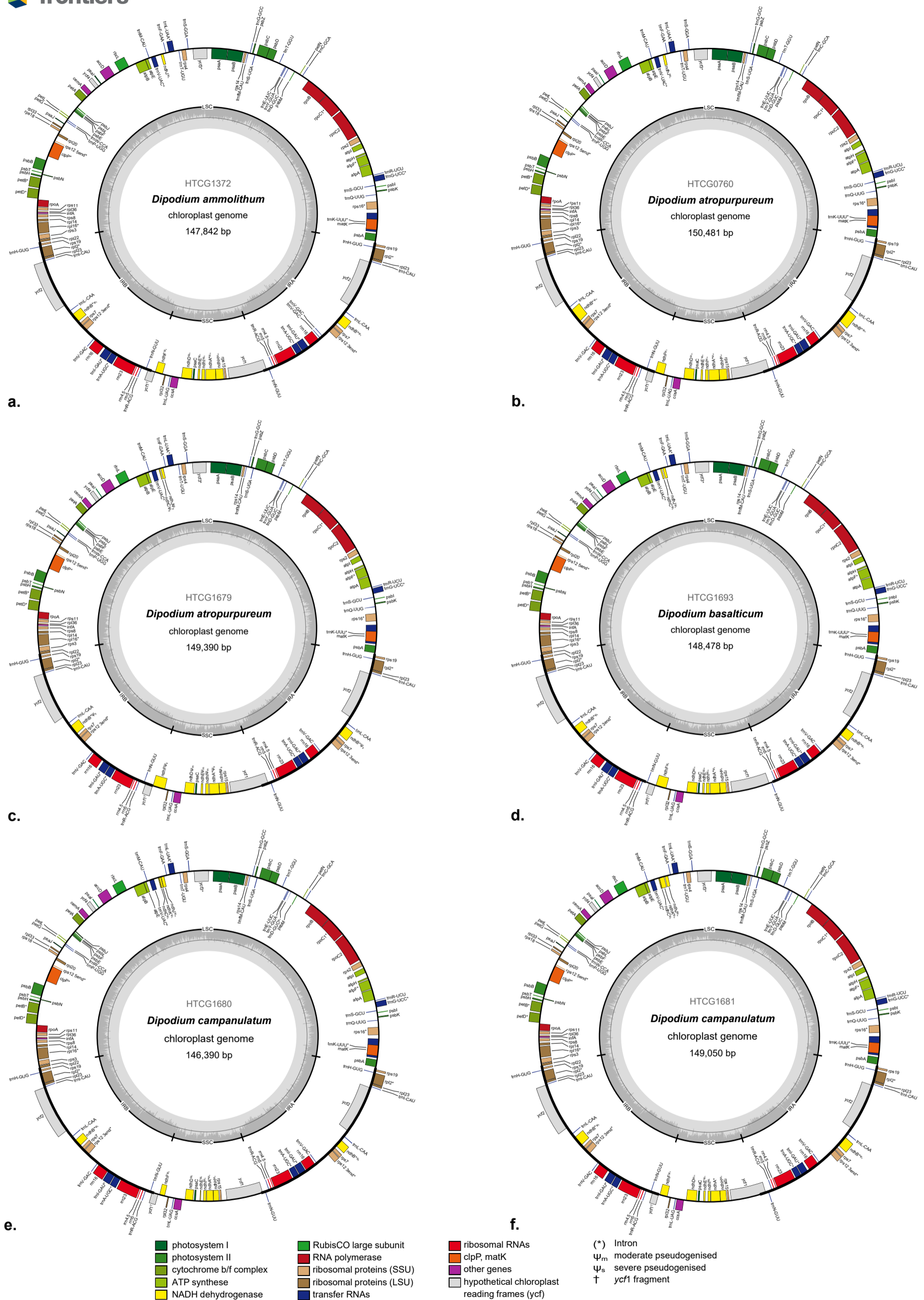


Figure S7.1: Circular plastome maps of a. *D. ammolithum* (HTCG1372), b., c. *D. atropurpureum* (HTCG0760, HTCG1679), d. *D. basalticum* (HTCG1683) and e., f. *D. campanulatum* (HTCG1680, HTCG1681). Genes outside the circle are transcribed in a clockwise direction, those inside the circle are transcribed in a counterclockwise direction. The dark grey inner circle corresponds to the G/C content, and the lighter grey to the A/C content. SSC: Small Single Copy; LSC: Large Single Copy; IRA/B: Inverted Repeat A/B.

