Table S1. Mean weekly residency index (RI) and activity space (BBKUD 50) of yellowtail kingfish with varying number of operating days

Operating Days/Week	*N* (RI)	Mean Residency (RI)	*N* (KUD)	Mean Activity Space (BBKUD 50)
0	68	0.554 ± 0.03	43	0.309 ± 0.02
1	9	0.476 ± 0.09	3	0.308 ± 0.01
2	16	0.527 ± 0.06	12	0.298 ± 0.04
3	86	0.488 ± 0.03	52	0.335 ± 0.03
4	103	0.559 ± 0.03	69	0.306 ± 0.01
5	167	0.599 ± 0.02	126	0.316 ± 0.01
6	222	0.652 ± 0.02	190	0.339 ± 0.01
7	38	0.650 ± 0.05	32	0.340 ± 0.02

Table S2. Estimated operator type coefficients (*β*) and their standard errors (SE), *t*-values of factors included in the top-ranked model (indicated for each variable)

Level	*β*	SE	DF	t-value	p-value
Weekly residency					
Detection index ~ 1 (intercept only)					
(Intercept)	0.538	0.024	659	22.51	0
Weekly activity space					
BBKUD ~ 1 (intercept only)					
(Intercept)	0.319	0.013	497	25.37	0
Daily time spent					
*Time ~ Operator Type * Temperature*					
(Intercept, No operator)	3.52	3.43	1.03		
Temp	0.53	0.19	2.76		
Acoustic	2.09	1.19	1.75		
One Food-based	0.36	0.97	0.37		
One Food-based+Acoustic	1.76	0.96	1.84		
Two Food-based	2.14	1.07	2.01		
