

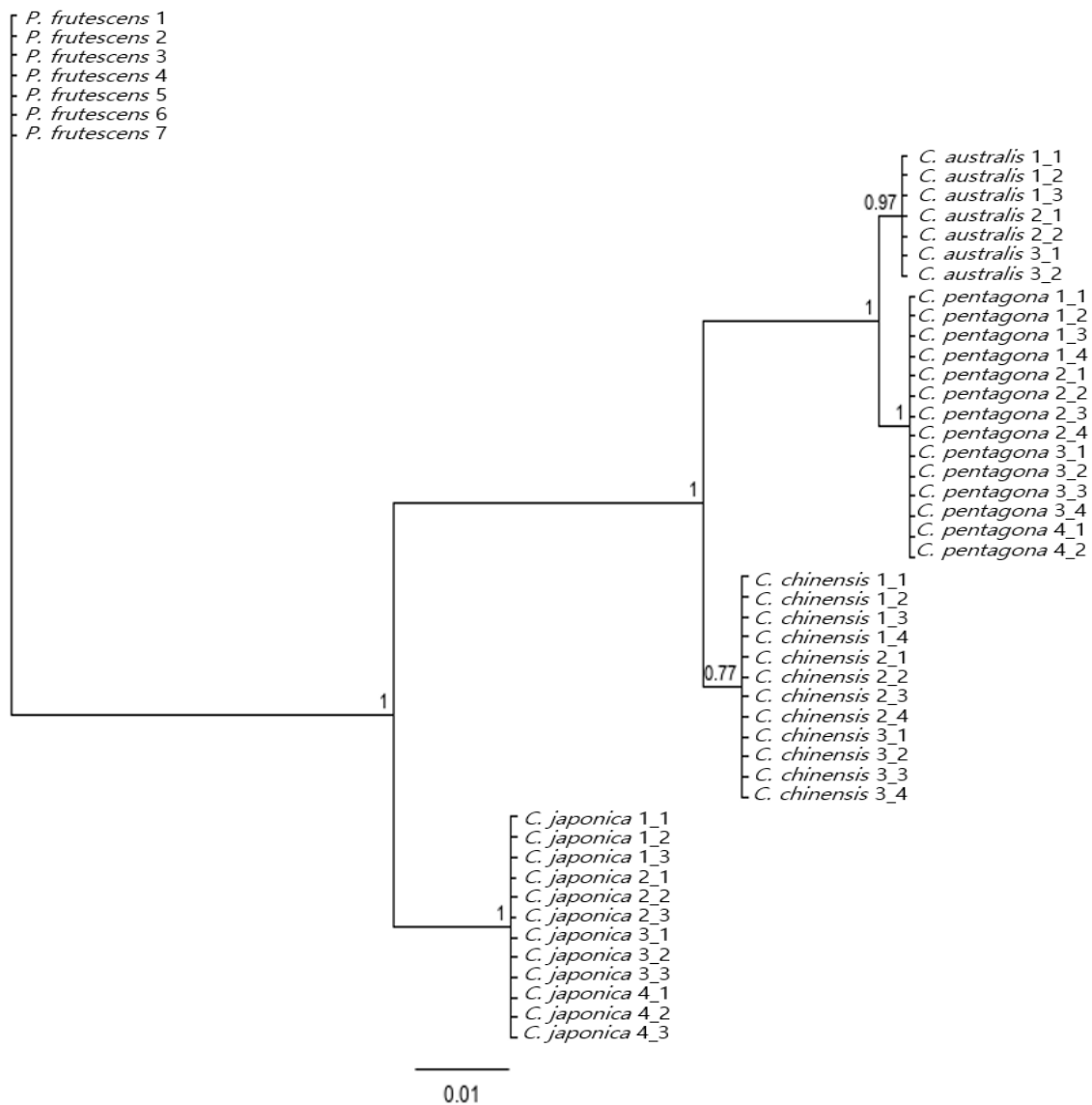


Figure S1. Phylogenetic analysis of five species. The phylogenetic tree was constructed from *Cuscuta* species with the Bayesian inference (BI) method. The *rbcL* sequences of *Perilla frutescens* were downloaded from GenBank and used as outgroups. BI posterior probability (PP) values at each node.

