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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2019 | | 2020 | | Model Outputs | | | | | | | |
| Response Variable | Moraine | Harrison Cove | Moraine | Harrison Cove | Explanatory Variables | Model | Estimate | CI (lwr, upr) | | S.E. | *X*2 value | *p* value |
| Dive activity (dives h-1) | 45.9 ± 11.3 | 38.9 ± 8.8 | 33.7 ± 7.6 | 39.4 ± 8.8 | Site (MO)  Year (2020)  Site (MO):Year (2020) | GLMM – Negative Binomial | 0.040  0.045  -0.043 | -0.040  -0.034  -0.123 | 0.119  0.125  0.036 | 0.041  0.041  0.041 | 0.952  1.25  1.13 | 0.329  0.263  0.288 |
| Number of wiggles per dive | 7.6 ± 2.2 | 7.2 ± 2.8 | 9.2 ± 1.8 | 8.9 ± 1.4 | Site (MO)  Year (2020)  Site (MO):Year (2020) | GLMM -Negative Binomial | -0.015  -0.107  -0.011 | -0.090 -0.183  -0.086 | 0.061  -0.031  0.065 | 0.039  0.039  0.039 | 0.142  7.66  0.080 | 0.706  **0.006**  0.777 |
| Dive duration (s) | 64.4 ± 17.0 | 71.1 ± 20.5 | 89.0 ± 19.3 | 66.7 ± 12.4 | Site (MO)  Year (2020)  Site (MO):Year (2020) | GLMM - Gaussian | -0.047  -0.066  0.088 | -0.136  -0.155  -0.000 | 0.041  0.022  0.177 | 0.045  0.045  0.045 | 1.09  2.15  3.81 | 0.297  0.143  0.051 |
| Max dive depth (m) | 19.0 ± 5.7 | 23.0 ± 7.8 | 30.9 ± 8.7 | 16.1 ± 5.2 | Site (MO)  Year (2020)  Site (MO):Year (2020) | GLMM - Gamma | -0.113  -0.032  0.197 | -0.230  -0.149  0.080 | 0.004  0.085  0.314 | 0.060  0.060  0.060 | 3.57  0.284  10.91 | 0.059  0.594  **<0.001** |
| Descent rate (ms-1) | 0.86 ± 0.11 | 0.90 ± 0.16 | 1.05 ± 0.08 | 0.85 ± 0.07 | Site (MO)  Year (2020)  Site (MO):Year (2020) | GLMM - Gaussian | -0.037  -0.038  0.066 | -0.068  -0.069  0.034 | 0.007  0.006  0.109 | 0.019  0.019  0.019 | 3.77  4.07  12.09 | 0.052  **0.044**  **<0.001** |
| Ascent rate (ms-1) | 0.84 ± 0.03 | 0.86 ± 0.06 | 0.91 ± 0.08 | 0.83 ± 0.08 | Site (MO)  Year (2020)  Site (MO):Year (2020) | GLMM - Gaussian | -0.008  -0.015  0.022 | -0.036  -0.043  -0.006 | 0.020  0.013  0.050 | 0.014  0.014  0.014 | 0.286  1.08  2.33 | 0.593  0.298  0.127 |
| Bottom time (s) | 30.5 ± 8.7 | 32.3 ± 9.5 | 40.5 ± 8.9 | 35.2 ± 4.3 | Site (MO)  Year (2020)  Site (MO):Year (2020) | GLMM - Gaussian | -0.020  -0.092  0.041 | -0.104  -0.176  -0.043 | 0.064  -0.008  0.126 | 0.043  0.043  0.043 | 0.212  4.64  0.935 | 0.645  **0.031**  0.334 |
| Foraging efficiency | 0.37 ± 0.03 | 0.38 ± 0.02 | 0.40 ± 0.03 | 0.43 ± 0.03 | Site (MO)  Year (2020)  Site (MO):Year (2020) | GLMM - Gaussian | 0.032  -0.041  -0.020 | -0.003  -0.075  -0.055 | 0.067  -0.006  0.014 | 0.018  0.018  0.018 | 3.36  5.31  1.33 | 0.067  **0.021**  0.249 |