All Operators	1.13	1.19	0.96		
Daily distance to operators					
*Distance ~ Operator Type * Temperature*					
(Intercept, Acoustic)	9.36058	5.67636	1.64905		
Temperature	0.58513	0.31962	1.83073		
All Operators	-5.1859	2.0385	-2.544		
One Food-based	-3.6767	2.07696	-1.7703		
One Food-based+Acoustic	-4.9138	2.06822	-2.3759		
Two Food-based	-6.2586	1.99824	-3.1321		

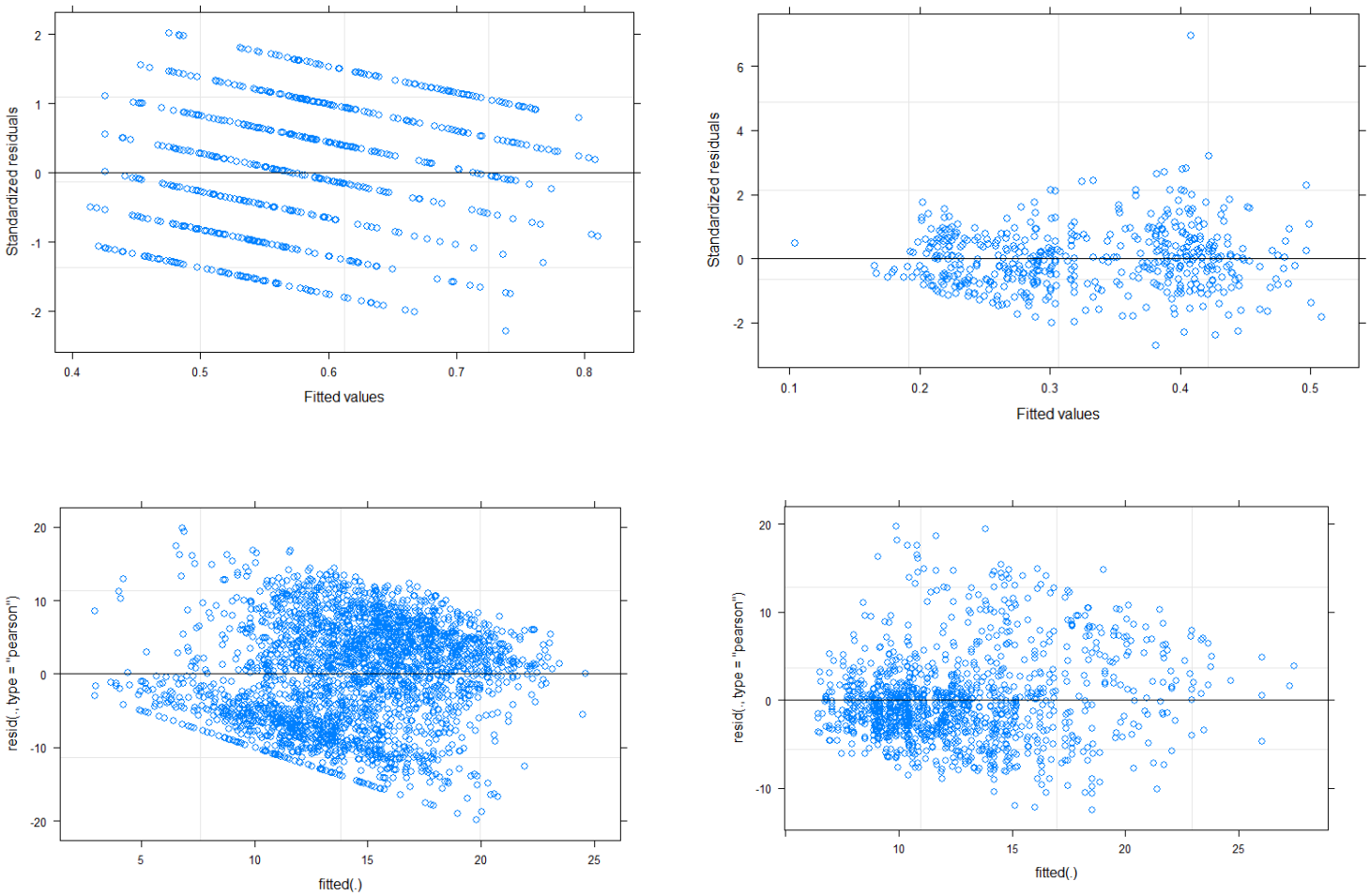


Figure S1. Plots of residuals vs fitted values for generalised linear mixed models used to assess influence of cage diving operations on kingfish residency and activity