

Supplemental Table

Table S1. Monthly encounter histories for 393 individual white sharks identified during 137 survey trips conducted off Cape Cod, Massachusetts, USA, from 2015-2018. The number of survey trips each individual was encountered in each month is noted, with blank cells indicating an individual was not encountered in that month. Sharks that were first encountered in 2014 are indicated with an ‘x’. Months when tagged sharks were detected in our receiver array and were considered ‘present’ in the survey area are indicated by light grey shading, those when they were detected in other researchers’ receiver arrays outside of the region and considered ‘away’ by black shading, and those when they were not detected in any array and not assigned a known state by dark grey shading.

| Individual | Survey Year/Month | | | | | | | | | | | | | | | | | | | |
|------------|-------------------|------|----|----|----|------|----|----|----|----|------|----|----|----|----|------|----|----|----|----|
| | 2014 | 2015 | | | | 2016 | | | | | 2017 | | | | | 2018 | | | | |
| | | 07 | 08 | 09 | 10 | 06 | 07 | 08 | 09 | 10 | 06 | 07 | 08 | 09 | 10 | 06 | 07 | 08 | 09 | 10 |
| MR0003 | x | | 2 | | | | | | | | | | | | | | | | | |
| MR0005 | x | | 2 | 1 | 1 | | | 4 | 2 | 1 | | | | | 2 | | | 6 | | 1 |
| MR0006 | x | | 2 | | | | 3 | 3 | 2 | | | 1 | 3 | | | 1 | 2 | 1 | 1 | 1 |
| MR0007 | x | | 1 | 3 | | | | | 2 | | | | 1 | 1 | | | | 2 | | |
| MR0008 | x | | 2 | 1 | | | | | | | | | | | | | | | | |
| MR0009 | x | | | 1 | 1 | | | 2 | | | | | | 1 | | | | 1 | 1 | |
| MR0010 | x | | 1 | | | | 1 | 2 | | | | 1 | 1 | | | | | | | |
| MR0011 | x | | 2 | 1 | | | | | 1 | | | 1 | 2 | | | | | | | |
| MR0012 | x | | 4 | 1 | 1 | | | | | 3 | | | 1 | | 2 | | | | | 2 |
| MR0014 | x | 1 | 1 | | | | 2 | 4 | | | | 2 | 2 | | | | 1 | 2 | 1 | 1 |
| MR0015 | x | | 1 | 1 | | | | | 2 | 5 | | | | | 1 | | | | | 1 |
| MR0016 | x | 1 | | | | | | 2 | | | | | 3 | | | | | 2 | 1 | |
| MR0017 | x | | | | 1 | | 1 | 1 | 1 | | | | 2 | | | | 1 | 1 | | |
| MR0018 | x | | 6 | | | | | 1 | | | | | | | | | | | | |
| MR0019 | x | | 1 | | | | 1 | | | | | | 1 | | | | 2 | | | |
| MR0020 | x | | 3 | 1 | | | | 1 | 3 | | | | | | 2 | | | 1 | 2 | |
| MR0021 | x | | 1 | 1 | | | | | 1 | 1 | | | | | 1 | | | | | |
| MR0022 | x | | 1 | 1 | | | | 4 | 2 | | | | | | | | | | 1 | |
| MR0023 | x | | 2 | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|---|---|---|---|
| MR0024 | x | | 5 | 2 | 2 | | | | 3 | 2 | | 2 | 2 | 2 | | | 1 | 3 | 2 | 2 |
| MR0027 | x | 1 | 3 | | | | 2 | 5 | | | | 1 | 1 | | | | 1 | 2 | | |
| MR0028 | x | | 1 | | 1 | | | 1 | | | | | 2 | | 1 | | | 2 | 1 | |
| MR0030 | x | | | | | | | | 1 | | | | | | | | | | | |
| MR0031 | x | | | 1 | 2 | | | | 1 | | | | | | | | | 2 | | |
| MR0033 | x | | | | | | | | 1 | | | | | | | | | | | |
| MR0034 | x | | 6 | | | | | | | | | | | | | | | | | |
| MR0035 | x | | 1 | | | | | 1 | | 1 | | 1 | 3 | 1 | | | 1 | | | 1 |
| MR0036 | x | | 1 | | | | | | | | | | | | | | | | | |
| MR0037 | x | | | | | 1 | | 1 | 2 | 2 | | | | | 1 | | 1 | 2 | | 3 |
| MR0038 | x | | 4 | | | | | | | | | | | | | | | | | |
| MR0040 | x | | 1 | | | | | 3 | 2 | 1 | | | | | 3 | | | | 1 | |
| MR0041 | x | | 2 | | | | | | | | | | | | 1 | | | | | |
| MR0042 | x | | 3 | 4 | | | 1 | | 2 | 2 | | | 2 | | 4 | | | 2 | 2 | 2 |
| MR0043 | x | | 5 | | | | | | | 2 | | | | 1 | | | | | | 1 |
| MR0044 | x | | | | | | | | | | | | | | | | | 1 | | |
| MR0045 | x | 1 | 2 | | | | | | | | | | | | | | | | | |
| MR0048 | x | | | | | | | | | | | | | | | | | | | 1 |
| MR0051 | x | | | | 1 | | | | | | | | | | | | | | | |
| MR0052 | x | | | | | | | | | 1 | | | | | | | | | | |
| MR0053 | x | | | | 1 | | | | | | | | | | | | | | | |
| MR0056 | x | | 2 | | | | | | 3 | 2 | | | | | | | | | | |
| MR0058 | x | 1 | | 1 | | | | | 1 | | | | | | 2 | | | | | |
| MR0059 | x | | | | | | | | 1 | | | | | | | | | | | |
| MR0060 | x | | | | | | | | 1 | | | | | | | | | | | |
| MR0064 | x | | 1 | 1 | | | | | 4 | | | | | | | | | | | |
