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*Wildlife Research*

### Supplementary Material

#### **Movement and ranging behaviour of long-nosed potoroos (*Potorous tridactylus*) in south-west Victoria, Australia**

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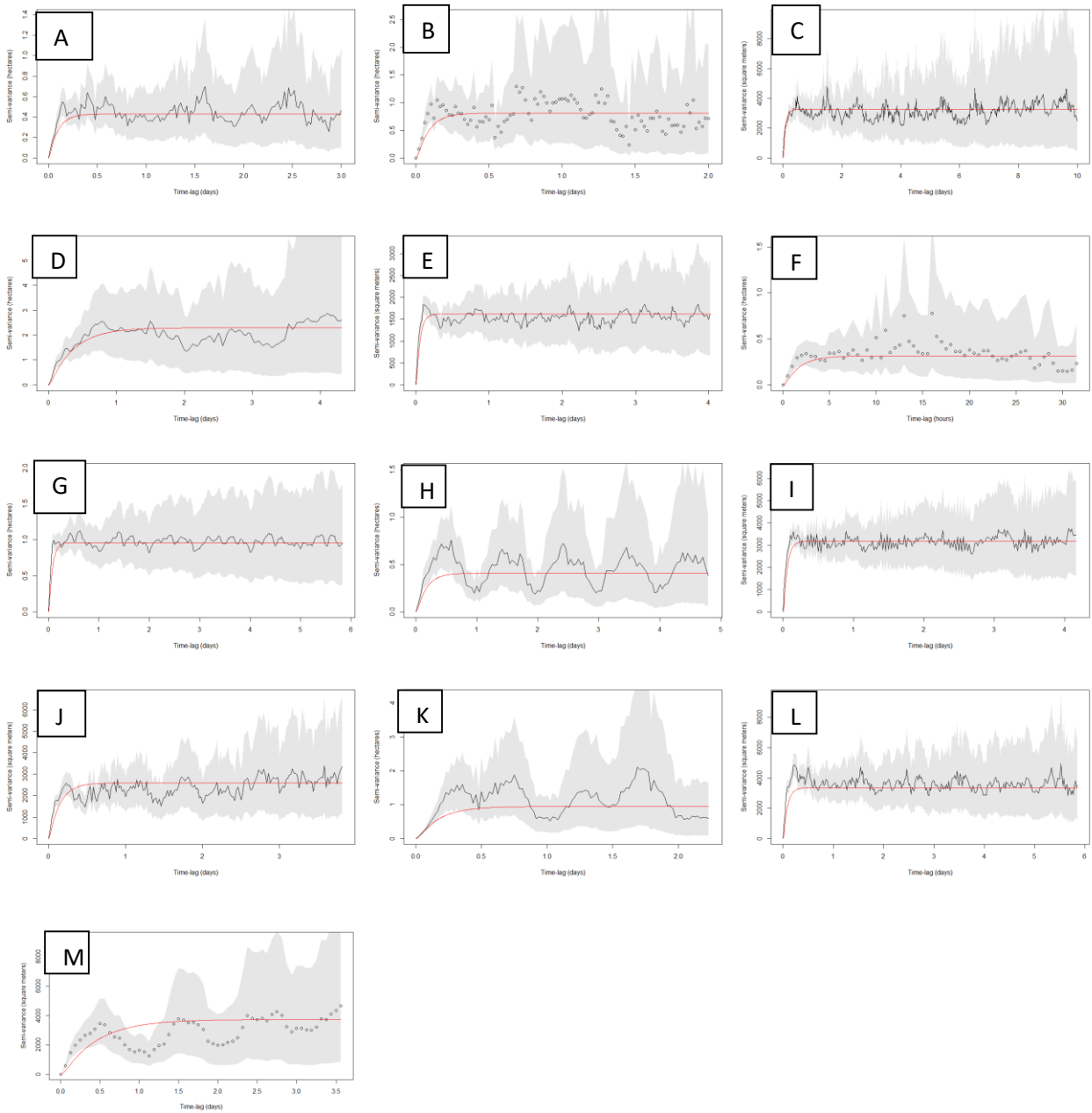


Figure S1. Variogram representing the average square distance travelled (in hectares - y axis) within some time lag (hours/days - x axis) for potoroos collared in 2020. Range residency is likely when variogram displays an asymptote. Individuals are as follows: A) Blanch, B) Danny, C) Doody, D) Eugene, E) Frenchie, F) Jan, G) Kenickie, H) Marty, I) Putzie, J) Rizzo, K) Sandy, L) Sonny, M) Vince.