space. a) weekly residency, b) weekly activity space (BBKUD-50), c) daily time spent at the islands, and d) distance from cage diving operators.

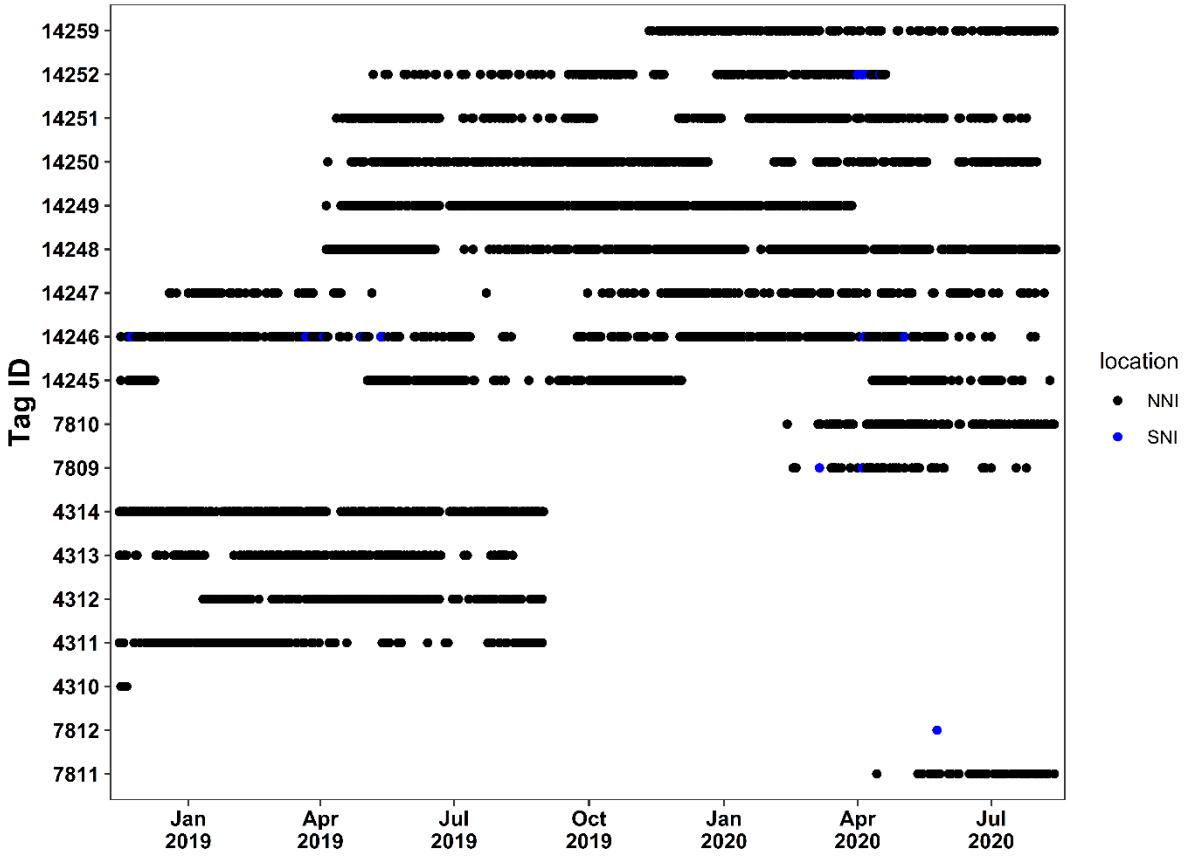
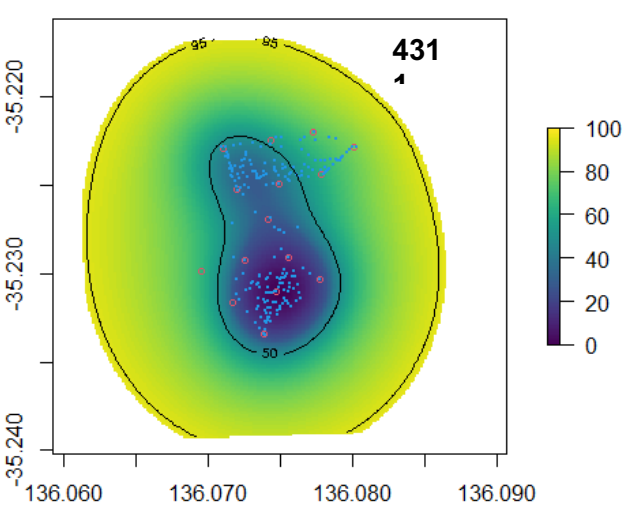


Figure S2. Abacus plot showing residency of 18 acoustically tagged kingfish at north (black) and south (blue) Neptune Islands between August 2018-20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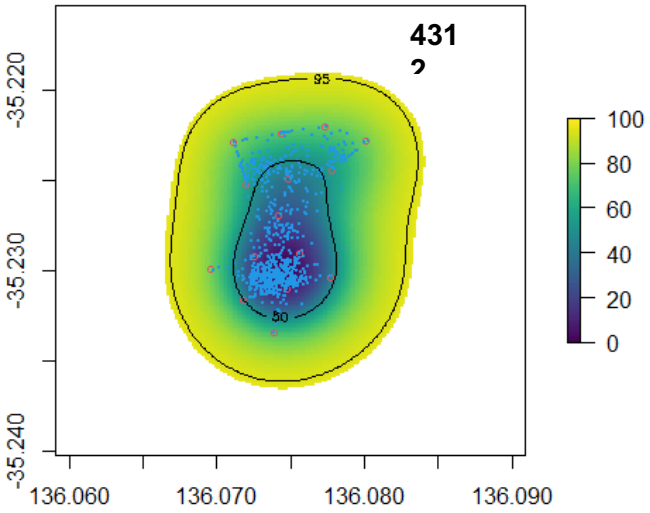
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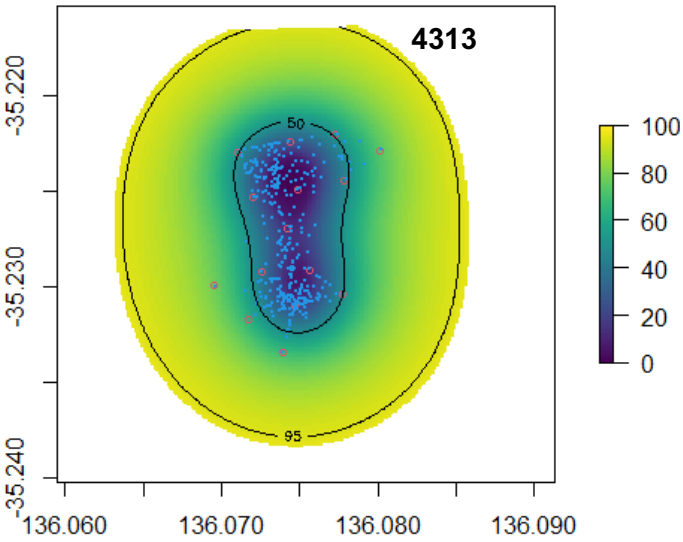
