

## Habitat availability is not limiting the distribution of the Bohemian–Bavarian lynx *Lynx lynx* population

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Table S1 Pooling of CORINE (Coordination of Information on the Environment) data according to environmental variables. Not all grid codes are included because not all types of land cover occur within the study area along the borders between Germany, the Czech Republic and Austria (Fig. 1).

Variable	Definition	CORINE grid code*
Human	Human settlements, industry, artificial surfaces	1,2,3,4,5,6,7,8,9,10,11
Acre	Non-irrigated arable land	12
Naturalagri	Agricultural areas with significant natural vegetation or complex cultivation patterns	15,16,20,21
Pasture	Pastures	18
Forestleaves	Broad-leaved forest	23
Forestconif	Coniferous forest	24
Forestmix	Mixed forest	25
Natgrassl	Natural grassland	26
Woodshrub	Transitional woodland shrub & wetlands	27,29,35,36
Water	Inland water bodies	40,41

\*Definitions of grid codes are available from CORINE land cover (European Environment Agency, 2012).

Table S2 Results of generalized linear mixed model fit by Laplace approximation, with lynx-ID as random effect. Random effect variance was 0.0022741, and standard deviation 0.04768.

Fixed effect	Estimate	Standard error	
Intercept	3.5719243	1.6117127	*
Distanc_hum	0.0346990	0.0456495	
Human	-0.6990133	1.7758258	
Acre	-1.6472586	2.0408822	
Pasture	2.7017628	1.5852694	
Naturalagri	3.3752439	1.5977477	*
Forestleaves	3.7786218	1.5959446	*
Forestconif	3.8066790	1.5805674	*
Forestmix	3.6984664	1.5929599	*
Woodshrub	4.2511631	1.5889616	**
Natgrassl	3.1409443	1.5986350	*
Altitude	-0.0016174	0.0002151	***

\*\*\*,  $P < 0.001$ ; \*\*,  $P < 0.01$ ; \*,  $P < 0.05$

Table S3 Determination of the most suitable grid cell size for the *MaxEnt* model.

Grid cell size (m)	AUC <sub>PO</sub>
200	0.699
500	0.726
700	0.749
1,000	0.764
1,200	0.718
1,500	0.697

Table S4 Least-cost paths connecting suitable habitat patches for lynx *Lynx lynx* along the borders between Germany, the Czech Republic and Austria (Fig. 1a).

Patch of origin (patch centre)	Target patch (contour)	Total path cost	Total path length (km)	Mean path cost	Inter- patch distance (km)
Bohemian Forest	Upper Palatinate Forest	36,444	74	492	8
	Brdy	52,587	74	711	38
	Patch CZ South	55,620	97	573	37
Upper Palatinate Forest	Fichtel Mountains	32,859	55	597	30
	Northern Franconian Jura	28,976	40	724	23
Fichtel Mountains	Franconian Forest	23,600	29	814	18
	Northern Franconian Jura	26,959	40	674	16
Brdy	Slavkovský les	50,892	75	679	52
Erz Mountains	Labské pískovce	36,282	91	399	19
Labské pískovce	Patch CZ North	26,450	45	588	30
	Krkonoše Mountains	34,997	65	538	51
Forest Quarter	Patch CZ South	24,657	37	666	34

Table S5 Number of individual lynx identified by camera trapping in the Bavarian Forest National Park and Šumava National Park (750 km<sup>2</sup>) during four winters. Independent lynx include adult and resident lynx. Juvenile lynx are still dependent on their mother. Lynx of unknown status encompass all remaining individuals without proof of independence of residency.