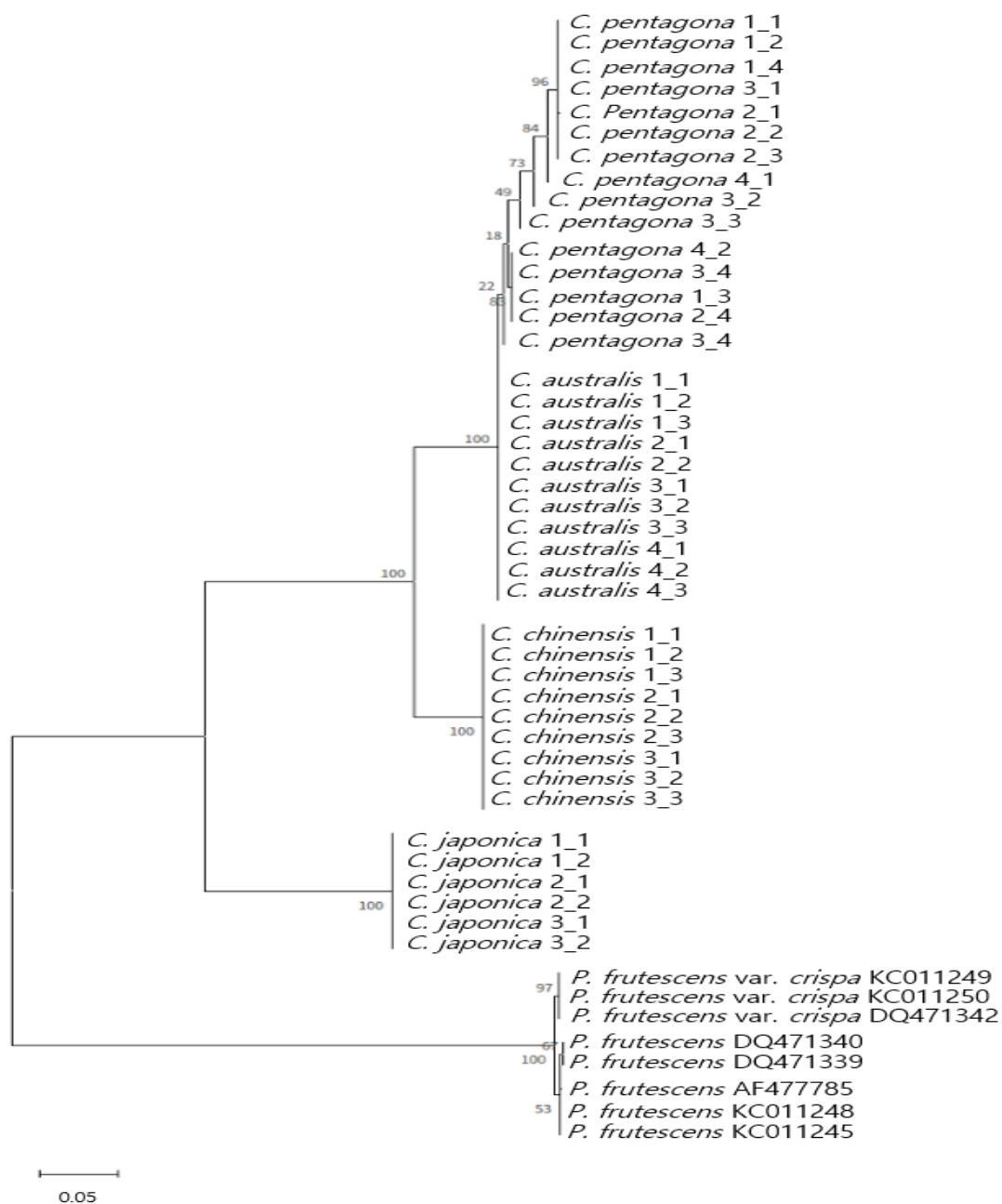


Figure S2. Phylogenetic analysis of five species. The phylogenetic tree was constructed from *Cuscuta* species with the maximum likelihood (ML) method. The ITS sequences of *Perilla frutescens* were downloaded from GenBank and used as outgroups. ML posterior probability (PP) values at each node.