| MR0065 | x | | 4 | | | | | 1 | 1 | | | | | | | | | | | |
| MR0066 | x | | | 2 | 1 | | | | 1 | | | | 1 | | 1 | | | | | 2 |
| MR0067 | x | | | | 1 | | | | | | | | | | | | | | | |
| MR0068 | x | | 1 | | | | | | | | | | | | | | | | | |
| MR0069 | x | | 3 | 1 | | | 3 | 1 | 2 | 2 | 1 | 2 | 2 | 2 | 3 | | | 1 | | 1 |
| MR0070 | x | | 1 | 1 | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|--|---|---|---|---|--|---|---|---|---|
| MR0074 | x | | | | | | | | | | | | | 2 | | | | | |
| MR0076 | | 1 | 1 | | | | | | | | | | | | | | | | |
| MR0077 | | 1 | 1 | | | | | | | | | | | | | | | | |
| MR0078 | | 1 | | | | | | | | | | | | | | | | | |
| MR0079 | | 1 | 1 | | | | | | | | | | | | | | | | |
| MR0080 | | 1 | 1 | | | | | | | | | | | 1 | | | | | 1 |
| MR0082 | | 2 | | | | | 2 | 2 | 1 | | | | | | | | | | |
| MR0083 | | 2 | | | | | | | | | | | | | | | | | |
| MR0085 | | 1 | | | | | | | | | | | | | | | | | |
| MR0086 | | 2 | | | | | 2 | 1 | | | | | | | | | | | |
| MR0088 | | 2 | | | | 1 | | | | | | | | | | | | | |
| MR0089 | | 1 | 1 | | | | | | | | | | 1 | | | | | | |
| MR0090 | | 2 | 2 | | | | | | | | | | | | | | | | |
| MR0091 | | 1 | 2 | | | | | | | | | | | | | | | | 2 |
| MR0092 | | 1 | | | | | 1 | | 1 | | | | | | | | 1 | 1 | |
| MR0093 | | 1 | 2 | | | | | | | | | | | | | | | | |
| MR0096 | x | 1 | 2 | | | | | | | | | | | | | | | | |
| MR0097 | | | 3 | | | | | | | | 1 | 1 | 1 | | | | | 1 | |
| MR0098 | | | 2 | | | | | | 1 | | | | | | | | | | |
| MR0099 | | | 2 | | | | 1 | | | | | 1 | | | | | | | |
| MR0100 | | | 1 | | | | | | | | | | | | | | | | |
| MR0102 | | | 1 | | | | | | | | | | | 1 | | | | | |
| MR0103 | | | 2 | | | | | 2 | 3 | | | | | | | | | 1 | |
| MR0104 | | | 1 | | | | | | | | | | | | | | | | |
| MR0105 | | | 1 | 1 | | | 1 | 3 | | | | 1 | 3 | | | | 1 | 2 | 1 |
| MR0106 | | | 1 | | | | | | | | | | | | | | | | |
| MR0107 | | | 2 | 2 | 1 | | | | 1 | | | 3 | 1 | | | | 3 | 1 | 1 |
| MR0108 | | | 2 | | | | 1 | | | | | 1 | | | | | 1 | 1 | 1 |
| MR0109 | | | 1 | | | | 1 | | | | | | | | | | | | |
| MR0110 | | | 2 | | | | | | | | | | | | | | | | |
| MR0111 | | | 3 | | | | | 2 | | | | 1 | 2 | | | 1 | | 1 | 3 |
| MR0112 | | | 2 | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | |
|--------|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MR0113 | | | 2 | | | 2 | 3 | | | | | | | | | | | | |
| MR0114 | | | 1 | | | 1 | | | | | | | 1 | | | | | | |
| MR0115 | | | 1 | | | 1 | 1 | 1 | | | | 2 | 1 | | | | | | 1 |
| MR0117 | | | 1 | | | 1 | 9 | | | | 1 | 2 | | 1 | | | 2 | | 2 |
| MR0118 | | | 1 | | | | | 1 | | | | | | | | | 1 | | 1 |
| MR0119 | | | 1 | | | | | | | | | | | | | | | | 2 |
| MR0120 | | | 2 | | | | | | | | | | | | | | | | |
| MR0123 | | | 4 | | | | | | | | | | | | | | | | |
| MR0124 | | | 2 | | | | | | | | | | | 1 | | | | | |
| MR0125 | | | 1 | | | | | | 1 | | | | | 1 | | | | | |
| MR0126 | | | 1 | | | | | 1 | | | | | | | | | | | 1 |
| MR0128 | | | 1 | | | | | | | | | | | | | | 1 | | |
| MR0129 | | | 1 | | | | | | | | | | | | | | | | |
| MR0130 | | | 1 | | | | | | | | | | | | | | | | |
| MR0132 | | | | 2 | 1 | | | 1 | 1 | 1 | | | | 1 | | 1 | 2 | 2 | |
| MR0133 | | | | 1 | 2 | | | 6 | 1 | 3 | | | | | | | | | |
| MR0135 | | | | 2 | 1 | | | | 3 | | | | | | | | | | |
| MR0136 | | | | 1 | | | | | | | | | | 1 | | | | | |
| MR0137 | | | | 1 | | | | | | | | | | | | | | | |
| MR0139 | | | | | 1 | | | | | 1 | | | | | | | 1 | | |
| MR0140 | | | | | 3 | | | | | | | | | | | | | | |
| MR0141 | | | | | 1 | | | | | 1 | | | 1 | | 1 | | | | |
| MR0142 | | | | | 1 | | | | 1 | 3 | | | | | 2 | | | | |
| MR0143 | | | | | 1 | | | | | | | | | | | | | | |
| MR0144 | | | | | 3 | | | | | | | | | | | | | | |
| MR0146 | | | | | 1 | | | | | | | | | | | | | | |
| MR0147 | | | | | 1 | | | | | | | | | | | | | | |
| MR0148 | | | | | 1 | | | | | | | | | | | | | | |
| MR0150 | | | | | 2 | | | | | | | | | | | | | | |
| MR0155 | | | | 1 | | | | 1 | | | 1 | 2 | | 1 | | | 2 | 2 | |
| MR0157 | | | | | | | | 1 | | | | | | | | | | | 1 |
| MR0158 | | | | | | | | 1 | | | | 1 | 3 | | | | | | |