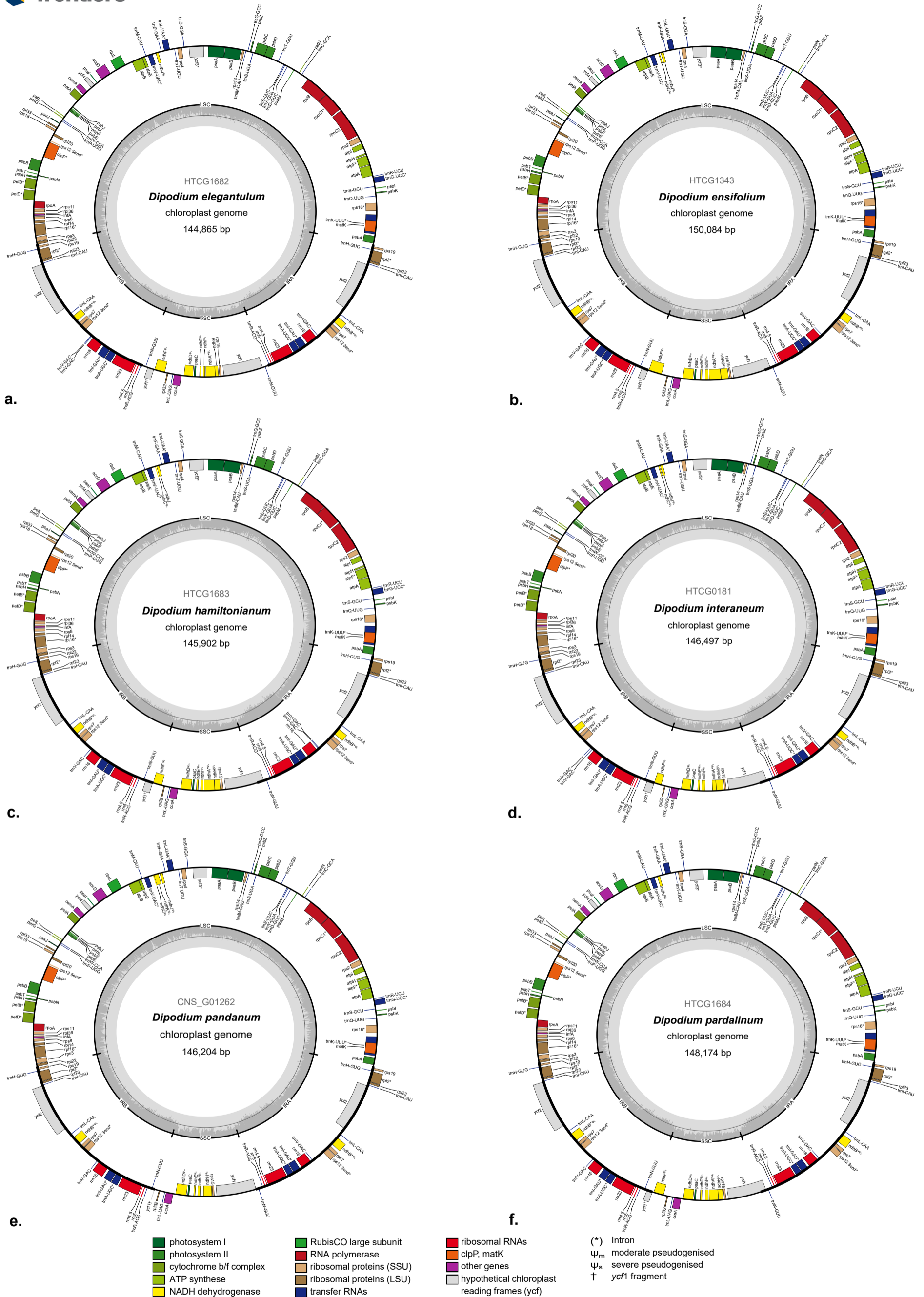


Figure S7.2: Circular plastome maps of a. *D. elegantulum* (HTCG1682), b. *D. ensifolium* (HTCG1343), c. *D. hamiltonianum* (HTCG1683), d. *D. interaneum* (HTCG0181), e. *D. pandanum* (CNS_G01262) and f. *D. pardalinum* (HTCG1684). Genes outside the circle are transcribed in a clockwise direction, those inside the circle are transcribed in a counterclockwise direction. The dark grey inner circle corresponds to the G/C content, and the lighter grey to the A/C content. SSC: Small Single Copy; LSC: Large Single Copy; IRA/B: Inverted Repeat A/B.