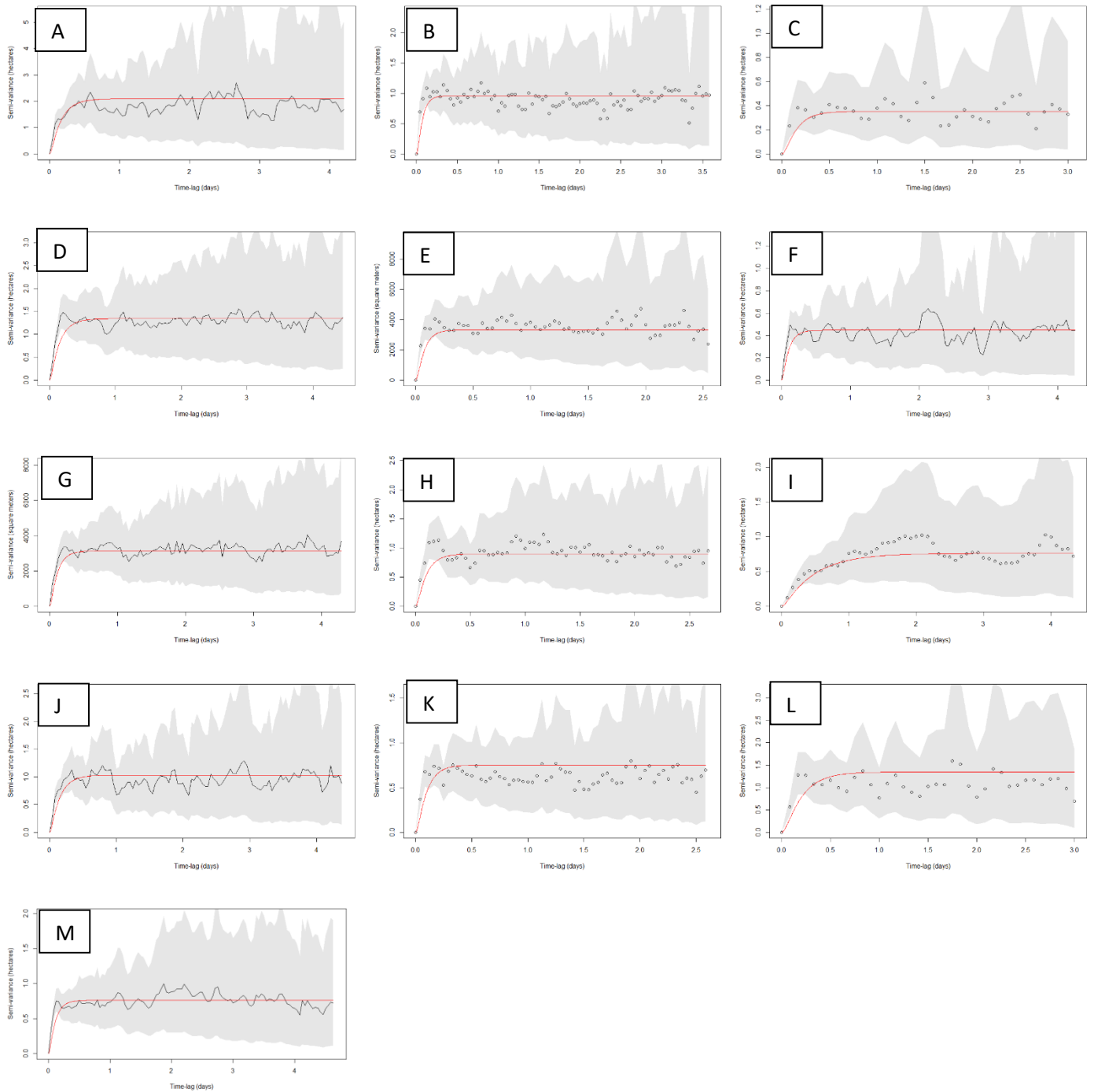


Figure S2. Variogram representing the average square distance travelled (in hectares - y axis) within some time lag (hours/days - x axis) for potoroos collared in 2020. Range residency is likely when variogram displays an asymptote. Individuals are as follows: A) Dobby, B) Dumbledore, C) Ginny, D) Harry, E) Hermione, F) Kreacher, G) Luna, H) Madeye, I) Neville, J) Ron, K) Sirius, L) Snape, M) Voldemort.





