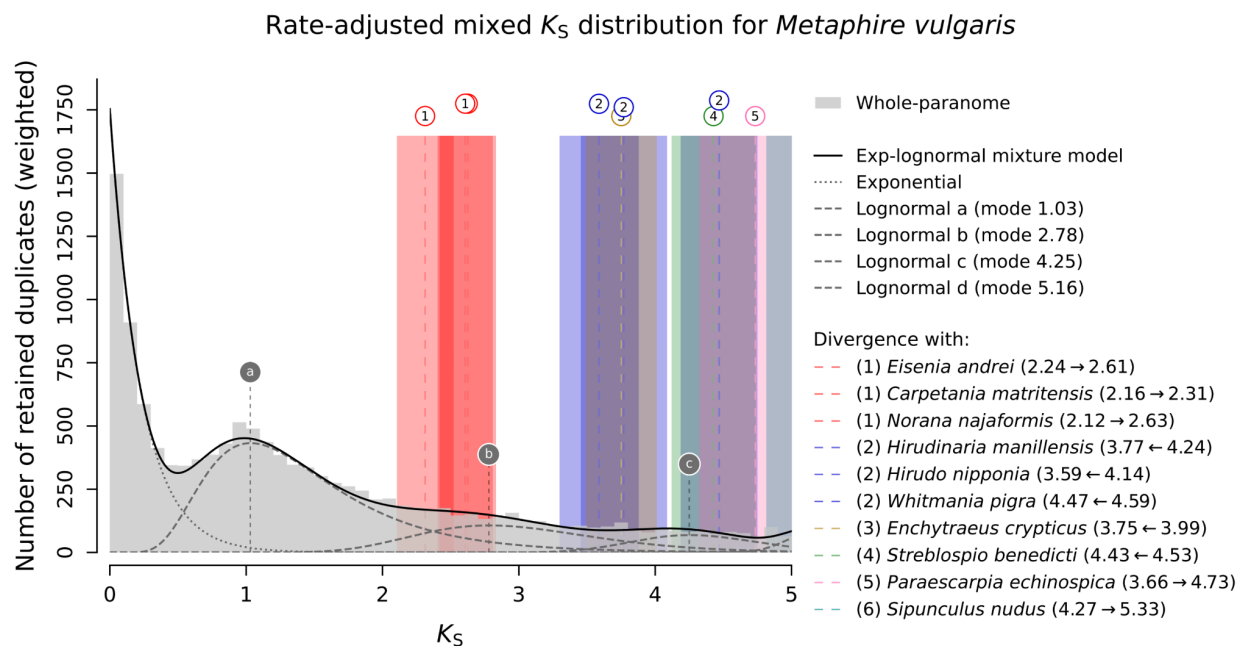
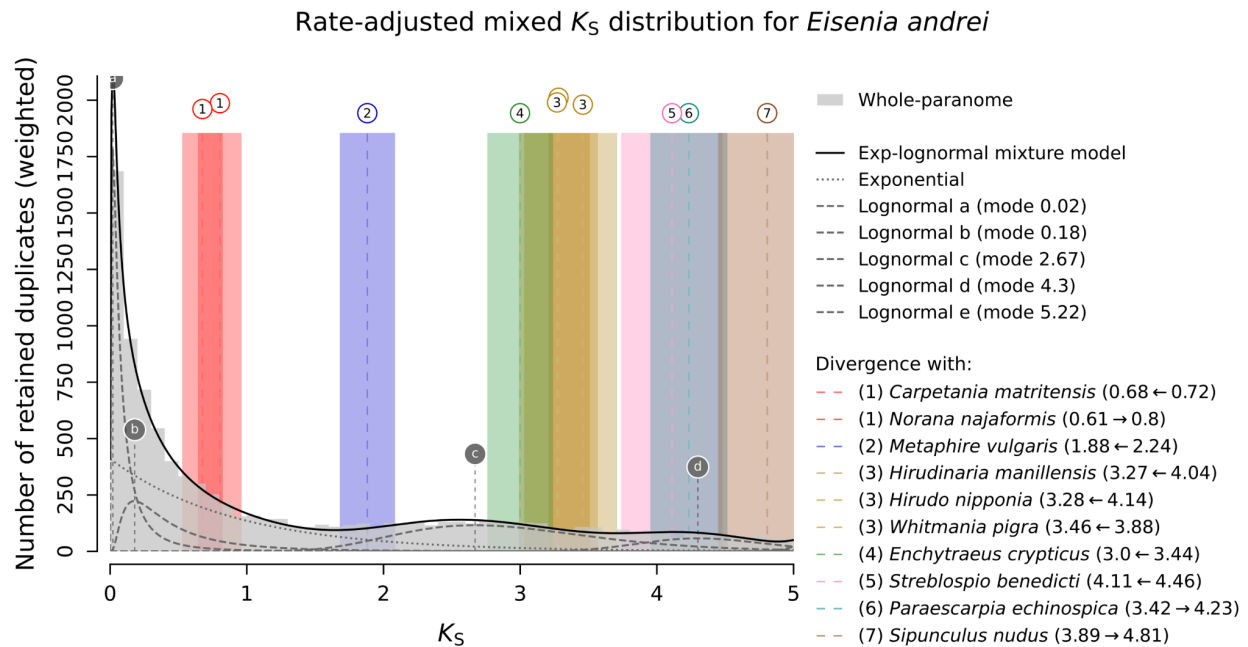
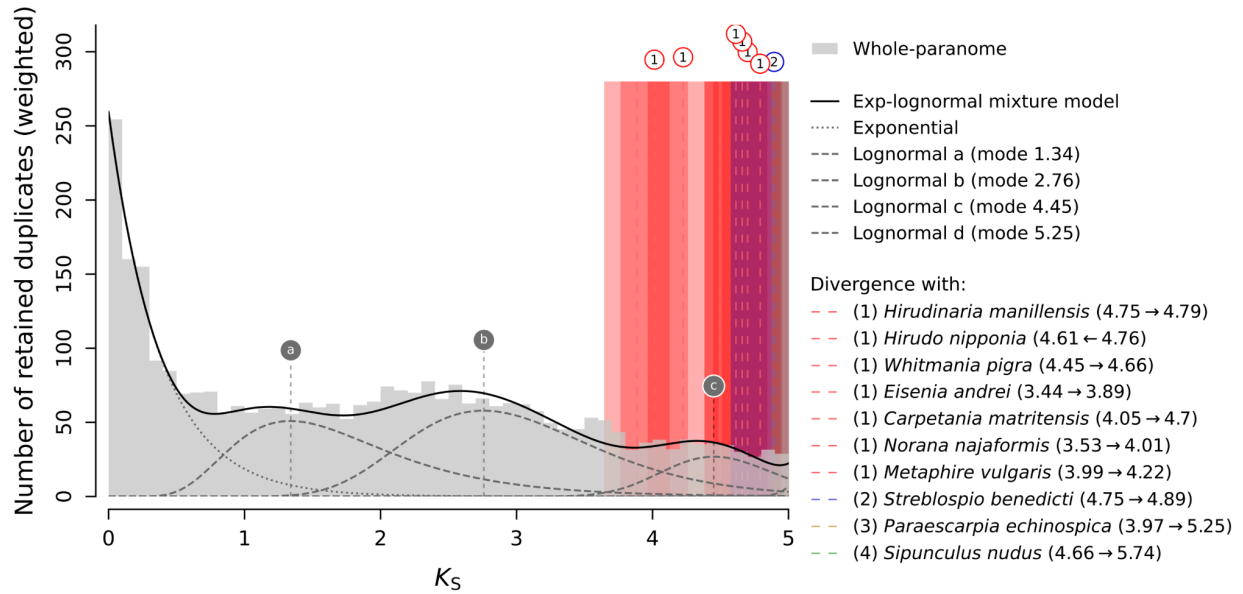


**Supplementary Data 1.** Substitution-rate-adjusted mixed paralog–ortholog  $K_S$  plot for *Eisenia andrei*, *Metaphire vulgaris*, *Hirudinaria manillensis* and *Enchytraeus crypticus*. The inferred putative WGD events are indicated with dashed lines labelled with letters (a, b, c, etc.) corresponding to the  $K_S$ -based WGD age estimates. The speciation events calculated using the rate-adjusted mode estimates of the ortholog  $K_S$ -distributions between each species and the other species are drawn as long-dashed lines labelled with numbers between 1 and 8 surrounded by coloured boxes ranging from one standard deviation below and above the mean mode estimate. Lines representing the same speciation event share number and colour.



Rate-adjusted mixed  $K_S$  distribution for *Enchytraeus crypticus*



Rate-adjusted mixed  $K_S$  distribution for *Hirudinaria manillensis*

