

Table S5. The resulting branch model when we used two different topology structures with two different foreground branches, respectively.

| Foregrou nd Branch | Model | n p | Ln L | Estimates of parameters | | | Model compared | LRT P- value | Omega for Foreground Branch |
|--------------------------|----------------------|--------|-------------------|-------------------------|---------------------|---------------------|----------------------------------|-----------------|-----------------------------|
| <i>R. coreanus</i> | Two ratio Model 2 | 1 9 | -41032.577533 | ω : | ω 0= 0.03065 | ω 1= 0.02035 | Two ratio Model 2 vs. Model 0 | 0.002391843 | ω 1= 0.02035 |
| | Model 0 | 1 8 | -41037.188303 | ω = | 0.02924 | | | | |
| <i>P. luteus</i> | Two ratio Model 2 | 19 | - 42114.968291 | ω : | ω 0= 0.03041 | ω 1=0.02982 | Two ratio Model 2 vs. Model 0 | 0.858612719 | |
| | Model 0 | 18 | - 42114.984158 | ω = | 0.03032 | | | | |