| | | | | | | | | | | | | | | | | | | | |
|--------|--|--|--|--|---|---|---|---|--|--|---|---|---|---|---|---|---|---|---|
| MR0159 | | | | | 1 | 3 | 1 | | | | 1 | 2 | | 1 | | | 2 | 1 | 1 |
| MR0160 | | | | | 1 | 1 | | | | | 1 | | | 1 | | 2 | 1 | | 1 |
| MR0161 | | | | | 1 | | | | | | 1 | 1 | | | | | | | |
| MR0162 | | | | | | 1 | | | | | | | | | | | | | |
| MR0163 | | | | | | 1 | | | | | | | | | | | | | |
| MR0164 | | | | | | 2 | | | | | | | | | | | | | |
| MR0165 | | | | | | 1 | | 1 | | | 1 | | 1 | | | | | | |
| MR0167 | | | | | | 2 | | | | | | | | 1 | | | | | |
| MR0168 | | | | | | 3 | | | | | 1 | 1 | | 2 | | 1 | 2 | | |
| MR0169 | | | | | | 1 | | | | | 1 | | | | | | | 1 | |
| MR0170 | | | | | | 2 | | | | | 1 | 1 | 1 | 2 | | | 1 | 1 | 1 |
| MR0171 | | | | | | 1 | | | | | | | 1 | | | | 2 | 1 | |
| MR0174 | | | | | | 2 | | | | | | | | | | | | | |
| MR0175 | | | | | | 1 | | | | | | | | | | | | | |
| MR0176 | | | | | | 1 | | | | | | | | | | | | | |
| MR0177 | | | | | | 1 | | | | | | | | 1 | | 2 | | | |
| MR0178 | | | | | | 1 | | | | | | 2 | | | | | | | |
| MR0179 | | | | | | 2 | | | | | | | | | | | | | |
| MR0181 | | | | | | 1 | 1 | | | | | | | | | | | | |
| MR0182 | | | | | | 1 | 2 | | | | | | | | | | 1 | | |
| MR0185 | | | | | | 1 | 3 | 1 | | | | | | | | | 1 | | |
| MR0186 | | | | | | 1 | | | | | | | | | | | | | |
| MR0187 | | | | | | 1 | 1 | 1 | | | | | | | | | | | 1 |
| MR0188 | | | | | | 1 | | | | | | 1 | | | 1 | | | | |
| MR0190 | | | | | | 1 | | 1 | | | | | 2 | | | | 1 | | 1 |
| MR0191 | | | | | | 1 | 1 | | | | | 1 | | | | | | | |
| MR0192 | | | | | | 1 | | | | | | | | | | 1 | 2 | | |
| MR0193 | | | | | | 1 | | | | | | | | | | 1 | | | |
| MR0196 | | | | | | | 2 | | | | | | | | | | | | |
| MR0197 | | | | | | | 1 | | | | | | | | | | 1 | | |
| MR0198 | | | | | | | 3 | 1 | | | | | | | | | | | |
| MR0199 | | | | | | | 1 | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | |
|--------|--|--|--|--|---|--|---|---|---|---|---|---|---|---|--|---|---|---|---|
| MR0200 | | | | | | | 1 | | | | | | | | | | | | |
| MR0204 | | | | | | | 1 | 1 | 2 | | | | | | | | | | |
| MR0206 | | | | | | | 2 | | | | 2 | 2 | | 2 | | | | | |
| MR0208 | | | | | | | 1 | | | | | 2 | | | | | | | |
| MR0210 | | | | | | | 2 | | | | | 2 | | | | | | | |
| MR0211 | | | | | | | 1 | | | | | | | | | | | 1 | 1 |
| MR0213 | | | | | | | 1 | | | | | 2 | | | | | | | |
| MR0214 | | | | | | | 1 | | | | | | | | | | 3 | | 1 |
| MR0216 | | | | | | | 1 | | | | 1 | 1 | | 2 | | 2 | | | |
| MR0217 | | | | | | | 1 | | | | | | | | | | | | |
| MR0218 | | | | | | | 1 | | 1 | | | | 1 | | | 1 | | 1 | 1 |
| MR0219 | | | | | | | 1 | 1 | 1 | | | 2 | 1 | 1 | | | 1 | 1 | 1 |
| MR0220 | | | | | | | 1 | 1 | | | | | 1 | | | | | | |
| MR0223 | | | | | | | | 1 | 1 | | | | | | | | | 1 | |
| MR0224 | | | | | | | | 3 | 1 | | | | 1 | 2 | | | | | |
| MR0225 | | | | | | | | 1 | | | | | | | | | 1 | | |
| MR0226 | | | | | | | | 1 | | | | | 1 | | | | | 1 | |
| MR0227 | | | | | | | | 1 | | 1 | | | | | | | | | |
| MR0228 | | | | | 1 | | | 1 | 1 | | | | | 2 | | | | 2 | |
| MR0229 | | | | | | | | 1 | | | | | | | | | | | |
| MR0230 | | | | | | | | 1 | 1 | | | | | | | | | | |
| MR0231 | | | | | | | | 1 | | | | 1 | | | | | | 1 | 1 |
| MR0232 | | | | | | | | 1 | | | | | | | | | | | |
| MR0234 | | | | | | | | 1 | | | | | | | | | | | |
| MR0235 | | | | | | | | 1 | | | 1 | 2 | | | | | 1 | 1 | |
| MR0237 | | | | | | | | 1 | | | | | 1 | | | | | | |
| MR0239 | | | | | | | | 1 | | | | 2 | | 1 | | | | 1 | 1 |
| MR0240 | | | | | | | | 1 | | | | | 2 | | | | 1 | | |
| MR0241 | | | | | | | | 1 | 1 | | | | 3 | | | 1 | 1 | | |
| MR0242 | | | | | | | | 1 | | | | | 1 | | | | | | 2 |
| MR0244 | | | | | | | | | 1 | | | | 1 | | | | | | |
| MR0245 | | | | | | | | | 2 | | | | | | | | | 1 | |