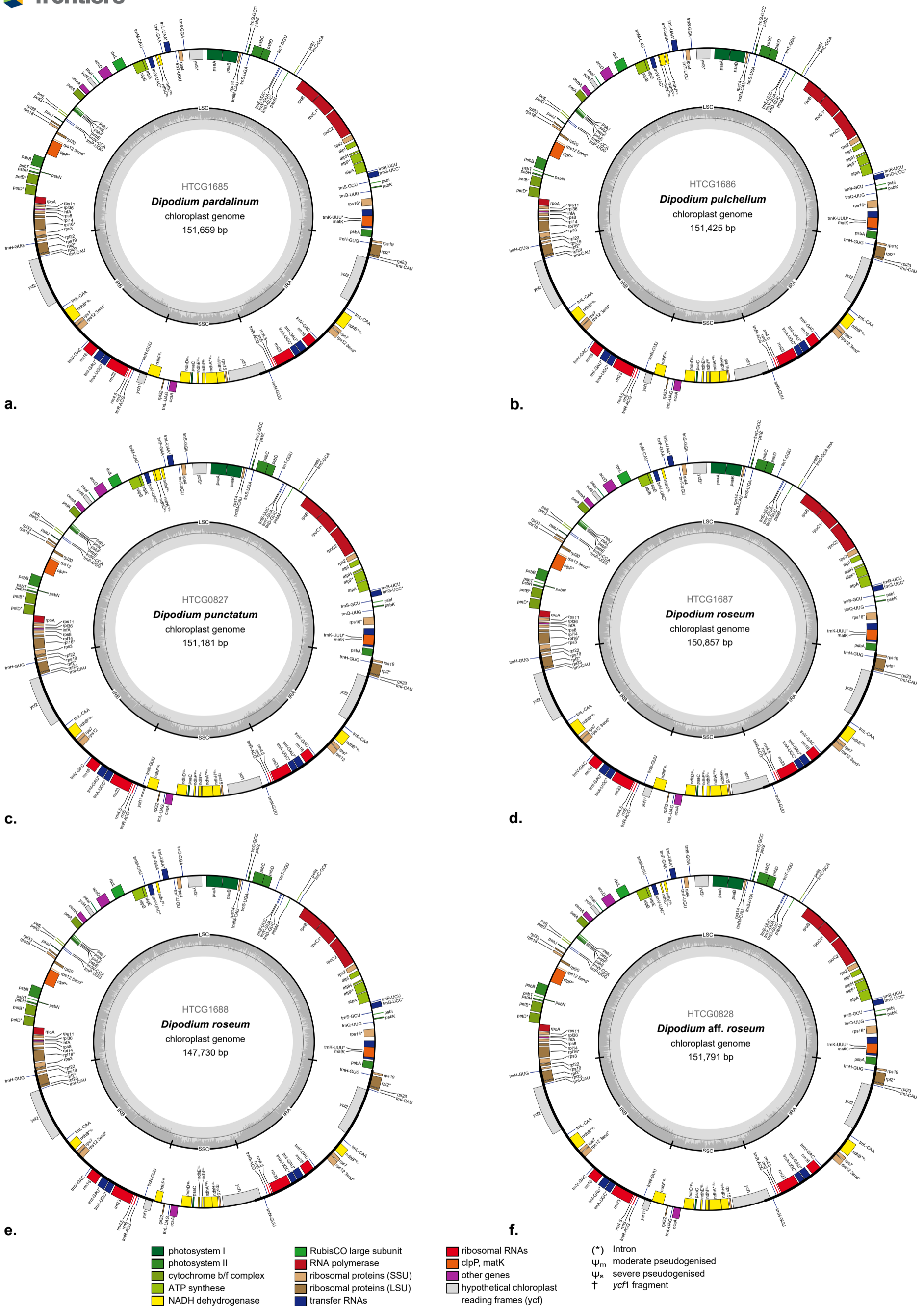


Figure S7.3: Circular plastome maps of a. *D. pardalinum* (HTCG1685), b. *D. pulchellum* (HTCG1686), c. *D. punctatum* (HTCG0827), d., e. *D. roseum* (HTCG1687, HTCG1688) and f. *D. aff. roseum* (HTCG0828). Genes outside the circle are transcribed in a clockwise direction, those inside the circle are transcribed in a counterclockwise direction. The dark grey inner circle corresponds to the G/C content, and the lighter grey to the A/C content. SSC: Small Single Copy; LSC: Large Single Copy; IRA/B: Inverted Repeat A/B.