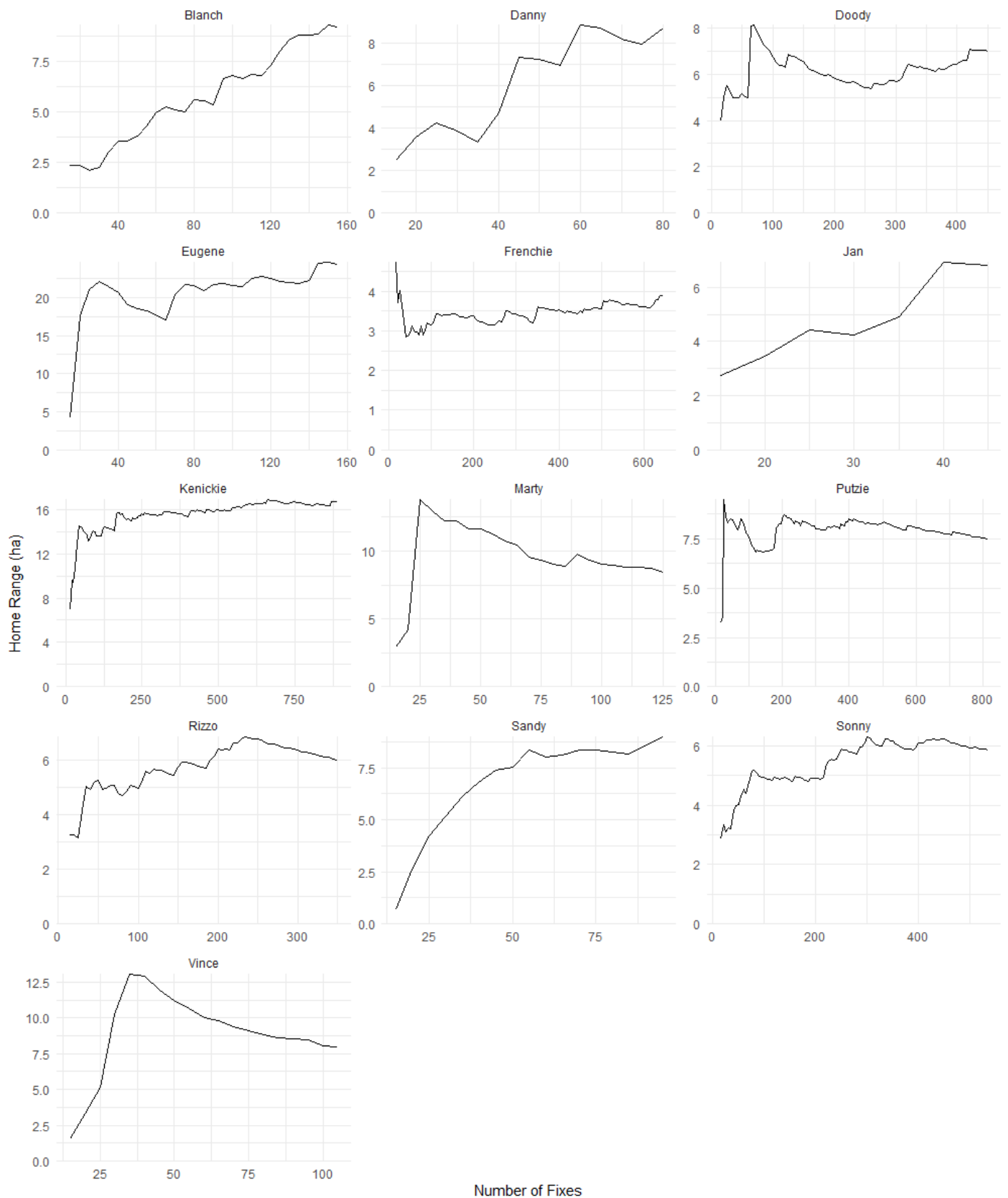


Figure S4. Asymptote analysis for all potoroos collared in 2020.

