**Table S5.** Genomic features comparison in genus *Cyperus*

| Genomic Feature | *Cyperus niveus* | *Cyperus aromaticus* | *Cyperus difformis* | *Cyperus exaltatus* | *Cyperus flavidus* | *Cyperus glomeratus* | *Cyperus iria* | *Cyperus michelianus* | *Cyperus rotundus* | *Cyperus simaoensis* |
|---|---|---|---|---|---|---|---|---|---|---|
| Accession Number | OR418070 | MT937178 | OK539707 | MW123055 | OK539740 | OK539708 | MW123056 | OK539709 | MT937176 | OK539710 |
| Genome size (bp) | 185,454 | 187,401 | 187,808 | 187,139 | 186,158 | 186,261 | 185,697 | 186,261 | 182,986 | 184,840 |
| LSC length (bp) | 99,339 | 101,085 | 102,206 | 100,780 | 103,127 | 104,040 | 99,360 | 101,087 | 100,733 | 101,861 |
| SSC length (bp) | 10,073 | 10,497 | 11,274 | 10,271 | 10,336 | 10,318 | 10,267 | 10,318 | 10,315 | 10,288 |
| IR length (bp) | 38,021 | 37,910 | 37,164 | 38,044 | 36,357 | 35,951 | 38,035 | 37,428 | 35,969 | 35,781 |
| Total GC content | 33.30% | 33.10% | 33.20% | 33.20% | 33.10% | 33.20% | 33.20% | 33.20% | 33.30% | 33.20% |
| LSC GC content | 30.90% | 34.20% | 31.00% | 30.90% | 30.70% | 30.80% | 30.90% | 30.90% | 30.91% | 30.90% |
| SSC GC content | 25.50% | 24.90% | 25.50% | 25.20% | 25.00% | 25.10% | 25.20% | 25.10% | 25.11% | 25.30% |
| IR GC content | 37.30% | 37.30% | 37.50% | 37.20% | 37.60% | 37.70% | 37.20% | 37.30% | 37.73% | 37.70% |
| Total number of genes | 140 | 136 | 135 | 139 | 140 | 137 | 139 | 140 | 133 | 137 |
| Number of PCGs | 83 | 87 | 87 | 91 | 92 | 89 | 91 | 92 | 84 | 89 |
| Number of tRNA genes | 39 | 41 | 40 | 40 | 40 | 40 | 40 | 40 | 41 | 40 |
| Number of rRNA genes | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |