**Table S2**: Maximum Principal Stress Values (MPa) for Three Biting Regimes

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Bilateral Biting** | Anterior | Mid-Anterior | Mid | Mid-Posterior | Posterior |
| *Ebrachosuchus* | 12.83 | 454.63 | 344.98 | 116.97 | 18.39 |
| Alligator | 0.12 | 6.65 | 11.11 | 17.61 | 18.10 |
| Gharial | 3.88 | 52.73 | 104.23 | 96.66 | 50.68 |
| Nile Crocodile | 0.14 | 4.93 | 4.39 | 7.15 | 22.86 |
| *Ebrachosuchus* (No Palate) | 1.55 | 271.15 | 290.93 | 239.02 | 127.00 |
| *Ebrachosuchus*  (No Antorbital fenestra) | 6.86 | 364.22 | 364 | 126.98 | 76.35 |
| Gharial  (No Palate) | 0.00 | 51.90 | 88.71 | 128.49 | 141.60 |
| **Unilateral Biting** |  |  |  |  |  |
| *Ebrachosuchus* | 19.78 | 455.41 | 345.51 | 118.33 | 18.79 |
| Alligator | 1.73 | 9.10 | 11.65 | 17.65 | 17.65 |
| Gharial | 4.14 | 56.81 | 105.53 | 97.32 | 50.39 |
| Nile Crocodile | 1.60 | 5.99 | 4.87 | 7.15 | 22.68 |
| *Ebrachosuchus* (No Palate) | 3.38 | 280.70 | 299.34 | 237.94 | 124.74 |
| *Ebrachosuchus*  (No Antorbital fenestra) | 9.66 | 365.48 | 364.20 | 129.24 | 59.13 |
| Gharial  (No Palate) | 0 | 62.73 | 95.75 | 135.61 | 152.60 |
| **Head Shaking** |  |  |  |  |  |
| *Ebrachosuchus* | 14.47 | 233.75 | 174.53 | 64.51 | 8.64 |
| Alligator | 4.74 | 6.70 | 5.99 | 8.53 | 8.40 |
| Gharial | 4.53 | 28.76 | 53.42 | 44.64 | 26.43 |
| Nile Crocodile | 3.19 | 3.95 | 2.94 | 3.83 | 11.68 |
| *Ebrachosuchus* (No Palate) | 2.70 | 105.01 | 115.62 | 80.57 | 30.95 |
| *Ebrachosuchus*  (No Antorbital fenestra) | 12.21 | 185.33 | 181.52 | 70.76 | 18.33 |
| Gharial  (No Palate) | 1.61 | 21.17 | 34.89 | 46.23 | 45.40 |