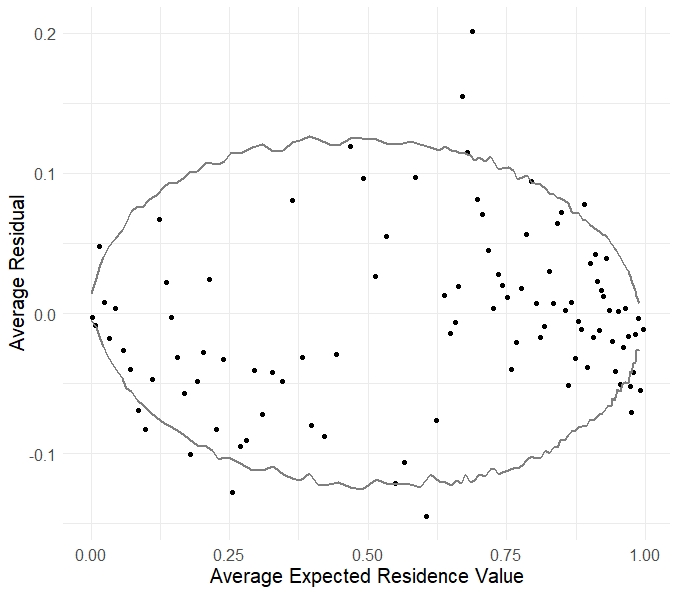
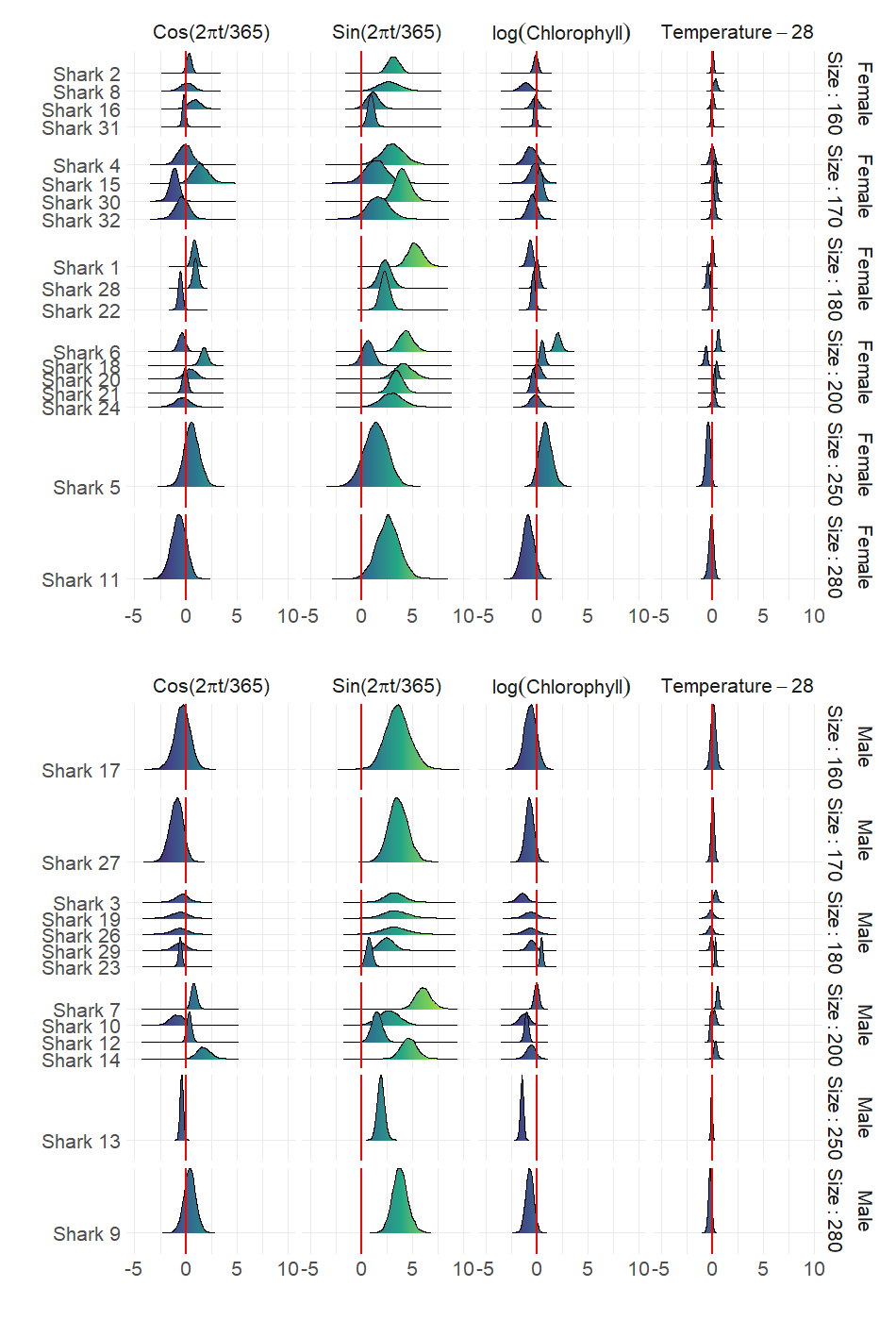
**Supplementary material**

