

Table S1. Productivity (number of chicks fledged) of White-tailed eagle breeding males during the tracking period. Zeros mean unsuccessful breeding.

	2018	2019	2020	2021	2022	2023
BIEL05	0	min. 1	1	1	0	
HALB11				0	2	0

Table S2. Summary of generalized additive models on daily distance covered by White-tailed eagle breeders and floaters across the year. Individual variability was incorporated as random effect.

Daily movement of breeders			
Predictors	Estimate	Standard error	<i>P</i>
(Intercept)	0.096	0.023	<0.001
s(day of the year)	7.842		<0.0001
s(individual)	0.99		<0.0001
Observations	2610		
Adjusted R ²	0.298		

Daily movement of floaters			
	Estimate	Standard error	<i>P</i>
(Intercept)	0.056	0.007	<0.0001
s(day of the year)	5.03		<0.0001
s(individual)	3.54		<0.0001
Observations	1786		
Adjusted R ²	0.044		

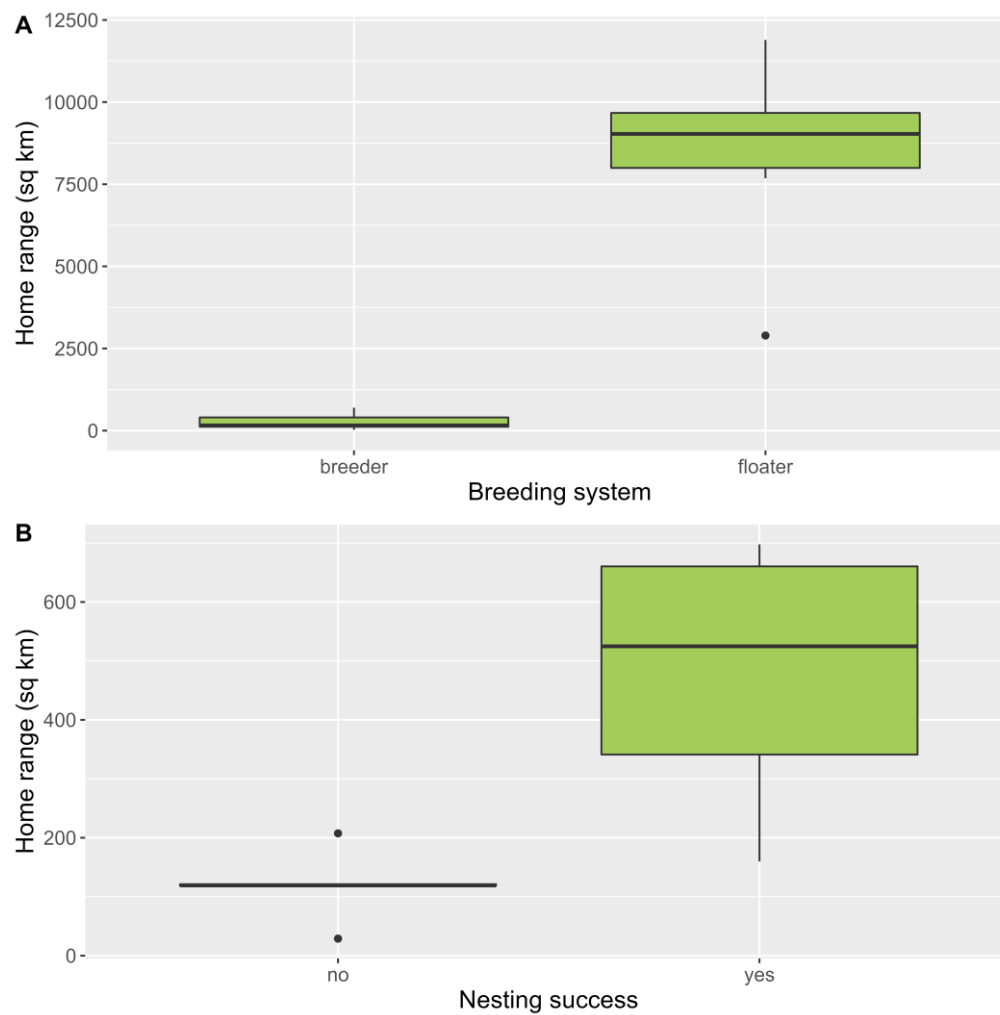


Figure S1. Comparison of 95% kernel density estimated home ranges of White-tailed eagle breeders and floaters (A) and successfully and unsuccessfully breeding males (B).