| | | | | | | | | | | | | | | | | | | | |
|--------|--|--|--|--|--|--|--|---|---|---|---|---|---|---|--|---|---|---|---|
| MR0246 | | | | | | | | | 1 | | | | | | | | | | |
| MR0247 | | | | | | | | | 1 | | | | | | | | | | 1 |
| MR0249 | | | | | | | | | 1 | | | | 4 | | | 1 | | | 2 |
| MR0250 | | | | | | | | 1 | | | | 3 | | | | 1 | | | |
| MR0252 | | | | | | | | 1 | | | 1 | | 1 | 1 | | | | | |
| MR0254 | | | | | | | | | 1 | | | | | | | | | | 1 |
| MR0258 | | | | | | | | | 1 | | | 1 | | 2 | | | 3 | 2 | |
| MR0259 | | | | | | | | | | 1 | | | | | | | | | |
| MR0260 | | | | | | | | | | 1 | | | | | | | | | |
| MR0261 | | | | | | | | | | 1 | | | | | | | | | |
| MR0262 | | | | | | | | | | | 1 | | | | | | | | |
| MR0263 | | | | | | | | | | | 1 | | | 1 | | | | | |
| MR0264 | | | | | | | | | | | 1 | 2 | | | | | | | |
| MR0265 | | | | | | | | | | | 1 | | | | | | | | |
| MR0266 | | | | | | | | | | | 1 | 1 | | 1 | | 2 | | | |
| MR0267 | | | | | | | | | | | 1 | | | | | | | | 3 |
| MR0268 | | | | | | | | | | | 1 | | | | | 2 | | | |
| MR0269 | | | | | | | | | | | 1 | | | 2 | | | | | |
| MR0271 | | | | | | | | | | | 1 | | | 1 | | | | | 1 |
| MR0272 | | | | | | | | | | | 1 | | | | | 1 | | | |
| MR0273 | | | | | | | | | | | 1 | 1 | | | | | 2 | 1 | |
| MR0274 | | | | | | | | | | | 1 | | | | | 3 | 3 | | |
| MR0275 | | | | | | | | | | | 1 | | | | | | | | |
| MR0276 | | | | | | | | | | | 1 | 1 | | | | | | | |
| MR0279 | | | | | | | | | | | | 3 | | | | | | | 1 |
| MR0280 | | | | | | | | | | | | 1 | | | | | | | |
| MR0281 | | | | | | | | | | | | 2 | | | | 1 | 1 | | |
| MR0282 | | | | | | | | | | | | 2 | | | | | | | |
| MR0283 | | | | | | | | | | | | 1 | | | | | 1 | 1 | |
| MR0284 | | | | | | | | | | | | 1 | | | | 1 | | 2 | |
| MR0285 | | | | | | | | | | | | 1 | | 1 | | | 1 | 2 | |
| MR0286 | | | | | | | | | | | | 2 | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | |
|--------|--|--|--|--|--|--|--|--|--|--|--|--|---|---|---|---|--|---|---|---|
| MR0288 | | | | | | | | | | | | | 1 | | | | | 1 | 1 | |
| MR0290 | | | | | | | | | | | | | 2 | | | | | 2 | | 1 |
| MR0291 | | | | | | | | | | | | | 1 | | | | | | | |
| MR0292 | | | | | | | | | | | | | 1 | | | | | | | |
| MR0293 | | | | | | | | | | | | | 1 | | | | | | | |
| MR0294 | | | | | | | | | | | | | 2 | | | 1 | | | | |
| MR0295 | | | | | | | | | | | | | 1 | | | | | | 1 | |
| MR0296 | | | | | | | | | | | | | 1 | | | | | 1 | | |
| MR0298 | | | | | | | | | | | | | 1 | 1 | | | | | | |
| MR0299 | | | | | | | | | | | | | 2 | 1 | 2 | | | | | |
| MR0300 | | | | | | | | | | | | | 1 | 1 | | | | | | |
| MR0301 | | | | | | | | | | | | | 1 | | | | | | 1 | 2 |
| MR0302 | | | | | | | | | | | | | 1 | | | | | 2 | | |
| MR0303 | | | | | | | | | | | | | 1 | | | | | 1 | | |
| MR0304 | | | | | | | | | | | | | 1 | | | | | | | |
| MR0306 | | | | | | | | | | | | | 1 | | | | | 1 | 1 | |
| MR0307 | | | | | | | | | | | | | 1 | 1 | | | | | 1 | |
| MR0308 | | | | | | | | | | | | | 1 | 2 | | | | 4 | 1 | 1 |
| MR0309 | | | | | | | | | | | | | 1 | | | | | | | |
| MR0310 | | | | | | | | | | | | | 1 | | | | | | 2 | |
| MR0311 | | | | | | | | | | | | | 1 | | | | | | | |
| MR0312 | | | | | | | | | | | | | 1 | | | | | | | |
| MR0313 | | | | | | | | | | | | | 1 | 1 | | | | | | |
| MR0314 | | | | | | | | | | | | | 1 | | 1 | | | | | |
| MR0315 | | | | | | | | | | | | | | 1 | | | | | | |
| MR0316 | | | | | | | | | | | | | 2 | | | | | | | |
| MR0317 | | | | | | | | | | | | | 2 | 1 | | | | | | |
| MR0318 | | | | | | | | | | | | | 1 | | | | | 1 | | |
| MR0319 | | | | | | | | | | | | | 1 | | | | | | | |
| MR0321 | | | | | | | | | | | | | 1 | | | | | | | |
| MR0322 | | | | | | | | | | | | | 1 | 2 | | | | | | 1 |
| MR0323 | | | | | | | | | | | | | 1 | 2 | | | | | 4 | 1 |