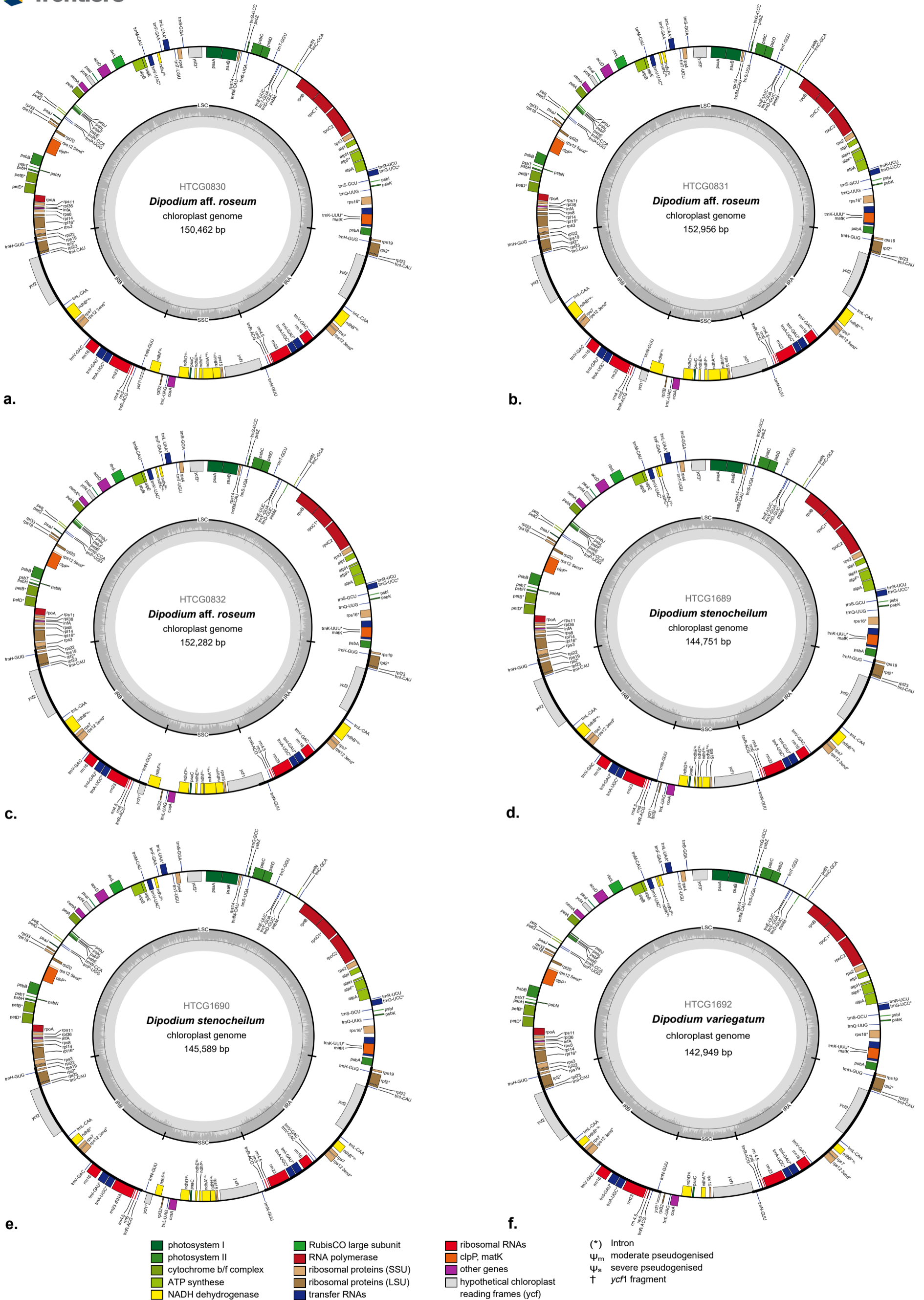
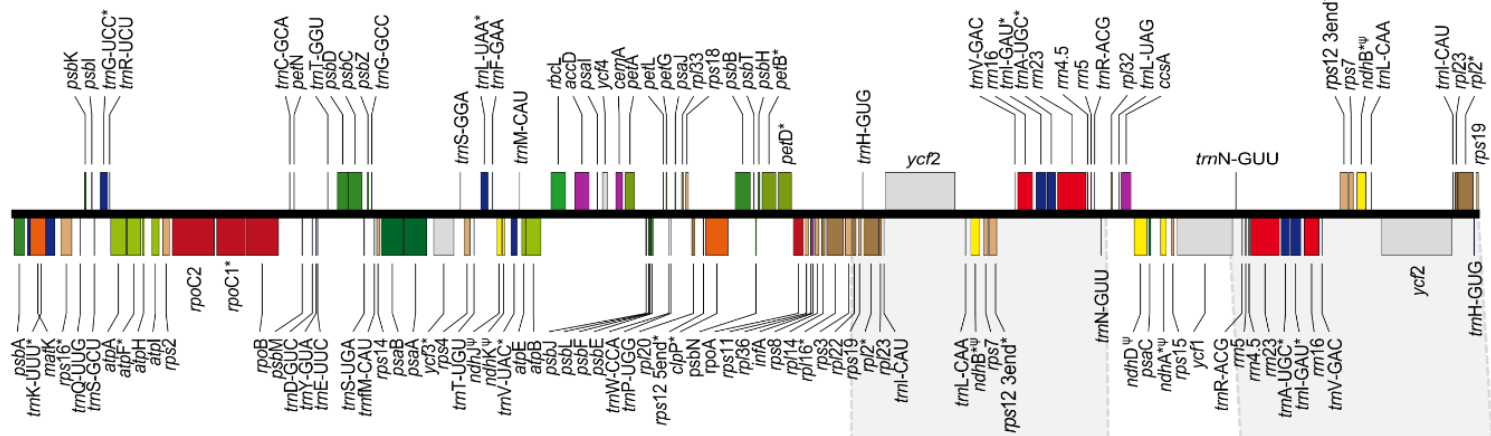
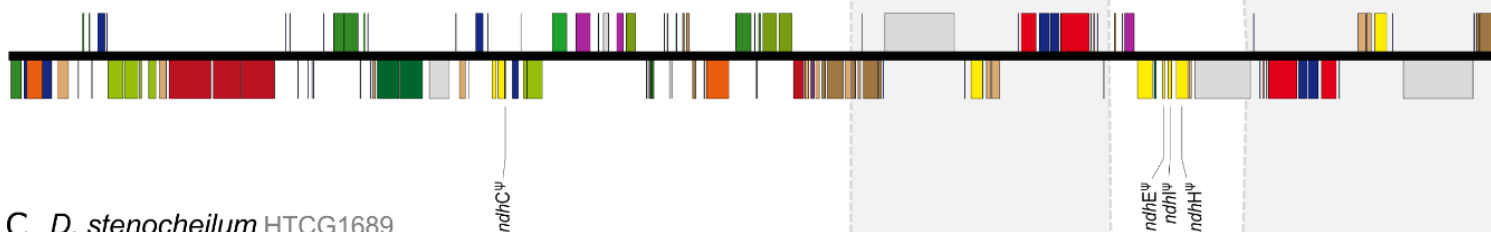


