**Effects of the early Toarcian Anoxic Event on ichthyosaur body size and faunal composition in the Southwest German Basin**

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*Supplementary Table 1*.—Specimen list and measurement data for *Stenopterygius quadriscissus*. Note that only approximate geographic provenance is available as these are historical finds. All measurements are in millimetres. Specimens for which all 6 measurements were not available were included in the lower jaw mean length analysis, but not the PCA analysis.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Specimen | Provenance | Stratigraphic horizon | Length lower Jaw | Length premaxilla | Length humerus | Length radius | Length ischio-pubis | Length femur | z-score |
| SMNS 51824 | Ohmden | I2 | 440 | 231 |  |  | 51 | 49 |  |
| SMNS 52036 | Holzmaden | I2 | 451 | 245 | 73 | 28 | 59 | 53 | -0.30 |
| SMNS 51554 | Ohmden | I2 | 452 | 243 | 68 | 26 | 59 | 47 | -0.26 |
| SMNS 56856 | Zell unter Aichelberg | II2 | 437 | 251 | 76 | 30 | 59 | 57 | -0.13 |
| SMNS 54062 | Holzmaden | II2 | 462 | 236 | 79 | 31 | 69 | 63 | -0.15 |
| SMNS 58881 | Ohmden | II3 | 407 | 197 | 80 | 37 | 70 | 58 | 0.05 |
| SMNS 55934 | Zell unter Aichelberg | II3 | 430 | 232 | 66 | 23 | 59 | 46 | -0.10 |
| SMNS 6293 | Holzmaden | II3 | 449 | 239 | 81 | 32 | 68 | 60 | -0.02 |
| SMNS 3775 | Holzmaden | II3 | 451 | 247 | 93 | 35 | 92 | 74 | 0.11 |
| SMNS 54816 | Holzmaden | II3 | 463 | 221 | 85 | 34 | 72 | 63 | -0.02 |
| SMNS 10460 | Holzmaden | II3 | 478 | 237 | 87 | 34 | 83 | 68 | -0.15 |
| SMNS 54064 | Holzmaden | II3 | 495 | 264 | 89 | 34 | 73 | 66 | -0.12 |
| SMNS 51948 | Zell unter Aichelberg | II3 | 498 | 250 | 88 | 33 | 72 | 66 | -0.34 |
| SMNS 55343 | Ohmden | II3 | 507 | 254 | 86 | 29 |  | 65 |  |
| SMNS 50963 | Zell unter Aichelberg | II3 | 514 | 272 | 98 | 37 | 96 | 76 | -0.06 |
| GPIT 1491/8 | Holzmaden | II3 | 522 | 251 | 99 | 35 | 85 | 74 | 0.04 |
| SMF 457 | Holzmaden | II4 | 454 | 240 | 71 | 31 | 68 | 59 | 0.17 |
| SMNS 80234 | Ohmden | II4 | 483 |  | 80 | 34 | 75 | 58 |  |
| SMNS 80115 | Schlierbach | II4 | 485 | 250 | 101 | 44 | 92 | 83 | -0.16 |
| SMNS 55748 | Holzmaden | II4 | 519 | 282 | 99 | 43 | 83 | 82 | 0.14 |
| SMNS 16811 | Holzmaden | II4 | 524 | 257 | 106 | 39 | 91 | 80 | 0.15 |
| SMNS 50165 | Holzmaden | II4 | 547 | 280 | 86 | 34 |  |  |  |
| GPIT 1491/1 | Holzmaden | II6 | 477 | 261 | 96 | 40 | 99 | 74 | 0.08 |
| SMNS 15033 | Holzmaden | II6 | 503 | 243 | 104 | 45 | 83 | 83 | 0.178 |
| SMNS 7402 | Holzmaden | II6 | 508 | 263 | 96 | 42 | 76 | 70 | 0.14 |
| GPIT 1491/9 | Ohmden | II6 | 550 | 264 | 107 | 38 | 99 | 80 | 0.16 |
| MHH 1981/33 | Holzmaden | II9 | 564 | 307 | 109 | 41 | 77 | 77 | 0.14 |
| SMNS 51142 | Holzmaden | II10 | 516 | 248 | 105 | 41 | 91 | 80 | 0.17 |
| SMNS 8664 | Holzmaden | II10 | 523 | 258 |  |  |  |  |  |
| GPIT 1491/2 | Holzmaden | II10 | 534 | 278 | 103 | 43 | 101 | 74 | 0.12 |
| SMNS 53001 | Zell unter Aichelberg | II10 | 558 | 288 | 107 | 41 | 87 | 80 | 0.17 |

*Supplementary Figure 1*.—Plot of lower jaw length against stratigraphic occurrence for all specimens of *S. quadriscissus* (juveniles included). The dashed line represents the maturity cutoff. Circled points are embryos (i.e., preserved inside the body cavity of a larger specimen); grey points are gravid females.

