**Table 1: Details of the datasets used in this study.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Beck2014** | **Brusatte2014** | **Bapst2016** | **Wright2017** |
| **Group** | mammals | theropods | theropods | crinoids |
| **# taxa** | 106 | 152 | 89 | 42 |
| **# characters** | 421 | 853 | 374 | 87 |
| **Age range (MYA)\*** | 171.8 - 0 | 168.5 - 0 | 207.2 - 0 | 485.4 - 372.2 |
| **Mass extinction (MYA)** | 66 (K-Pg) | NA**¶** | NA**¶** | 443 (O-S) |
| **Reference** | Beck & Lee 2014a | Brusatte et al. 2014a | Bapst et al. 2016a | Wright 2017a |
| **Data reference** | Beck & Lee 2014b | Brusatte et al. 2014b | Bapst et al. 2016b | Wright 2017b |

\*Age ranges are root time to most recent tip taxon. **¶**Insufficient taxa post K-Pg to investigate the effects of the mass extinction on disparity.