| | | | | | | | | | | | | | | | | | | | | |
|--------|--|--|--|--|--|--|--|--|--|--|--|--|---|---|--|---|---|---|---|---|
| MR0324 | | | | | | | | | | | | | | 1 | | | | | | |
| MR0327 | | | | | | | | | | | | | | 1 | | | | | | |
| MR0328 | | | | | | | | | | | | | | 2 | | | | | | 2 |
| MR0329 | | | | | | | | | | | | | | 1 | | | | | | |
| MR0330 | | | | | | | | | | | | | | 1 | | | | | | |
| MR0331 | | | | | | | | | | | | | | 2 | | | | | | |
| MR0332 | | | | | | | | | | | | | | 1 | | | | | | |
| MR0333 | | | | | | | | | | | | | | 1 | | | | | | |
| MR0334 | | | | | | | | | | | | | | 1 | | | 1 | 1 | 1 | |
| MR0335 | | | | | | | | | | | | | | 1 | | | | | | |
| MR0336 | | | | | | | | | | | | | | 1 | | | | | | |
| MR0337 | | | | | | | | | | | | | | 2 | | | 1 | | | |
| MR0338 | | | | | | | | | | | | | | 1 | | | | | | |
| MR0339 | | | | | | | | | | | | | | 1 | | 1 | | | | |
| MR0340 | | | | | | | | | | | | | | 1 | | | 1 | | | |
| MR0341 | | | | | | | | | | | | | | 1 | | | | | | |
| MR0342 | | | | | | | | | | | | | | 1 | | | | | | 1 |
| MR0343 | | | | | | | | | | | | | | 1 | | | 1 | 1 | 1 | |
| MR0344 | | | | | | | | | | | | | | 2 | | | | | | 2 |
| MR0345 | | | | | | | | | | | | | | 1 | | | | 1 | | |
| MR0346 | | | | | | | | | | | | | | 2 | | | | | | 3 |
| MR0347 | | | | | | | | | | | | | 1 | | | | 1 | 1 | | |
| MR0349 | | | | | | | | | | | | | | 1 | | | 2 | | | |
| MR0350 | | | | | | | | | | | | | | 1 | | | | | | 1 |
| MR0351 | | | | | | | | | | | | | | 1 | | 1 | | | | |
| MR0352 | | | | | | | | | | | | | | 1 | | | | | | |
| MR0353 | | | | | | | | | | | | | | 1 | | | | | | |
| MR0354 | | | | | | | | | | | | | | 1 | | | | | | |
| MR0355 | | | | | | | | | | | | | | 1 | | | | | | |
| MR0356 | | | | | | | | | | | | | 1 | | | | 1 | 1 | | |
| MR0357 | | | | | | | | | | | | | | 1 | | | | | | |
| MR0358 | | | | | | | | | | | | | | 1 | | | 2 | | | |

| | | | | | | | | | | | | | | | | | | | | |
|--------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|---|---|---|---|
| MR0359 | | | | | | | | | | | | | | | 1 | | | | | |
| MR0362 | | | | | | | | | | | | | | | | 1 | | | | |
| MR0363 | | | | | | | | | | | | | | | | | 1 | | | |
| MR0364 | | | | | | | | | | | | | | | | | 1 | 1 | 2 | |
| MR0365 | | | | | | | | | | | | | | | | | 1 | 1 | | |
| MR0366 | | | | | | | | | | | | | | | | | 4 | 1 | | |
| MR0367 | | | | | | | | | | | | | | | | | 1 | | | |
| MR0368 | | | | | | | | | | | | | | | | | 2 | | 1 | |
| MR0369 | | | | | | | | | | | | | | | | | 2 | | | |
| MR0370 | | | | | | | | | | | | | | | | | 1 | | 1 | |
| MR0371 | | | | | | | | | | | | | | | | | 1 | | | |
| MR0372 | | | | | | | | | | | | | | | | | 2 | | | |
| MR0373 | | | | | | | | | | | | | | | | | 2 | 1 | 1 | |
| MR0374 | | | | | | | | | | | | | | | | | 1 | | | |
| MR0375 | | | | | | | | | | | | | | | | | 2 | | | |
| MR0376 | | | | | | | | | | | | | | | | | 1 | | | |
| MR0377 | | | | | | | | | | | | | | | | | 1 | | 2 | 1 |
| MR0378 | | | | | | | | | | | | | | | | | 2 | 1 | | |
| MR0379 | | | | | | | | | | | | | | | | | 1 | | | |
| MR0380 | | | | | | | | | | | | | | | | | 1 | 3 | 1 | |
| MR0381 | | | | | | | | | | | | | | | | | 1 | 1 | | |
| MR0382 | | | | | | | | | | | | | | | | | 1 | | | |
| MR0384 | | | | | | | | | | | | | | | | | 1 | | | |
| MR0385 | | | | | | | | | | | | | | | | | 1 | | | |
| MR0386 | | | | | | | | | | | | | | | | | 1 | | | |
| MR0388 | | | | | | | | | | | | | | | | | 1 | | | |
| MR0389 | | | | | | | | | | | | | | | | | 1 | 1 | | |
| MR0390 | | | | | | | | | | | | | | | | | 2 | | | |
| MR0391 | | | | | | | | | | | | | | | | | 1 | 1 | | |
| MR0392 | | | | | | | | | | | | | | | | | 1 | | | |
| MR0393 | | | | | | | | | | | | | | | | | 1 | | | |
| MR0394 | | | | | | | | | | | | | | | | | 1 | 1 | 1 | |