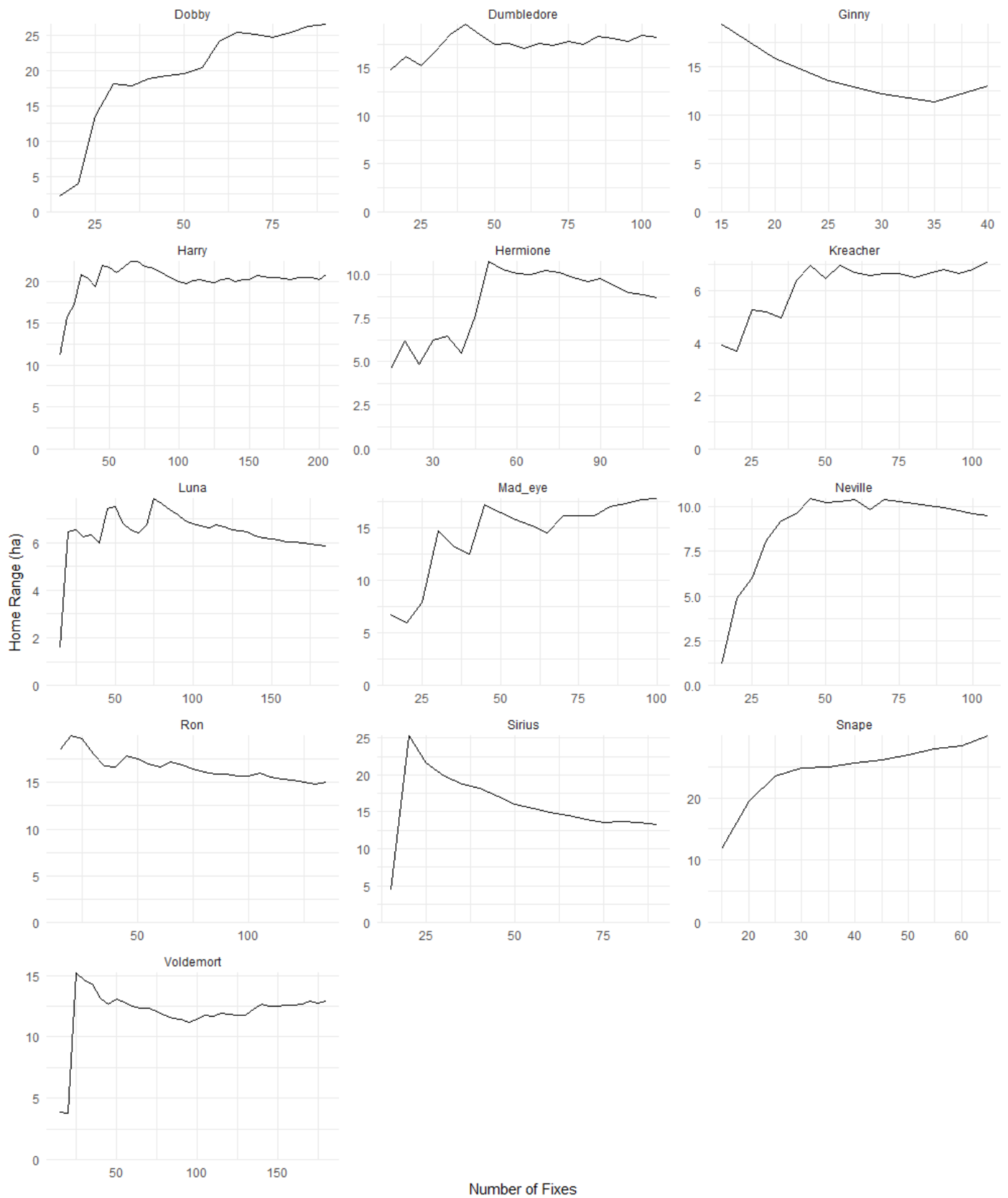


Figure S5. Asymptote analysis for all potoroo collared in 2021.

