

Supplementary File 14. Transition matrix for the Five-State Markov process. m_1 denotes the probability of an *A. oxysepala* lineage being a migrant, while m_2 denotes the probability of a *A. japonica* lineage being a migrant at a given generation.

	(1,1,1)	(1,2,0)	(1,0,2)	(1,0,1)	(1,1,1)*
(1,1,1)	$1-(m_1+m_2)$	m_1	m_2	0	0
(1,2,0)	m_2	$1-(2*m_2+1/N)$	0	$1/N$	m_2
(1,0,2)	m_1	0	$1-(2*m_1+1/N)$	$1/N$	m_1
(1,0,1)	0	0	0	1	0
(1,1,1)*	0	m_1	m_2	0	$1-(m_1+m_2)$