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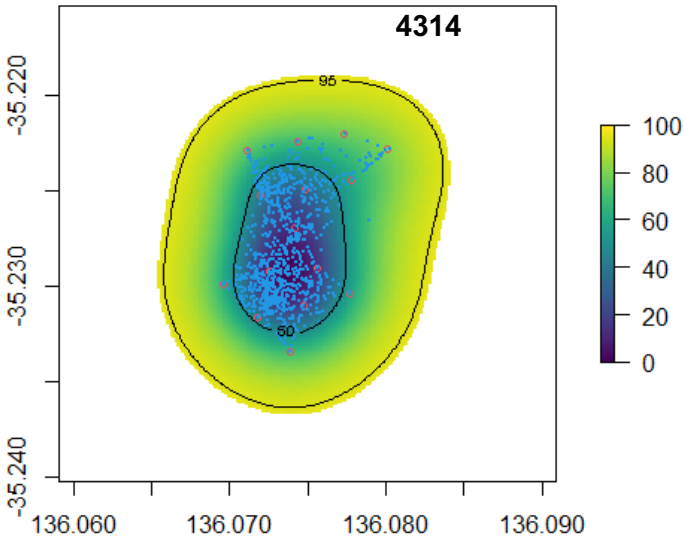
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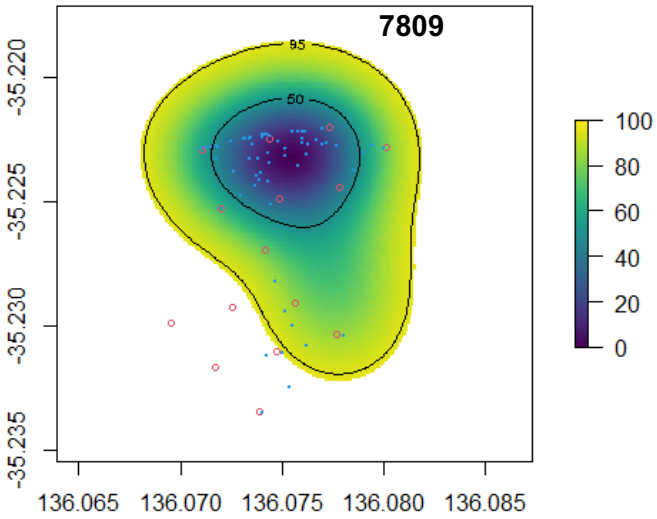
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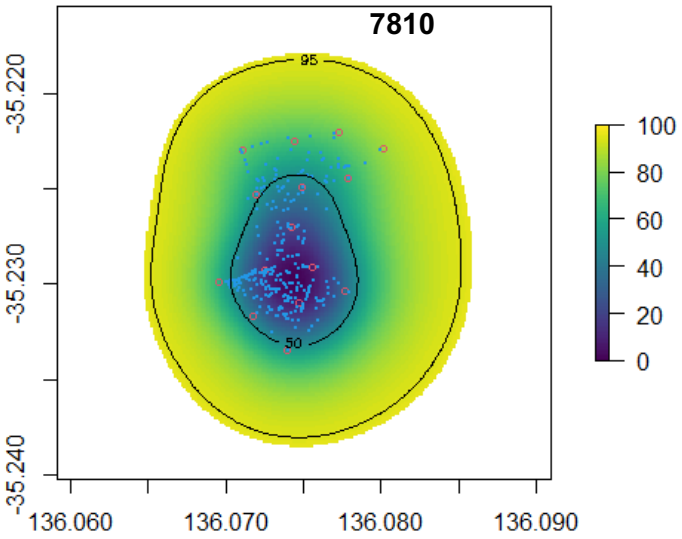
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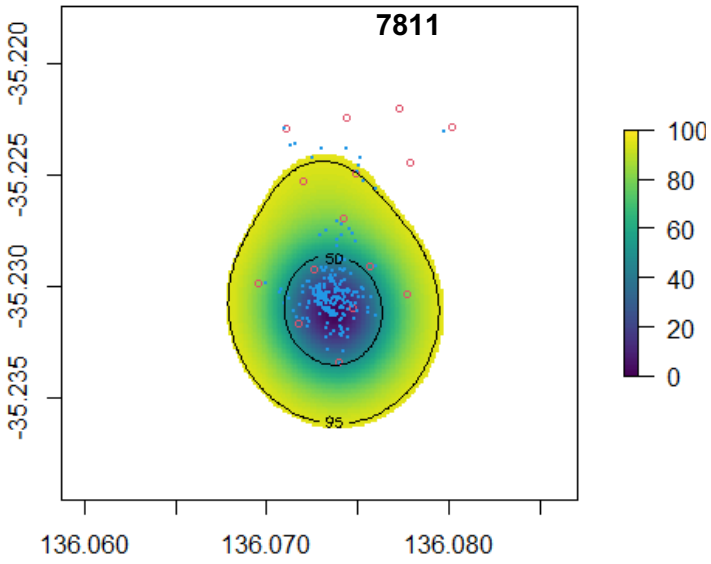
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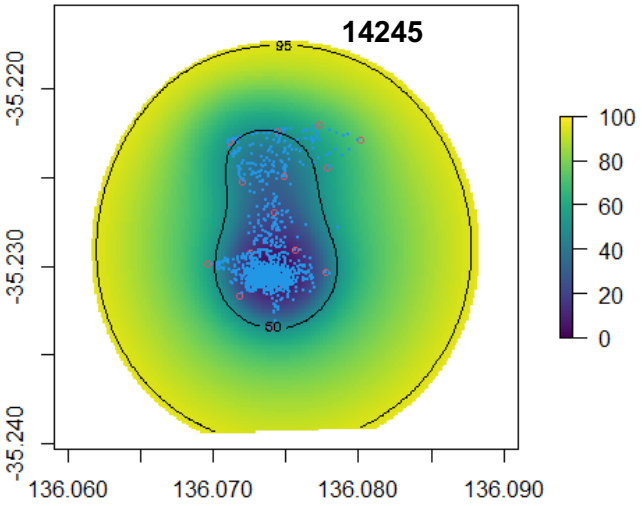
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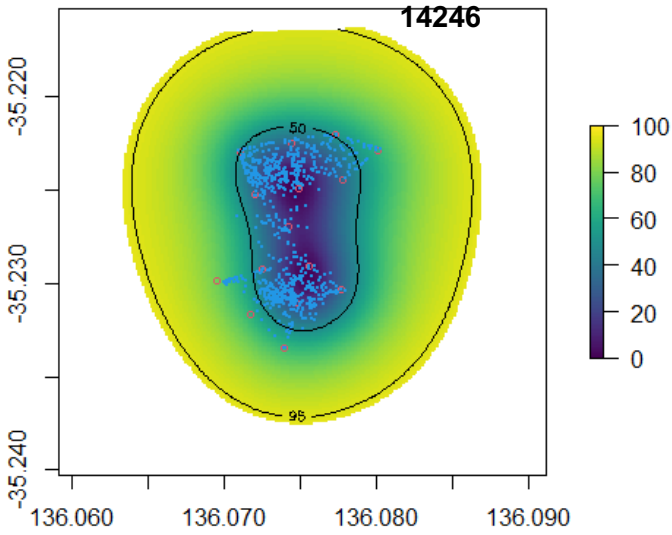