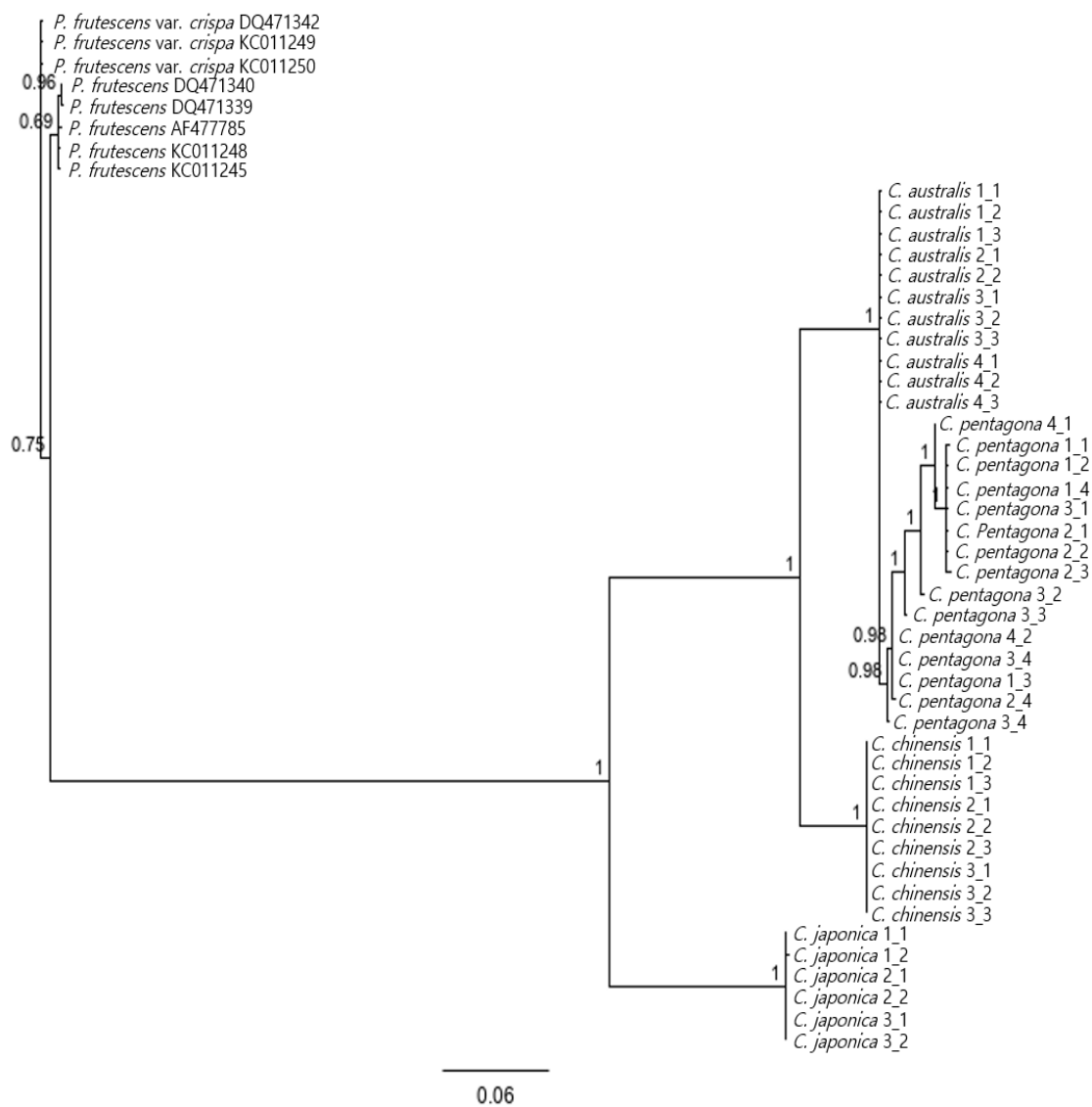


Figure S3. Phylogenetic analysis of five species. The phylogenetic tree was constructed from *Cuscuta* species with the Bayesian inference (BI). The ITS sequences of *Perilla frutescens* were downloaded from GenBank and used as outgroups. BI posterior probability (PP) values at each node.

Table S1. Selection of the best-fitting substitution model for ITS using jModelTest.