Figure S7.4: Circular plastome maps of a-c. *D. aff. roseum* (HTCG0830, HTCG0831, HTCG0832), d., e. *D. stenocheilum* (HTCG1689, HTCG1690) and f. *D. variegatum* (HTCG1692). Genes outside the circle are transcribed in a clockwise direction, those inside the circle are transcribed in a counterclockwise direction. The dark grey inner circle corresponds to the G/C content, and the lighter grey to the A/C content. SSC: Small Single Copy; LSC: Large Single Copy; IRA/B: Inverted Repeat A/B.

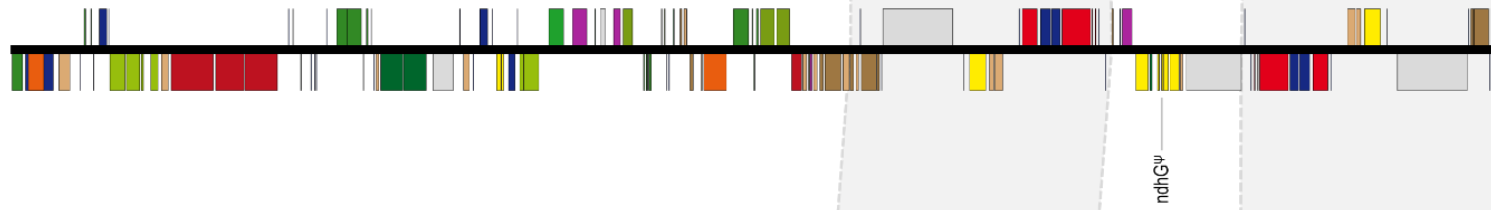
A *D. variegatum* HTCG1692
142,949 bp



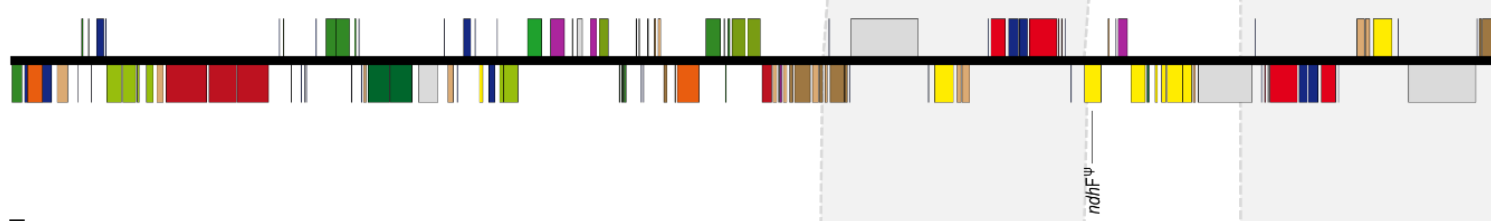
B *D. pandanum* CNS_G01262
146,204 bp



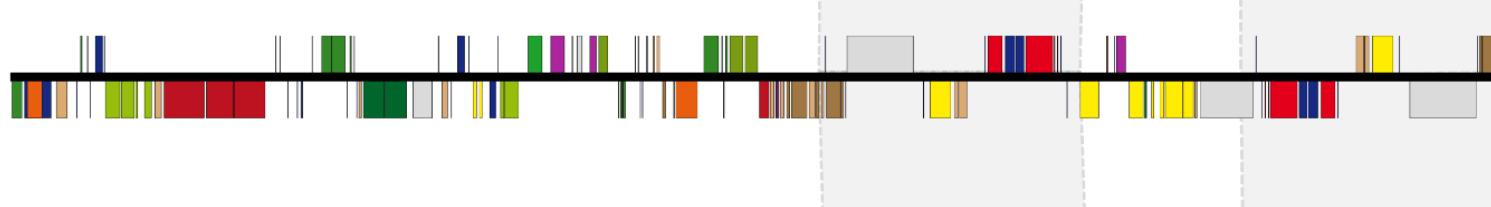
C *D. stenocheilum* HTCG1689
144,751 bp



D *D. ammolithum* HTCG1372 (147,842 bp), *D. stenocheilum* HTCG1690 (145,589 bp), *D. elegantulum* HTCG1682 (144,865 bp),
D. atropurpureum HTCG0760 (150,481 bp), *D. pardalinum* HTCG1684 (148,174 bp), *D. aff. roseum* HTCG0830 (150,462 bp), *D. roseum* HTCG1687, HTCG1688 (150,857 bp; 147,730 bp)