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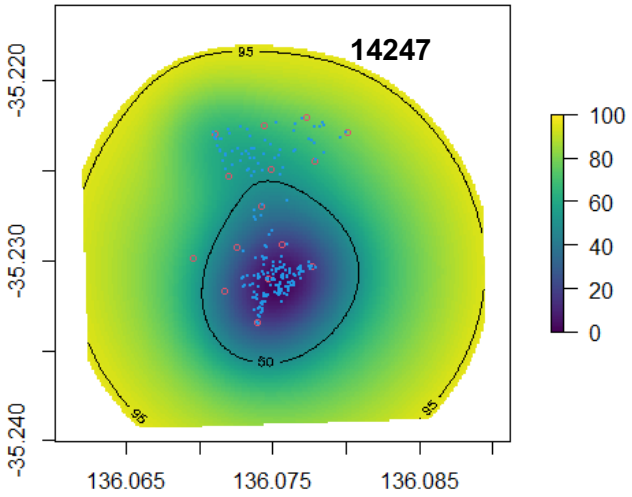
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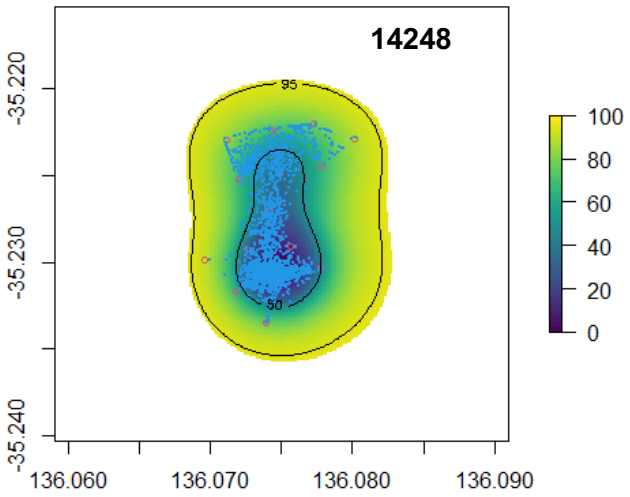
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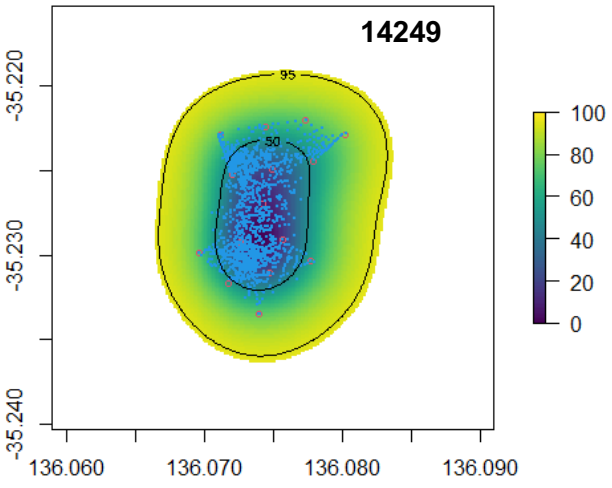
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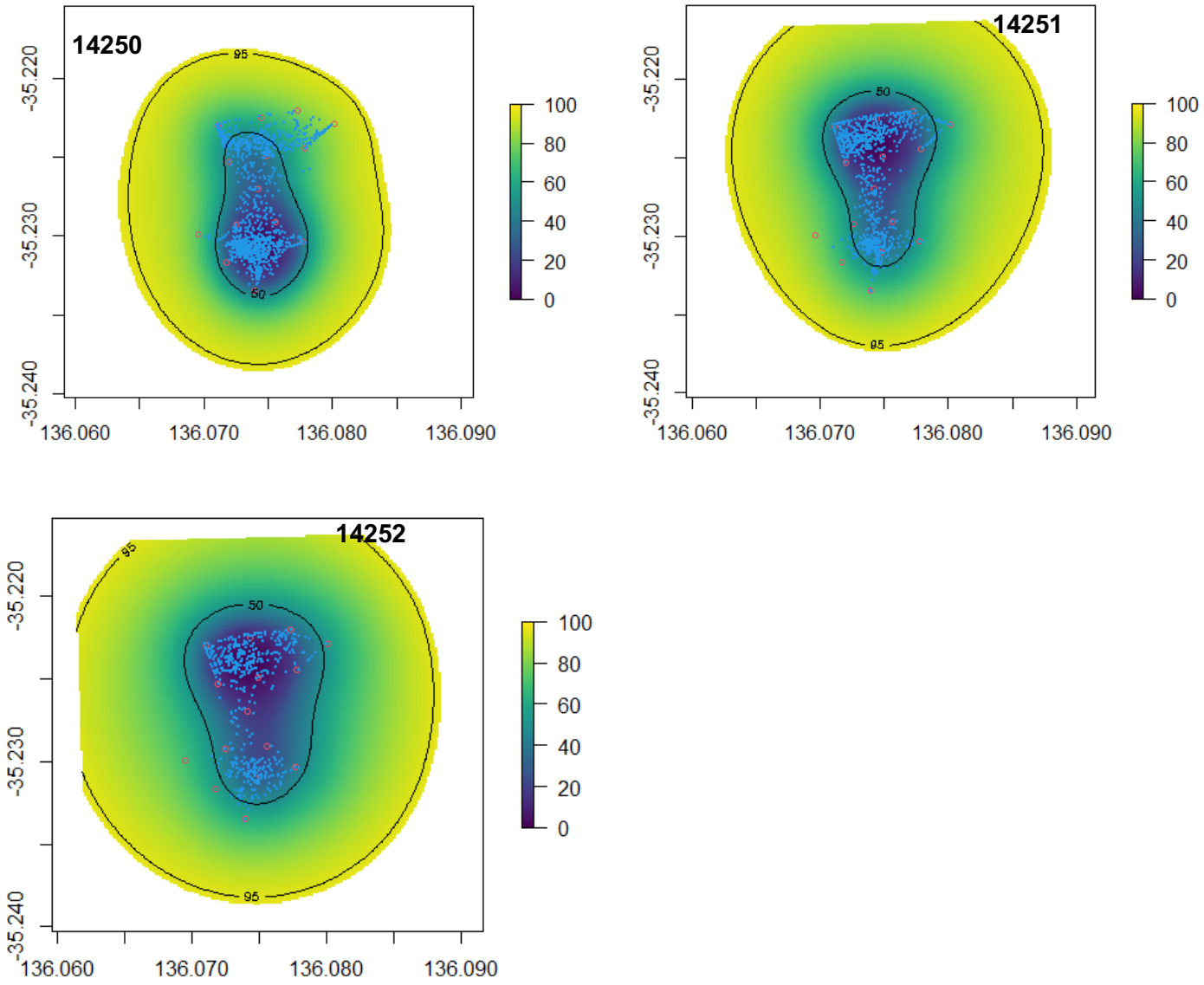

Figure S3. Overall activity space (BBKUD 50- and 95 % contours) of yellowtail kingfish at the Neptune Islands. Estimates of 60-minute centre of activities are shown in blue. Location of VR2W acoustic receivers are shown in red.