	Model	f(a)	f(c)	f(g)	f(t)	kappa	titv	Ra	Rb	Rc	Rd	Re	Rf	pInv	Gamma
AIC	GTR+I	0.22	0.28	0.27	0.21	2.47	1.23	0.77	2.73	1.41	0.60	1.63	1	0.25	1.36
	Model	-lnL*				K	AIC	delta	weight	cumWeight					
	GTR+I	3525.119				123	7296.239	0	0.188444	0.188444					
	TIM3+I	3527.159				121	7296.317	0.0782	0.181218	0.369661					
	TIM3+G	3527.24				121	7296.48	0.24118	0.167036	0.536697					
	GTR+G	3525.316				123	7296.633	0.39384	0.15476	0.691457					
	TIM3+I+G	3526.67				122	7297.339	1.10066	0.108687	0.800144					
	GTR+I+G	3524.679				124	7297.357	1.1182	0.107738	0.907882					
	TIM2+G	3529.464				121	7300.927	4.68836	0.018077	0.925958					
	TIM2+I	3529.584				121	7301.169	4.93014	0.016018	0.941976					
	TIM2+I+G	3529.029				122	7302.059	5.81998	0.010266	0.952242					
	TrN+G	3531.407				120	7302.813	6.57424	0.00704	0.959283					
	TrN+I	3531.679				120	7303.358	7.11896	0.005362	0.964645					
	TVM+I	3529.783				122	7303.566	7.32746	0.004831	0.969476					
	TPM3uf+I	3531.825				120	7303.649	7.41048	0.004635	0.97411					
	TPM3uf+G	3531.945				120	7303.89	7.65072	0.00411	0.97822					
	TrN+I+G	3531.047				121	7304.094	7.85524	0.003711	0.981931					
	TVM+G	3530.082				122	7304.163	7.92464	0.003584	0.985515					
	TIM1+G	3531.371				121	7304.742	8.50342	0.002683	0.988198					
	TPM3uf+I+G	3531.383				121	7304.767	8.52774	0.002651	0.990849					
	TVM+I+G	3529.42				123	7304.839	8.60036	0.002556	0.993406					
	TIM1+I	3531.654				121	7305.307	9.06824	0.002023	0.995429					
	TIM1+I+G	3531.013				122	7306.025	9.78662	0.001413	0.996842					

*-lnL, negative log likelihood; K, number of estimated parameters; AIC, Akaike Information Criterion; delta, AIC difference; weight, AIC weight; cumWeight, cumulative AIC weight.

Table S2. Selection of the best-fitting substitution model for *rbcL* using jModelTest.

	Model	f(a)	f(c)	f(g)	f(t)	kappa	titv	Ra	Rb	Rc	Rd	Re	Rf	pInv	Gamma
AIC	GTR+I	0.29	0.18	0.22	0.29	2.58	1.25	1.76	2.16	0.62	1.49	3.76	1	0.851	0.851
	Model	-lnL*				K	AIC	delta	weight	cumWeight					
	GTR+I	1495.75				111	3213.5	2.22032	0.052392	0.528477					
	TrN+G	1498.765				108	3213.529	2.24942	0.051635	0.580112					
	TIM3+I+G	1496.779				110	3213.558	2.27836	0.050893	0.631005					
	GTR+G	1495.915				111	3213.829	2.5492	0.044448	0.675452					
	TPM3uf+I	1498.975				108	3213.95	2.66998	0.041843	0.717295					
	TPM3uf+G	1499.138				108	3214.276	2.99584	0.035552	0.752847					
	TIM1+I+G	1497.603				110	3215.205	3.92536	0.022337	0.775184					
	TIM2+I	1498.634				109	3215.269	3.98858	0.021642	0.796825					
	TIM2+G	1498.651				109	3215.302	4.0215	0.021288	0.818114					
	TPM1uf+I	1499.729				108	3215.458	4.17826	0.019683	0.837797					
	TrN+I+G	1498.774				109	3215.548	4.26842	0.018816	0.856613					
	TPM1uf+G	1499.84				108	3215.679	4.39946	0.017623	0.874235					
	GTR+I+G	1495.915				112	3215.829	4.54926	0.016351	0.890586					
	HKY+I	1500.946				107	3215.891	4.611	0.015854	0.90644					
	HKY+G	1501.017				107	3216.034	4.7544	0.014757	0.921197					
	TVM+I	1498.049				110	3216.099	4.8188	0.014289	0.935486					
	TPM3uf+I+G	1499.138				109	3216.276	4.9959	0.013078	0.948565					
	TVM+G	1498.234				110	3216.468	5.18752	0.011883	0.960448					
	TIM2+I+G	1498.658				110	3217.316	6.03618	0.007774	0.968222					

*-lnL, negative log likelihood; K, number of estimated parameters; AIC, Akaike Information Criterion; delta, AIC difference; weight, AIC weight; cumWeight, cumulative AIC weight.