| | | | | | | | | | | | | | | | | | | | | |
|--------|--|--|--|--|--|--|--|--|--|--|---|--|--|---|--|--|---|---|---|---|
| MR0395 | | | | | | | | | | | | | | | | | 1 | | | |
| MR0396 | | | | | | | | | | | | | | | | | 1 | 1 | | |
| MR0397 | | | | | | | | | | | | | | | | | 1 | | | |
| MR0399 | | | | | | | | | | | | | | | | | 2 | | | |
| MR0402 | | | | | | | | | | | | | | | | | 1 | 2 | | 1 |
| MR0404 | | | | | | | | | | | | | | | | | 1 | | | |
| MR0408 | | | | | | | | | | | | | | | | | 1 | | | 1 |
| MR0409 | | | | | | | | | | | | | | | | | 1 | | | |
| MR0410 | | | | | | | | | | | 1 | | | | | | 1 | 2 | 1 | |
| MR0411 | | | | | | | | | | | | | | | | | | 3 | 1 | |
| MR0412 | | | | | | | | | | | | | | | | | | 1 | | |
| MR0413 | | | | | | | | | | | | | | | | | | 1 | | |
| MR0414 | | | | | | | | | | | | | | | | | | 2 | | |
| MR0415 | | | | | | | | | | | | | | | | | | 1 | | |
| MR0417 | | | | | | | | | | | | | | | | | | 1 | | |
| MR0418 | | | | | | | | | | | | | | | | | | 1 | | |
| MR0419 | | | | | | | | | | | | | | | | | | 1 | | |
| MR0421 | | | | | | | | | | | | | | | | | | 2 | | |
| MR0422 | | | | | | | | | | | | | | | | | | 1 | | |
| MR0423 | | | | | | | | | | | | | | | | | | 1 | 1 | |
| MR0425 | | | | | | | | | | | | | | | | | | 3 | 2 | 1 |
| MR0426 | | | | | | | | | | | | | | | | | | 1 | | |
| MR0427 | | | | | | | | | | | | | | | | | | 1 | | |
| MR0429 | | | | | | | | | | | | | | | | | | 2 | | 1 |
| MR0431 | | | | | | | | | | | | | | | | | | 1 | | |
| MR0432 | | | | | | | | | | | | | | | | | | 1 | | 1 |
| MR0434 | | | | | | | | | | | | | | | | | | 1 | 1 | |
| MR0435 | | | | | | | | | | | | | | | | | | 1 | | |
| MR0436 | | | | | | | | | | | | | | | | | | 1 | 1 | |
| MR0437 | | | | | | | | | | | | | | | | | | 1 | | |
| MR0439 | | | | | | | | | | | | | | 1 | | | | | | 1 |
| MR0440 | | | | | | | | | | | | | | | | | | | 2 | |

| | | | | | | | | | | | | | | | | | | | | |
|--------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|---|
| MR0441 | | | | | | | | | | | | | | | | | | 1 | | |
| MR0442 | | | | | | | | | | | | | | | | | | 1 | 1 | |
| MR0443 | | | | | | | | | | | | | | | | | | 1 | | 1 |
| MR0445 | | | | | | | | | | | | | | | | | | 1 | 1 | 1 |
| MR0446 | | | | | | | | | | | | | | | | | | 1 | | |
| MR0447 | | | | | | | | | | | | | | | | | | 1 | | |
| MR0448 | | | | | | | | | | | | | | | | | | 1 | | 2 |
| MR0449 | | | | | | | | | | | | | | | | | | 1 | | |
| MR0451 | | | | | | | | | | | | | | | | | | 1 | | 1 |
| MR0452 | | | | | | | | | | | | | | | | | | 1 | | |
| MR0453 | | | | | | | | | | | | | | | | | | 1 | | |
| MR0454 | | | | | | | | | | | | | | | | | | 1 | | |
| MR0456 | | | | | | | | | | | | | | | | | | 1 | | |
| MR0457 | | | | | | | | | | | | | | | | | | 1 | 1 | |
| MR0458 | | | | | | | | | | | | | | | | | | | 1 | |
| MR0460 | | | | | | | | | | | | | | | | | | | 1 | 1 |
| MR0461 | | | | | | | | | | | | | | | | | | | 1 | |
| MR0462 | | | | | | | | | | | | | | | | | | | 1 | |
| MR0463 | | | | | | | | | | | | | | | | | | | 2 | |
| MR0464 | | | | | | | | | | | | | | | | | | | 1 | |
| MR0465 | | | | | | | | | | | | | | | | | | | 1 | |
| MR0466 | | | | | | | | | | | | | | | | | | | 1 | |
| MR0468 | | | | | | | | | | | | | | | | | | | 1 | |
| MR0471 | | | | | | | | | | | | | | | | | | | 1 | |
| MR0472 | | | | | | | | | | | | | | | | | | | 1 | |
| MR0475 | | | | | | | | | | | | | | | | | | | 1 | 2 |
| MR0478 | | | | | | | | | | | | | | | | | | | 1 | 1 |
| MR0480 | | | | | | | | | | | | | | | | | | | 1 | 1 |
| MR0481 | | | | | | | | | | | | | | | | | | | 1 | |
| MR0482 | | | | | | | | | | | | | | | | | | | 1 | 1 |
| MR0483 | | | | | | | | | | | | | | | | | | | 1 | |
| MR0484 | | | | | | | | | | | | | | | | | | | 1 | |

| | | | | | | | | | | | | | | | | | | | | |
|--------|--|--|--|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|
| MR0485 | | | | | | | | | | | | | | | | | | | 1 | 1 |
| MR0486 | | | | | | | | | | | | | | | | | | | 1 | 1 |
| MR0487 | | | | | | | | | | | | | | | | | | | 1 | 1 |
| MR0488 | | | | | | | | | | | | | | | | | | | 1 | 1 |
| MR0489 | | | | | | | | | | | | | | | | | | | | 1 |
| MR0490 | | | | | | | | | | | | | | | | | | | | 2 |
| MR0492 | | | | | | | | | | | | | | | | | | | | 1 |
| MR0493 | | | | | | | | | | | | | | | | | | | | 2 |
| MR0494 | | | | | | | | | | | | | | | | | | | | 1 |
| MR0496 | | | | | | | | | | | | | | | | | | | | 1 |
| MR0499 | | | | | | | | | | | | | | | | | | | | 1 |
| MR0501 | | | | | | | | | | | | | | | | | | | | 2 |
| MR0502 | | | | | | | | | | | | | | | | | | | | 1 |
| MR0504 | | | | | | | | | | | | | | | | | | | | 1 |
| MR0506 | | | | | | | | | | | | | | | | | | | | 2 |
| MR0507 | | | | | | | | | | | | | | | | | | | | 1 |
| MR0508 | | | | | | | | | | | | | | | | | | | | 1 |
| MR0509 | | | | | | | | | | | | | | | | | | | | 1 |
| MR0511 | | | | | | | | | | | | | | | | | | | | 1 |
| MR0512 | | | | | | | | | | | | | | | | | | | | 1 |
| MR0513 | | | | | 1 | | | | | | | | | | | | | | | 1 |
| MR0515 | | | | | | | | | | | | | | | | | | | | 1 |