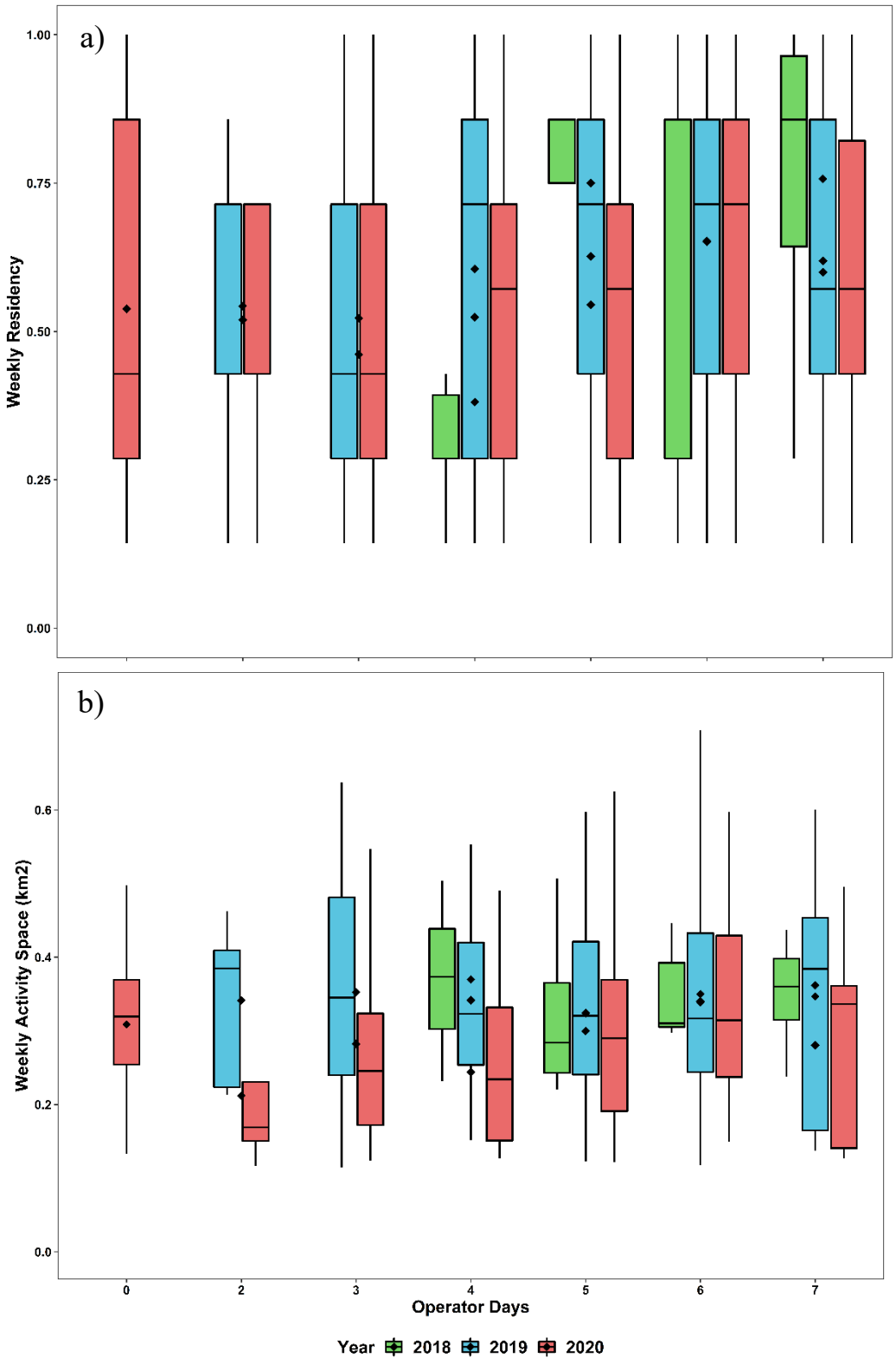

Figure S4. Values for weekly a) residency, and b) activity space with increasing number of operator days in a week between 2018-2020.