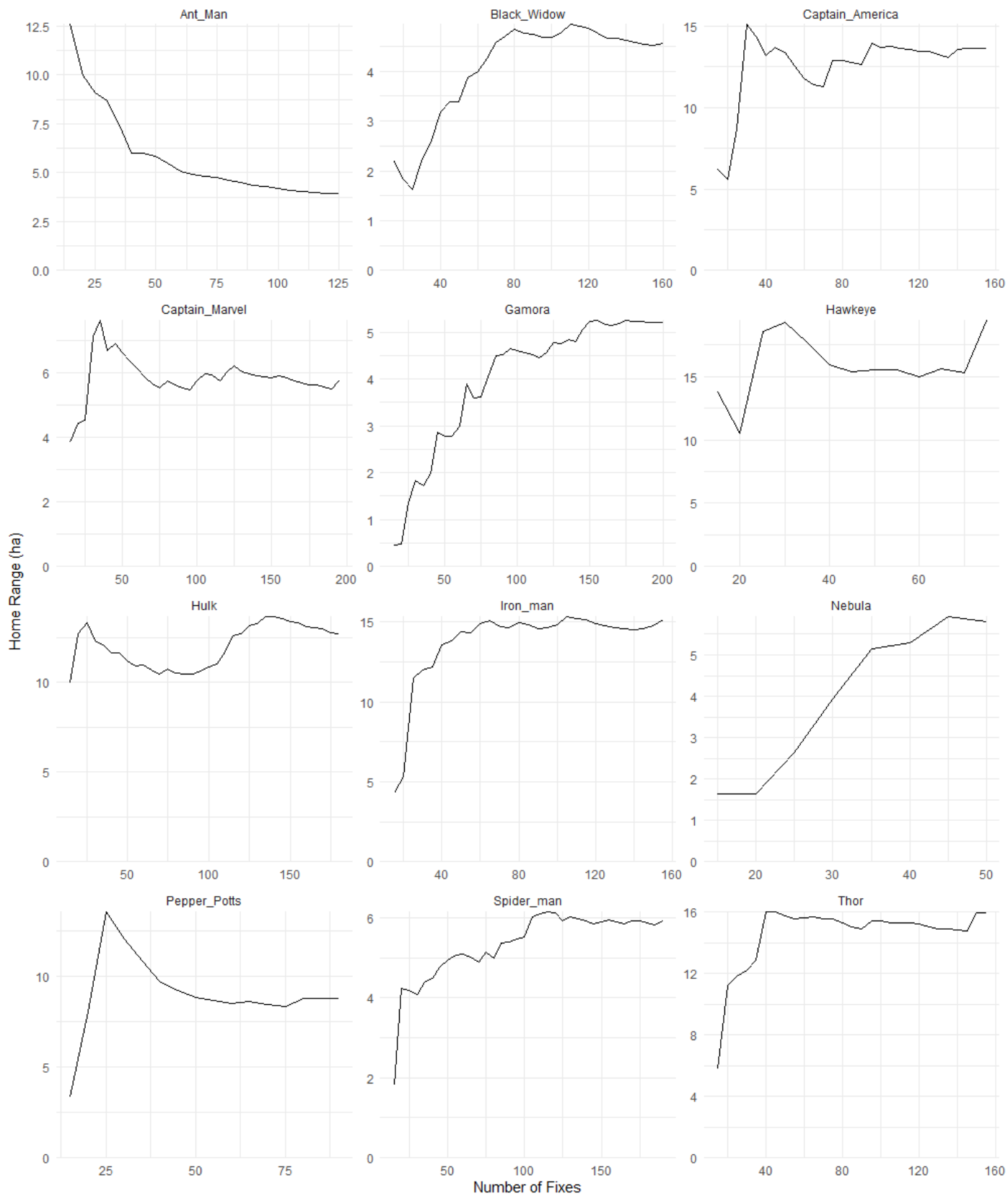


Figure S6. Asymptote analysis for all potoroos collared in 2022.



Table S4. Male – Female 95% range overlap (%).

Male – Female 95% HR Overlap					
ID_A	ID_B	95% HR (ha) (ID_A)	95% HR (ha) (ID_B)	AREA <sub>AB</sub> (ha)	Overlap %
Vince	Marty	7.4	8.12	6.8	87.72
Danny	Sandy	8.53	8	5.66	68.52
Kenickie	Frenchie	16.21	3.52	3.49	46.20
Kenickie	Putzie	16.21	7.09	6.37	59.42
Kenickie	Jan	16.21	6.13	5.36	53.77
Sonny	Frenchie	5.5	3.52	2.24	50.91
Sonny	Putzie	5.5	7.09	3.76	60.21
Sonny	Jan	5.5	6.13	4.81	82.84
Doody	Frenchie	6.55	3.52	3.29	68.52
Doody	Putzie	6.55	7.09	5.39	79.09
Doody	Jan	6.55	6.13	3.17	50.03
Dobby	Hermione	26.13	8.35	8.25	55.85
Harry	Hermione	20.29	8.35	2.55	19.59
Voldemort	Hermione	12.38	8.35	2.18	21.44
Harry	Luna	20.29	5.08	0.08	0.79
Ron	Luna	12.21	5.08	2.46	31.24
Madeye	Ginny	17.21	12.51	6.74	45.93
Ant_Man	Black_Widow	3.44	3.89	0.23	6.29
Spiderman	Black_Widow	5.4	3.89	0.15	3.27
Hulk	Black_Widow	12.14	3.89	3.89	56.61
Hulk	Captain_Marvel	12.14	5.28	4.75	59.33
Hulk	Pepper_Potts	12.14	8.21	2.44	24.44
Thor	Nebula	15.43	5.6	0.48	5.16
Iron_Man	Nebula	14.46	5.6	0.65	7.22
