Fencing affects African wild dog movement patterns and population dynamics

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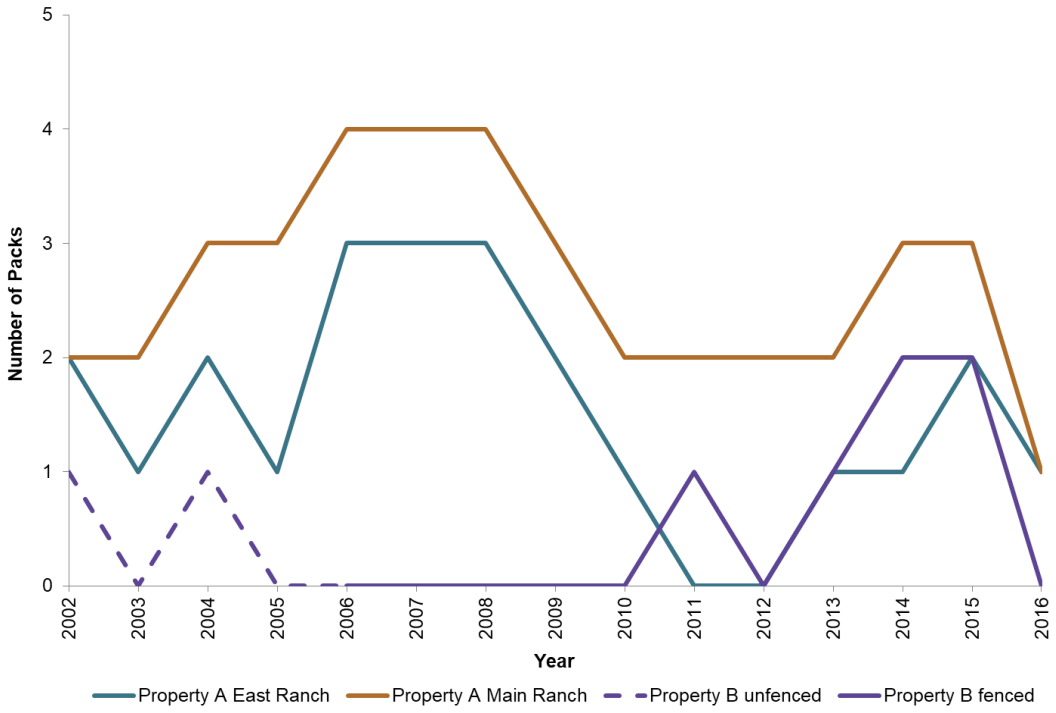
SUPPLEMENTARY TABLE 1 Summary of fence crossings by GPS collared wild dogs.