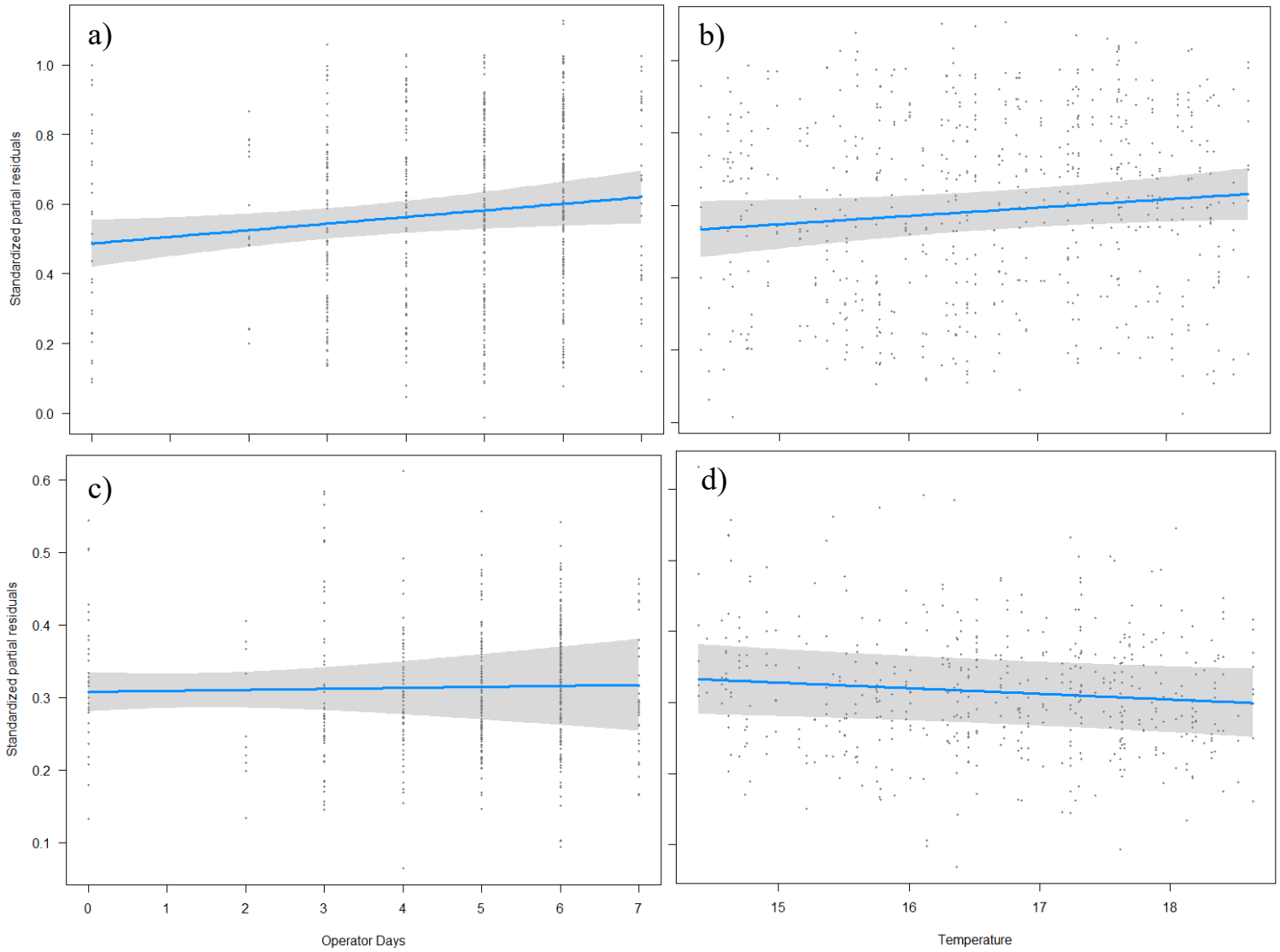

Figure S5. Predictor effects from full General Linear Models for weekly operator days (a, c) and temperature (b, d) for weekly residency (a, b) and activity space (c, d) of kingfish at the Neptune Islands.