

**Supplementary File 9.** *K*-mer based estimates of genome size and repetitive sequence proportion

Geographic region	Species	Genome size (bp)	Proportion repetitive
North America	<i>A. pubescens</i>	327739099	0.473
	<i>A. formosa</i>	320736307	0.442
	<i>A. barnebyi</i>	314243005	0.449
	<i>A. longissima</i>	315526747	0.452
	<i>A. chrysantha</i>	327663698	0.443
Europe	<i>A. aurea</i>	301759711	0.443
	<i>A. vulgaris</i>	298726981	0.419
Asia	<i>A. sibirica</i>	289831630	0.417
	<i>A. flabellata</i>	284394029	0.402
	<i>A. oxysepala</i>	316478823	0.452