

Supplemental Table1 S1: Species represented in Figure 1

Plant Group	Species	Reference
<i>Dicotyledons</i>	<i>Arabidopsis thaliana</i> <i>Brassica rapa</i> <i>Malus domestica</i> <i>Solanum lycopersicum</i> <i>Solanum tuberosum</i>	Phytozome (https://phytozome-next.jgi.doe.gov/)
<i>Monocotyledons</i>	<i>Oryza sativa</i> <i>Zea mays</i> <i>Sorghum bicolor</i>	Phytozome (https://phytozome-next.jgi.doe.gov/)
<i>Amborella trichopoda</i>	<i>Amborella trichopoda</i>	Nishii <i>et al.</i> , 2018; Kaltenegger <i>et al.</i> , 2018
<i>Gymnosperms</i>	<i>Pinus trichocarpa</i> <i>Picea abies</i>	Pils and Heyl, 2009; Wang <i>et al.</i> , 2020 a, b; Kaltenegger <i>et al.</i> , 2018
<i>Lycophyta</i>	<i>Selaginella moellendorffii</i>	Nishii <i>et al.</i> , 2018; Kaltenegger <i>et al.</i> , 2018; Wang <i>et al.</i> , 2020 b
<i>Moss</i>	<i>Physcomitrium patens</i>	Rensing <i>et al.</i> , 2008; Nishii <i>et al.</i> , 2018
<i>Hornwort</i>	<i>Anthoceros agrestis</i>	Li <i>et al.</i> , 2023
<i>Liverwort</i>	<i>Marchantia polymorpha</i>	Nishii <i>et al.</i> , 2018; Bow
<i>Zygnematophyceae</i>	<i>Zygema cylindrium</i> <i>Spirogyra pratensis</i>	Feng <i>et al.</i> , 2023
<i>Coleochaetophyceae</i>		No data available
<i>Charophyceae</i>	<i>Chara braunii</i>	Wang <i>et al.</i> 2020c Nishiyama <i>et al.</i> 2018
<i>Klebsormidiophyceae</i>	<i>Klebsormidium nitans</i>	Zizkova <i>et al.</i> 2017 Nishii <i>et al.</i> 2018 Kaltenegger <i>et al.</i> 2018
<i>Chlorokybophyceae</i>	<i>Chlorokybus atmophyticus</i>	Wang <i>et al.</i> 2020c
<i>Mesostimatophyceae</i>	<i>Mesostigma viride</i>	Wang <i>et al.</i> 2020c
<i>Chlorophyta</i>	<i>Chlamydomonas reinhardtii</i> <i>Osteococcus taurii</i> <i>Volvox craterii</i>	Phytozome (https://phytozome-next.jgi.doe.gov/) Pils and Heyl, 2009, Wang <i>et al.</i> c, 2020