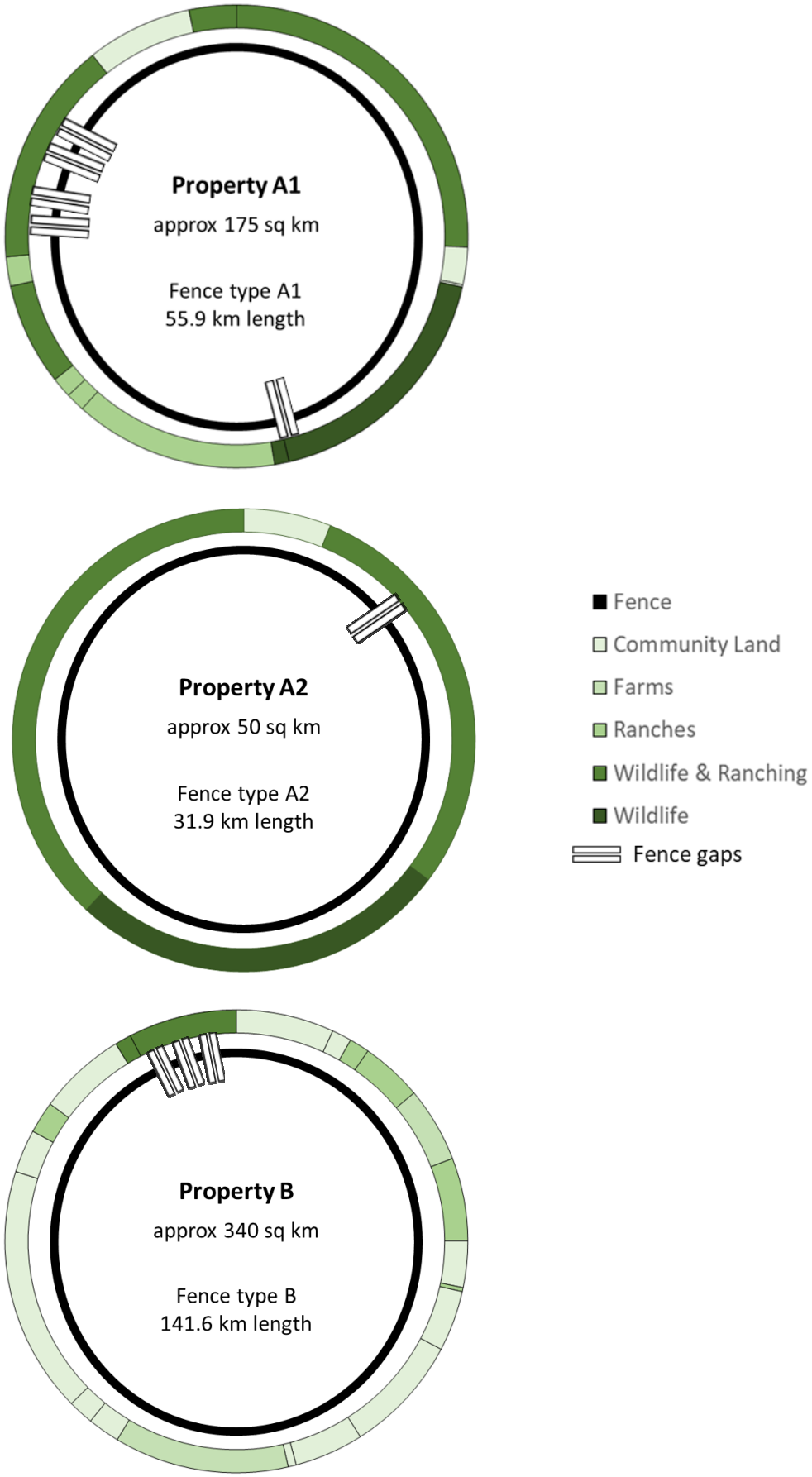
Wild Dog ID	Social Group	Mean Step Length (m)	Fence Type	Property	Number of Steps in Fence Buffer	Number of Crossings	Number of Crossings Less Than 1,000m from Fence Gap
WDF25	Resident pack	820.6	Real	A1	58	10	2
			Real	A2	141	17	0
			Simulated		14	4	
WDM30	Resident pack	780.1	Real	A1	156	28	3
			Real	A2	2	0	0
			Simulated		123	19	
WDM64	Resident pack	1454.4	Real	A1	432	66	14
			Real	A2	69	0	0
			Simulated		109	17	
WDF96	Resident pack	897.6	Real	A1	207	33	12
			Real	A2	3	0	0
			Simulated		114	27	
WDM97	Resident pack	2025.6	Real	A1	220	27	11
			Real	B	101	8	7
			Real	A2	18	1	0
			Simulated		65	6	
WDM111	Single sex dispersal group	672.2	Real	A1	11	2	0
WDM118	Resident pack	851.8	Real	A1	121	32	10
			Real	B	897	1	1
			Real	A2	12	4	2
			Simulated		132	39	