				<b>Mean (95% CI)</b>	<b>43.52 (32.7 – 54.3)</b>

Table S5. Male – Male 95% range overlap (%).

Male – Male 95% HR Overlap					
ID_A	ID_B	95% HR (ha) (ID_A)	95% HR (ha) (ID_B)	AREA <sub>AB</sub> (ha)	Overlap %
Kenickie	Sonny	16.21	3.52	5.03	66.59
Kenickie	Doody	16.21	6.21	6.08	60.60
Doody	Sonny	6.45	3.52	3.22	67.58
Dobby	Harry	26.13	20.29	14.89	64.67
Dobby	Voldemort	26.13	12.38	3.82	21.24
Harry	Voldemort	20.29	12.38	0.01	0.06
Ron	Neville	14.4	8.55	3.03	27.31
Snape	Kreacher	29.5	6.56	6.56	47.16
Snape	Dumbledore	29.5	17.63	17.1	74.98
Snape	Sirius	29.5	12.81	6.78	34.88
Snape	Madeye	29.5	17.21	11.3	50.15
Madeye	Sirius	17.21	12.81	6.3	42.43
Madeye	Dumbledore	17.21	17.63	7.25	41.62
Madeye	Kreacher	17.21	6.56	0.54	5.08
Dumbledore	Kreacher	18.97	6.56	4.68	41.95
Dumbledore	Sirius	18.97	12.81	2.77	17.77
Ant_Man	Spiderman	3.44	5.4	0.59	13.69
Hulk	Ant_Man	12.14	3.44	3.44	53.23
Hulk	Spiderman	12.14	5.4	2.68	33.10
Captain_America	Iron_Man	12.92	14.46	2.27	16.61
Captain_America	Thor	12.92	15.43	1.58	11.19
Thor	Iron_Man	15.43	14.46	12.68	84.89
Thor	Hawkeye	15.43	19.27	2.56	14.85
			<b>Mean (95% CI)</b>		<b>38.77 (29.0 – 48.6)</b>

