Body length estimation of Neogene macrophagous lamniform sharks (*Carcharodon* and *Otodus*) derived from associated fossil dentitions

Victor J. Perez; Ronny M. Leder;Teddy Badaut

**APPENDIX 3**. Crown width measurements in mm of 11 fossil dentitions of *Otodus* and *Carcharodon*. Measurements are separated for the different regions preserved: upper left (UL), upper right (UR), lower left (LL), and lower right (LR).

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | A/a1 | | A/a2 | A/a3 | L/l1 | L/l2 | L/l3 | L/l4 | L/l5 | L/l6 | L/l7 | L/l8 | L/l9 | L/l10 |
| ***Otodus megalodon*** | | | | | | | | | | | | | | |
| UF-VP-311000 | | | | | | | | | | | | | | |
| UL | | 101.1 | 101.2 | 97.7 | 114.3 | 111.7 | 107.0 | 106.4 | 108.4 | 89.2 | - | 56.2 | - | NA |
| UR | | - | - | - | - | - | - | - | - | - | 62.3 | - | - | NA |
| LL | | 81.9 | - | 89.1 | 94.8 | 88.4 | 87.3 | 89.1 | 80.5 | 62.1 | 48.3 | 38.8 | NA | NA |
| LR | | - | 92.2 | - | - | - | - | - | - | - | - | - | NA | NA |
| GHC 1 | |  |  |  |  |  |  |  |  |  |  |  |  |  |
| UL | | 108.1 | 98.9 | 97.2 | 112.7 | 112.1 | 105.5 | 105.0 | 97.6 | - | 76.3 | - | 38.2 | NA |
| UR | | 112.4 | 105.5 | 114.2 | 106.8 | 113.5 | 106.4 | 112.6 | 95.1 | 80.8 | - | - | - | NA |
| LL | | 76.0 | 81.4 | 76.1 | 86.8 | 85.5 | 81.6 | 78.3 | - | 73.3 | - | 50.0 | NA | NA |
| LR | | 84.0 | - | 76.0 | 77.5 | 77.9 | 82.9 | 80.1 | - | 72.0 | - | - | NA | NA |
| CH-31-46P | | | | | | | | | | | | | | |
| UL | | 83.3 | 74.4 | 81.5 | 80.2 | 87.1 | 82.6 | 73.8 | 63.4 | 50.6 | 47.3 | 34.3 | 25.1 | NA |
| UR | | 81.8 | 76.5 | 75.9 | 85.8 | 87.9 | 83.5 | 76.3 | 64.9 | - | 47.6 | 34.1 | 25.2 | NA |
| LL | | 58.6 | 68.8 | 64.7 | 62.9 | 66.2 | 67.7 | 64.9 | 57.4 | 45.9 | 32.8 | 22.6 | NA | NA |
| LR | | 61.2 | 67.4 | 63.7 | 62.2 | 66.7 | 65.1 | 64.3 | 58.2 | 49.0 | - | 21.4 | NA | NA |
| UF-VP-460000 | | | | | | | | | | | | | | |
| UL | | 73.1 | 75.7 | 75.5 | 72.0 | 74.9 | 62.9 | 55.5 | - | - | - | 30.0 | - | NA |
| UR | | 72.5 | 74.5 | 74.4 | 71.0 | 72.9 | 65.4 | 56.5 | - | - | 46.6 | - | - | NA |
| LL | | 53.8 | 61.0 | 56.6 | 59.7 | 59.8 | 57.4 | 52.4 | - | - | - | - | - | NA |
| LR | | 55.0 | 61.2 | 58.5 | 60.6 | 60.7 | 56.4 | 52.4 | - | - | - | - | - | NA |
| ***Otodus chubutensis*** | | | | | | | | | | | | | | |
| USNM 411881 | | | | | | | | | | | | | | |
| UL | | 56.2 | 59.3 | 58.8 | 57.9 | 53.3 | - | 54.3 | 48.3 | 41.9 | 35.0 | 26.5 | - | NA |
| UR | | 55.8 | 61.3 | 57.7 | 59.4 | 54.1 | 47.3 | 44.9 | - | 41.7 | 33.8 | 26.7 | - | NA |
| LL | | 40.2 | - | 45.1 | 45.3 | 45.3 | 45.7 | 45.7 | 43.2 | 42.7 | 36.1 | - | NA | NA |