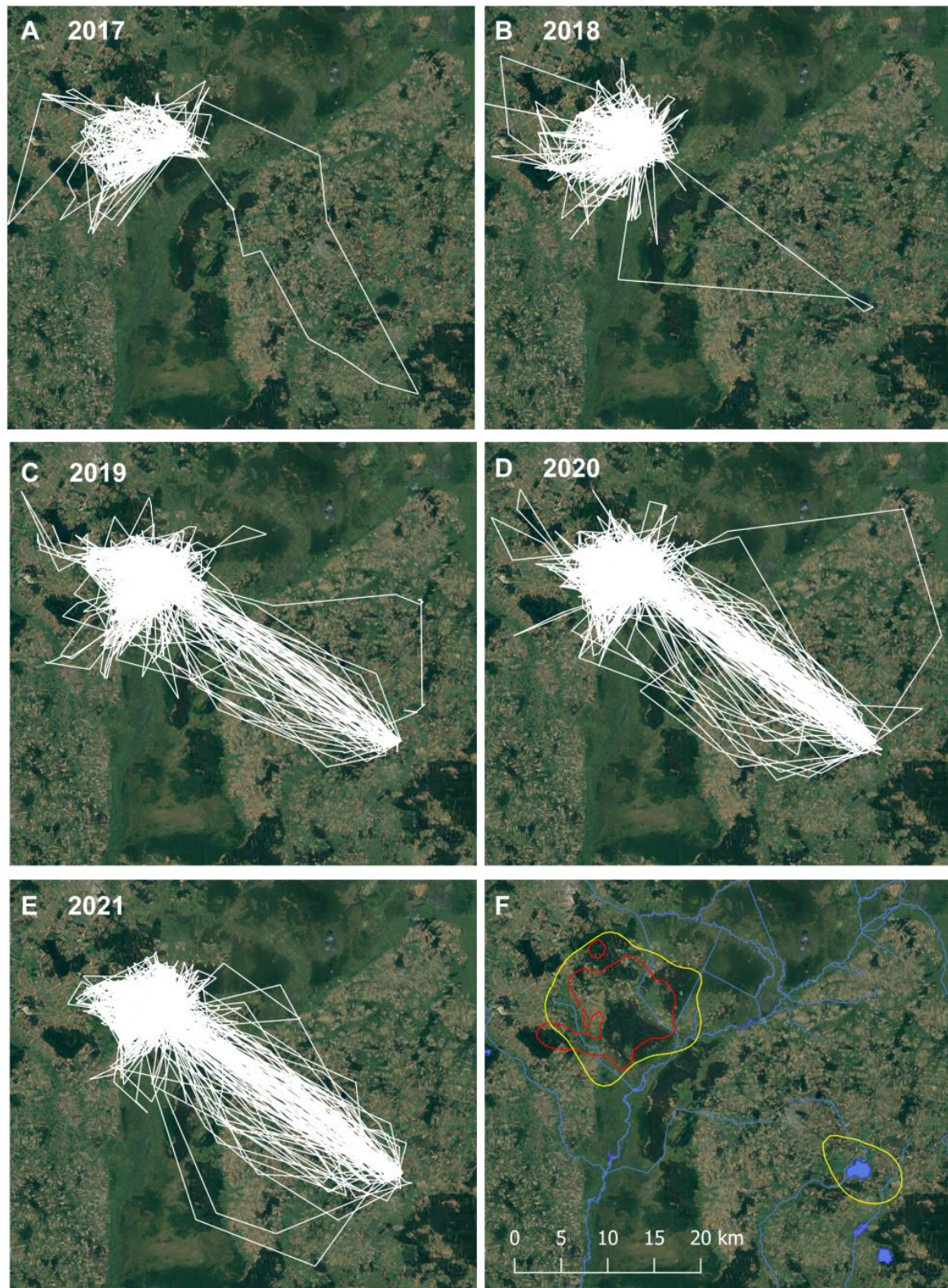


Figure S2. Movements of White-tailed eagle male (BIEL05) in years when nesting failed (A, B) and when it was successful (C, D, E); kde95% home range in sample successful and unsuccessful breeding seasons on the background of potential foraging sites represented by rivers and waterbodies (F).