Table S6. Female – Female 95% range overlap (%).

Female – Female 95% HR Overlap					
ID_A	ID_B	95% HR (ha) (ID_A)	95% HR (ha) (ID_B)	AREA <sub>AB</sub> (ha)	Overlap %
Putzie	Frenchie	7.09	3.52	2.35	47.04
Putzie	Jan	7.09	6.13	3.4	51.57
Frenchie	Jan	3.52	6.13	2.08	44.78
Captain_Marvel	Black_Widow	5.28	3.89	3.4	75.02
Captain_Marvel	Pepper_Potts	5.28	8.21	2.84	43.13
Black_Widow	Pepper_Potts	3.89	8.21	1.19	21.06
			<b>Mean (95% CI)</b>		<b>47.10 (33.2 – 61.0)</b>

Table S7. Male – Female 50% range overlap (%).

Male – Female 50% HR Overlap					
ID_A	ID_B	95% HR (ha) (ID_A)	95% HR (ha) (ID_B)	AREA <sub>AB</sub> (ha)	Overlap %
Vince	Marty	1.35	1.49	0.75	52.88
Danny	Sandy	1.37	1.76	0.38	24.47
Kenickie	Frenchie	4.45	0.62	0.19	11.44
Kenickie	Putzie	4.45	1.17	0.18	7.89
Kenickie	Jan	4.45	1.62	0.36	13.41
Sonny	Jan	1.16	1.62	0.81	59.09
Doody	Frenchie	1.24	0.62	0.24	27.37
Doody	Putzie	1.24	1.17	0.87	72.23
Doody	Jan	1.24	1.62	0.05	3.53
Dobby	Hermione	5.84	1.29	0.88	32.06
Hulk	Black_Widow	2.91	1.07	0.72	40.80
Hulk	Captain_Marvel	2.91	0.95	0.82	49.32
			<b>Mean (95% CI)</b>		<b>32.87 (20.4 – 45.4)</b>

Table S8. Male – Male 50% range overlap

Male – Male 50% HR Overlap					
ID_A	ID_B	95% HR (ha) (ID_A)	95% HR (ha) (ID_B)	AREA <sub>AB</sub> (ha)	Overlap %
Kenickie	Sonny	4.45	1.16	0.35	15.4
Kenickie	Doody	4.45	1.24	0.26	11.07
Doody	Sonny	1.24	1.16	0.001	0.10
Harry	Dobby	4.72	5.84	2.84	54.09
Snape	Kreacher	8	1.36	0.79	23.95
Snape	Dumbledore	8	3.89	2.83	50.73
Hulk	Ant_Man	2.91	0.79	0.36	23.74
Thor	Iron_Man	4.04	3.85	1.96	49.70
			<b>Mean (95% CI)</b>		<b>28.60 (14.4 – 42.8)</b>

Table S9. Female – Female 50% range overlap

Female – Female 50% HR Overlap					
ID_A	ID_B	95% HR (ha) (ID_A)	95% HR (ha) (ID_B)	AREA <sub>AB</sub> (ha)	Overlap %
Putzie	Frenchie	1.17	0.62	0.004	0.47
Frenchie	Jan	0.62	1.62	0.005	0.50
Black_Widow	Captain_Marvel	1.07	0.95	0.45	44.63
Captain_Marvel	Pepper_Potts	0.95	1.87	0.07	5.25
			<b>Mean (95% CI)</b>		<b>12.71 (0 – 33.7)</b>