| LR | | 42.4 | 43.4 | 46.4 | - | 41.9 | - | 42.5 | 44.0 | 39.8 | - | - | NA | NA |
| USNM 299832 | | | | | | | | | | | | | | |
| UL | | - | - | 70.5 | 72.6 | 72.3 | - | - | - | - | - | - | - | NA |
| UR | | 62.9 | 76.9 | 76.8 | 75.6 | 73.3 | - | 65.9 | 53.1 | 49.1 | 42.7 | - | - | NA |
| LL | | - | - | - | - | - | - | - | - | - | - | - | NA | NA |
| LR | | 55.9 | 59.3 | 60.3 | 56.1 | 56.1 | 54.7 | 56.7 | - | - | - | - | NA | NA |
| GHC 3 | | | | | | | | | | | | | | |
| UL | | - | - | - | - | - | - | - | 60.1 | - | - | - | - | NA |
| UR | | 69.0 | 74.2 | 74.0 | 72.1 | 72.3 | 72.5 | 69.4 | 58.7 | 47.9 | 33.6 | 24.9 | - | NA |
| LL | | - | - | 58.9 | 59.9 | 54.6 | 56.1 | 52.9 | 40.1 | 34.5 | 22.2 | - | NA | NA |
| LR | | 52.2 | 62.5 | 59.8 | 60.6 | 60.5 | 58.5 | 55.6 | 52.1 | 37.4 | 29.5 | 14.0 | NA | NA |
| UF-VP-312864 | | | | | | | | | | | | | | |
| UL | | 33.6 | 43.4 | 38.7 | 38.5 | 37.9 | 35.9 | 30.8 | 30.4 | 28.6 | - | 20.6 | 19.5 | NA |
| UR | | 37.9 | 44.8 | 34.9 | 38.3 | - | - | 34.2 | 30.0 | 27.3 | - | 21.7 | - | NA |
| LL | | 30.1 | 32.9 | - | 37.2 | 35.6 | 32.3 | 30.4 | 29.3 | 24.2 | 26.9 | 20.1 | NA | NA |
| LR | | - | - | - | 37.2 | 30.5 | - | 25.4 | 22.4 | 21.3 | 21.0 | 16.5 | NA | NA |
| ***Carcharodon carcharias*** | | | | | | | | | | | | | | |
| GHC 4 | | | | | | | | | | | | | | |
| UL | | 30.3 | - | 28.7 | - | 30.0 | 26.4 | 24.7 | 18.4 | 14.6 | 11.4 | 7.1 | - | NA |
| UR | | 30.7 | 30.1 | 27.8 | 27.5 | 29.5 | 28.2 | 23.6 | 19.0 | 15.4 | 10.1 | 7.8 | - | NA |
| LL | | 20.9 | 25.0 | 21.3 | 21.2 | - | - | - | - | - | - | - | - | NA |
| LR | | 22.9 | 24.0 | 22.2 | 22.2 | 20.8 | 19.7 | 17.6 | 16.3 | 12.8 | - | - | - | NA |
| ***Carcharodon hubbelli*** | | | | | | | | | | | | | | |
| UF-VP-226255 | | | | | | | | | | | | | | |
| UL | | 34.7 | 36.8 | 31.8 | 35.1 | 34.9 | 34.3 | 26.1 | 22.9 | 17.7 | 12.2 | 10.2 | 8.7 | 7.6 |
| UR | | 34.0 | 36.2 | 30.7 | 34.6 | 35.0 | 34.5 | 28.3 | 17.6 | 16.5 | 12.6 | 11.4 | - | NA |
| LL | | 28.5 | 31.4 | 27.8 | 27.7 | 22.1 | 21.0 | 16.7 | 14.0 | - | - | - | - | NA |
| LR | | 29.3 | 31.4 | 28.1 | 27.2 | 27.2 | 21.4 | 18.6 | 14.0 | 11.2 | 9.0 | 8.0 | - | NA |
| ***Carcharodon hastalis*** | | | | | | | | | | | | | | |
| GHC 5 | | | | | | | | | | | | | | |
| UL | | 41.2 | 38.4 | 34.3 | 41.1 | 37.6 | 37.1 | 30.3 | 23.5 | 18.0 | - | - | - | NA |
| UR | | 39.1 | 40.4 | 34.5 | 40.3 | 37.7 | 36.1 | 27.1 | 22.9 | 18.1 | 14.8 | 11.9 | - | NA |
| LL | | 31.2 | 39.3 | 30.4 | 31.4 | 28.6 | 24.5 | 19.6 | 15.9 | 11.2 | - | - | - | NA |
| LR | | 29.0 | 32.3 | 25.8 | 26.8 | 25.5 | 23.6 | 16.8 | 13.9 | 11.8 | 8.5 | 5.2 | - | NA |