Supplemental Table 1. Sharks tagged in CPNP since 2015. Where Tag ID is the acoustic code, TL (total length in centimetres) and RI is the residency index.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **ID** | **Tagging date** | **Tag ID** | **Sex** | **TL (cm)** | **RI** |
| CL1 | 20/11/2015 | 28990 | Unknown | 170 | 0.04 |
| CL2 | 11/05/2016 | 28983 | Female | 200 | 0.17 |
| CL3 | 12/05/2016 | 28986 | Male | 180 | 0.06 |
| CL4 | 12/05/2016 | 28987 | Female | 200 | 0.16 |
| CL5 | 12/05/2016 | 28991 | Male | 180 | 0.05 |
| CL6 | 12/05/2016 | 28996 | Male | 180 | 0.08 |
| CL7 | 29/05/2016 | 29000 | Female | 170 | 0.07 |
| CL8 | 02/06/2016 | 28993 | Male | 170 | 0.06 |
| CL9 | 02/06/2016 | 28997 | Female | 170 | 0.07 |
| CL10 | 28/05/2017 | 16317 | Male | 210 | 0.13 |
| CL11 | 05/05/2018 | 16845 | Male | 200 | 0.1 |
| CL12 | 05/05/2018 | 16846 | Female | 170 | 0.31 |
| CL13 | 05/05/2018 | 16850 | Male | 160 | 0.12 |
| CL14 | 05/05/2018 | 18707 | Female | 200 | 0.14 |
| CL15 | 05/05/2018 | 18708 | Male | 180 | 0.1 |
| CL16 | 06/05/2018 | 13044 | Female | 160 | 0.61 |
| CL17 | 06/05/2018 | 13046 | Male | 180 | 0.3 |
| CL18 | 06/05/2018 | 13048 | Female | 170 | 0.21 |
| CL19 | 06/05/2018 | 14666 | Female | 160 | 0.24 |
| CL20 | 06/05/2018 | 13042 | Female | 180 | 0.54 |
| CL21 | 06/05/2018 | 14668 | Male | 230 | 0.22 |
| CL22 | 06/05/2018 | 16849 | Female | 160 | 0.14 |
| CL23 | 12/05/2018 | 13924 | Female | 250 | 0.09 |
| CL24 | 12/05/2018 | 15900 | Male | 200 | 0.2 |
| CL25 | 12/05/2018 | 15901 | Female | 280 | 0.19 |
| CL26 | 13/05/2018 | 13925 | Female | 200 | 0.1 |
| CL27 | 13/05/2018 | 13926 | Male | 200 | 0.19 |
| CL28 | 13/05/2018 | 15902 | Male | 200 | 0.68 |
| CL29 | 12/05/2018 | 15903 | Female | 280 | 0.19 |
| CL30 | 13/05/2018 | 13927 | Female | 200 | 0.1 |
| CL31 | 13/05/2018 | 13928 | Male | 200 | 0.19 |
| CL32 | 12/05/2018 | 13929 | Male | 200 | 0.19 |



Supplemental Figure 1. Pooled binned residuals for the hierarchical logistic regression model along with 95% credible intervals (grey lines) constructed by using draws from the posterior predictive distribution.

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Supplemental Figure 2. Density curves of the marginal posterior distributions for each individual. The red line at zero indicates the value of the effect that leads to an occurrence probability of 50%, were no other terms in the model included. Values to the right of the red line would lead to an occurrence probability greater than 50%, and vice versa for values to the left of the red line.