Supplemental Figures

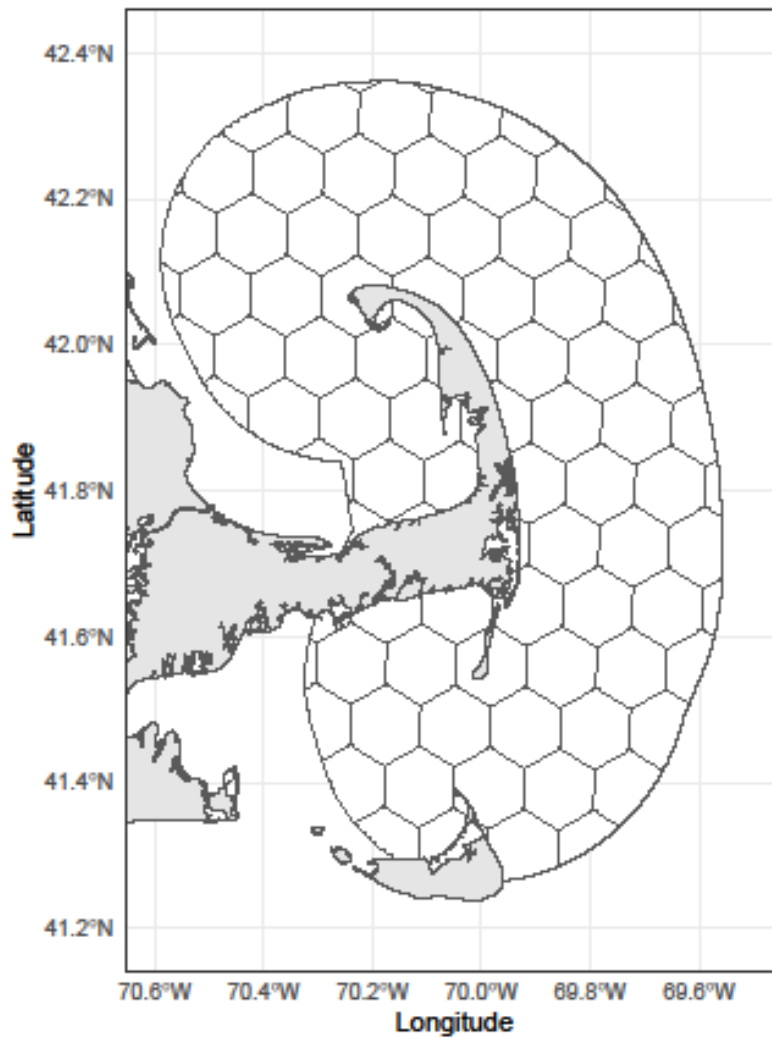


Figure S1. Gridded state space (total area = 6,811 km², grid cell size 100 km²) of the spatial capture recapture model used to estimate the abundance of white sharks at a seasonal aggregation site off Cape Cod, Massachusetts, USA. The state space size and grid cell spacing was determined based on preliminary model fits as described in the text.