E *D. basalticum* HTCG1693 (148,478 bp), *D. interaneum* HTCG0181 (146,497 bp), *D. hamiltonianum* HTCG1683 (145,902 bp), *D. ensifolium* HTCG1343 (150,084 bp),
D. atropurpureum HTCG1679 (149,390 bp), *D. pardalinum* HTCG1685 (151,659 bp), *D. aff. roseum* HTCG0832, HTCG0831, HTCG0828 (152,282 bp; 152,956 bp; 151,791 bp)



F *D. punctatum* HTCG0827 (151,181 bp), *D. pulchellum* HTCG1686 (151,425 bp), *D. campanulatum* HTCG1681, HTCG1680 (149,050 bp; 146,390 bp)

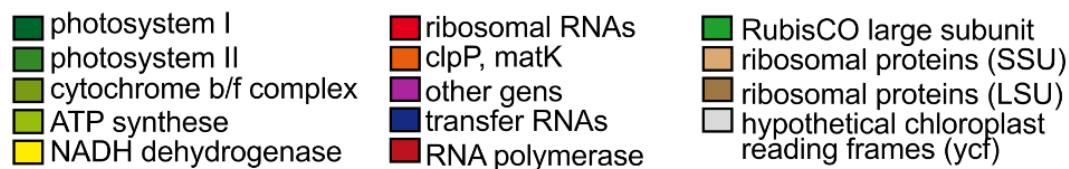
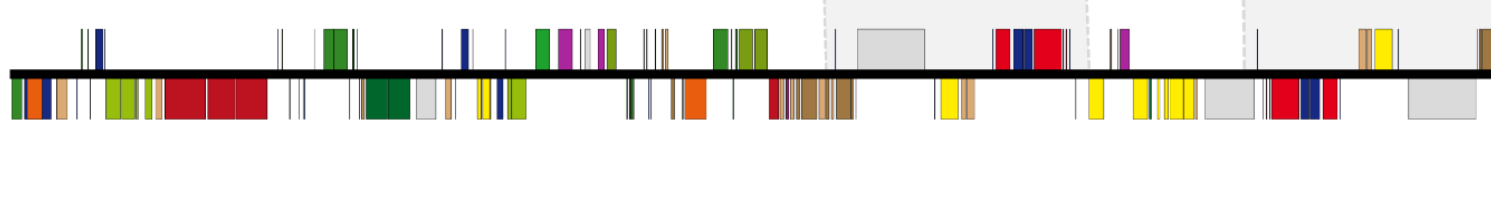


Figure S7.5: (A-F) Linear plastome maps of *Dipodium*. Genes drawn below the black line are transcribed clockwise, genes drawn above the black line are transcribed counterclockwise. Different functional groups of genes are colour-coded according to the legend. Phi (ψ) represents putative moderately or severely pseudogenised genes. Asterisks (*) represents intron containing genes. Grey shaded boxes highlighting IR regions.