WDF120	Resident pack and single sex dispersal group	1364.4	Real	A1	307	68	3
			Real	A2	599	89	11
			Simulated		153	26	
WDF126	Resident pack	1015.9	Real	A1	591	84	17
			Real	A2	39	6	2
			Simulated		288	39	
WDF130	Resident pack and single sex dispersal group	1206.4	Real	A1	227	33	10
			Real	B	814	42	23
			Simulated		234	42	
WDM132	Resident pack	419.1	Real	B	2	1	1
WDM136	Resident pack and single sex dispersal group	1208.6	Real	A1	112	26	3
			Real	A2	398	56	11
			Simulated		46	7	
WDF137	Resident pack and single sex dispersal group	1074.9	Real	A1	12	2	0
			Real	A2	7	2	0
			Simulated		2	1	

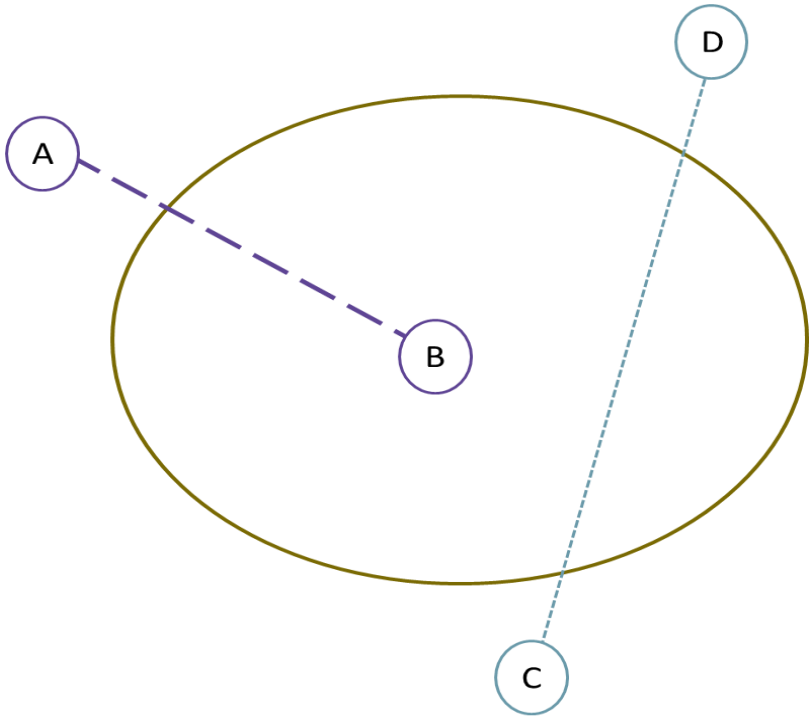


SUPPLEMENTARY FIG. 1 Number of packs with each property as part of their territory each year. All three properties are smaller than the average territory size for wild dog packs in Laikipia (Property A1: 175 sq km; Property A2: 50 sq km; Property B: 340 sq km; mean (95% Kernal Density Estimate) wild dog territory: 423 sq km; Woodroffe, 2010); each of the packs represented in the above graph therefore had part of their territories outside of the property they used. In addition, pack territories in Laikipia often have substantial amounts of overlap, although it is rare to find packs using areas at the same time (Woodroffe, 2010).

SUPPLEMENTARY FIG. 2 Example of a fence gap (from Property B) designed to restrict rhino movement but allow other species to cross the fence line.



SUPPLEMENTARY FIG. 3 Graphics showing the land uses of properties surrounding Properties A. and B, and the locations of fence gaps.



SUPPLEMENTARY FIG. 4 A GPS collared individual was considered to have crossed a fence when a location and its subsequent location were on opposite sides of the fence as shown by the purple dashed line between points A and B. The blue line would not have been counted as a crossing event as locations C and D are both on the same side of the fence and the individual is likely to have gone around the fence rather than crossing it.

SUPPLEMENTARY PLATE 1 The PB pack separated by the Property B fence from a potential new alpha female. Panel a shows the pack resting next to the fence. Panel b shows the alpha male looking through the fence and panel c shows the young female from the BA pack on the other side (the blurred lines in panel c are the wires of the fence). (photos by Stefanie Strebel).