

**Supplementary Table 3.** Functional groups of CDS with variant events

<b>Functional groups</b>	<b>Genes</b>
ATP atpase	<i>accD, atpB, atpH</i>
Cytochrome b/f complex	<i>petA</i>
Envelope membrane protein	<i>ccsA, cemA</i>
Large subunit of Rubisco	<i>rbcL</i>
Maturase	<i>matK</i>
NADH dehydrogenase	<i>ndhF, ndhE, ndhH, ndhD, ndhJ, ndhB</i>
Phyotosystem	<i>psbC, psbH, psbN, psbB, psbD, psbA, psaC</i>
Ribosomal protein	<i>rps8, rpl22, rps3, rpl14, rpl20, rps4, rps12</i>
RNA polymerase	<i>rpoC1, rpoA, rpoB</i>
tRNA	<i>trnS-GCU</i>
Unknown function	<i>ycf1, ycf2, ycf3, ycf4</i>