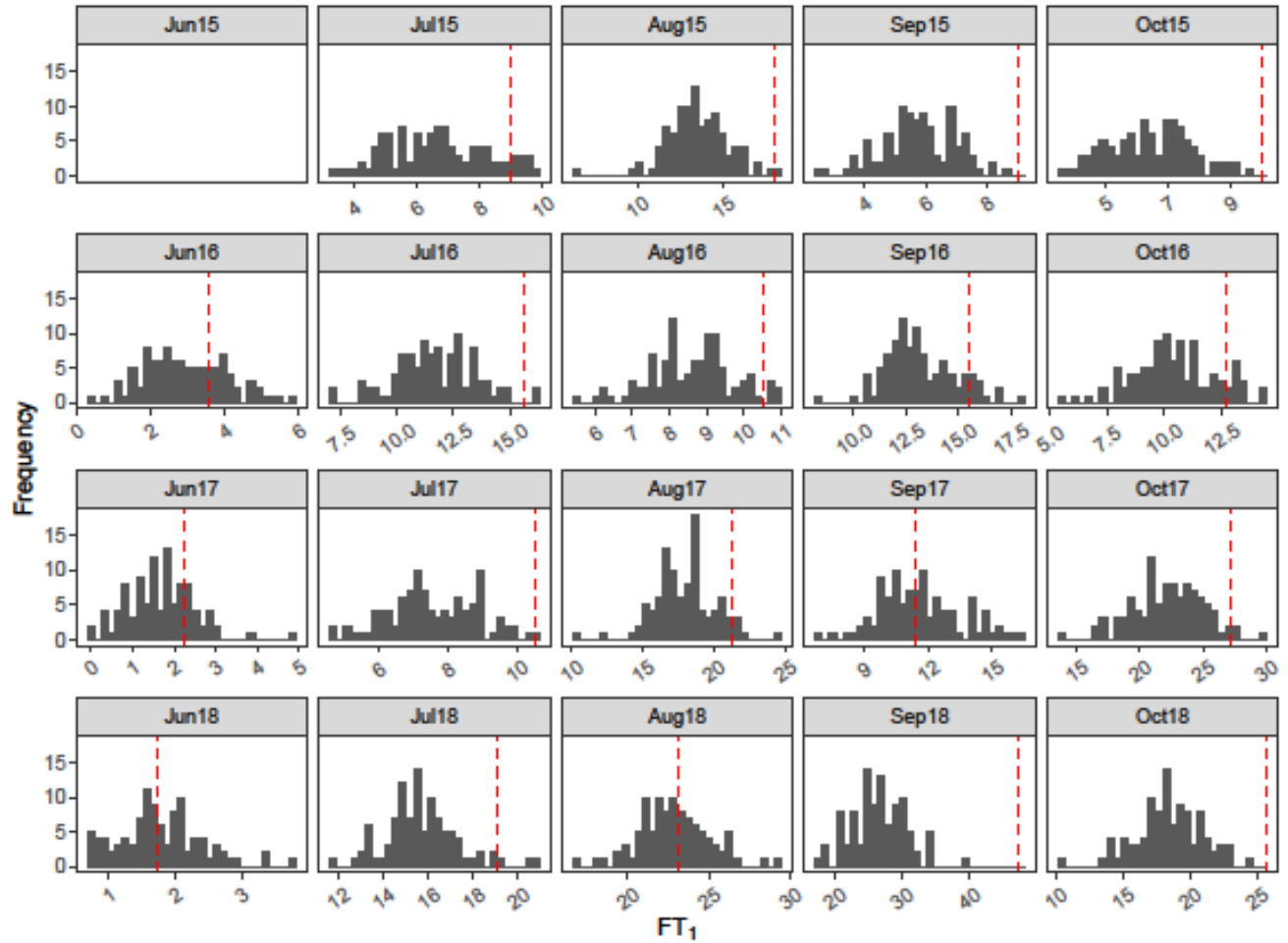


Figure S2. Distribution of estimates of the Freeman-Tukey fit statistic for distribution of activity centers from 100 datasets simulated using the open spatial capture recapture model applied to estimate white shark abundance. The red dotted line indicates the value of the fit statistic calculated for the observed data set. When the value for the observed data set falls beyond the distribution for simulated datasets, it indicates poor fit for that primary occasion.

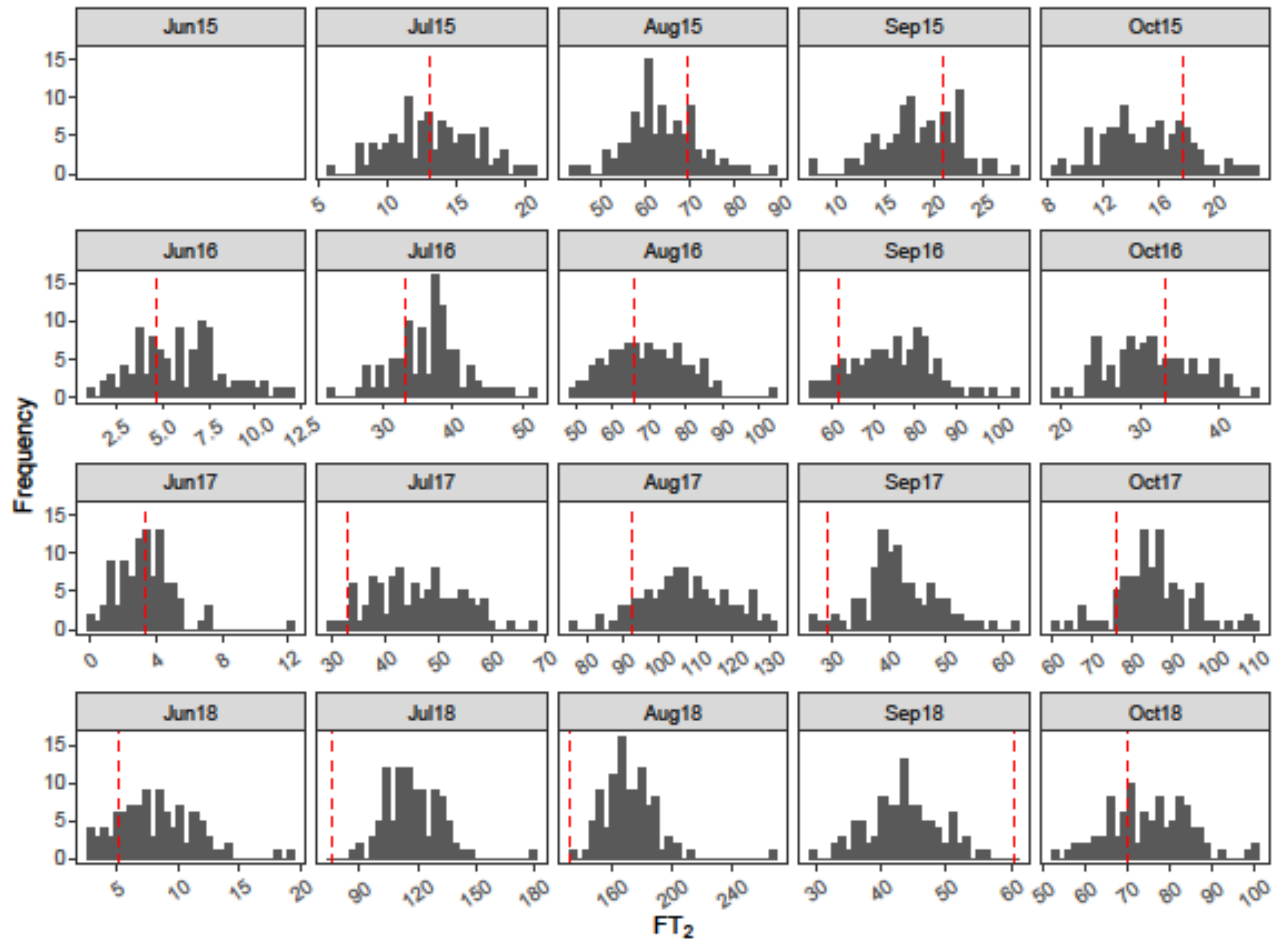


Figure S3. Distribution of estimates of the Freeman-Tukey fit statistic for the encounter model from 100 datasets simulated using the open spatial capture recapture model applied to estimate white shark abundance. The red dotted line indicates the value of the fit statistic calculated for the observed data set. When the value for the observed data set falls beyond the distribution for simulated datasets, it indicates poor fit for that primary occasion.