	2009–2010	2010–2011	2011–2012	2013–2014
Independent lynx <sup>1</sup>	10	16	14	16
Juvenile lynx <sup>2</sup>	8	7	5	9
Status unknown <sup>3</sup>	6	0	4	0

<sup>1</sup>Include adult and resident lynx

<sup>2</sup>Still dependent on mother

<sup>3</sup>No proof of independence or residency

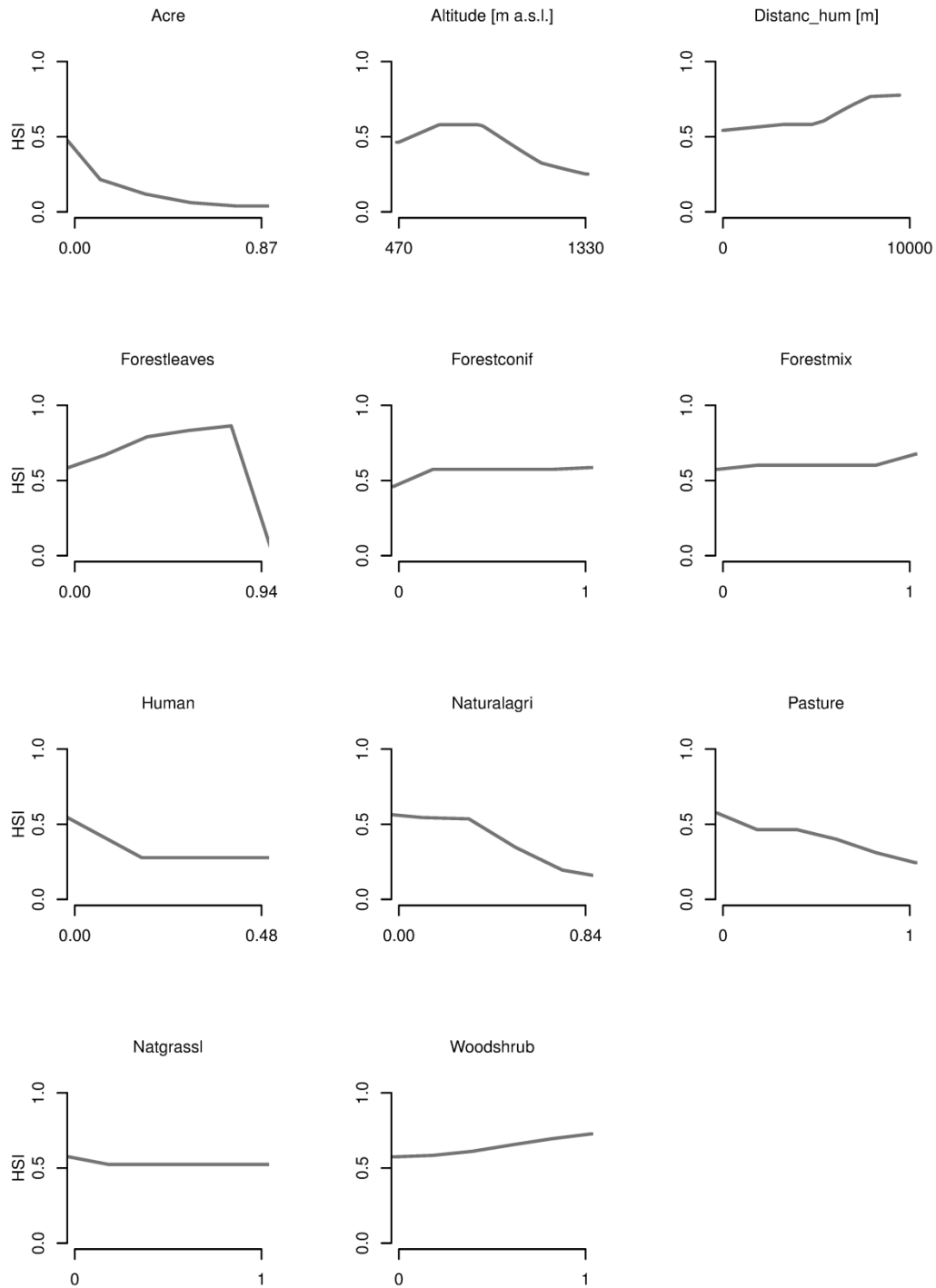


Fig. S1 Variable response curves of the *MaxEnt* model, showing how the habitat suitability index changes as each environmental variable is varied, keeping all other environmental variables at their mean sample value. The x-axes display proportions of variables per grid cell, unless a unit is specified in the title. The variables are defined in Table 1.

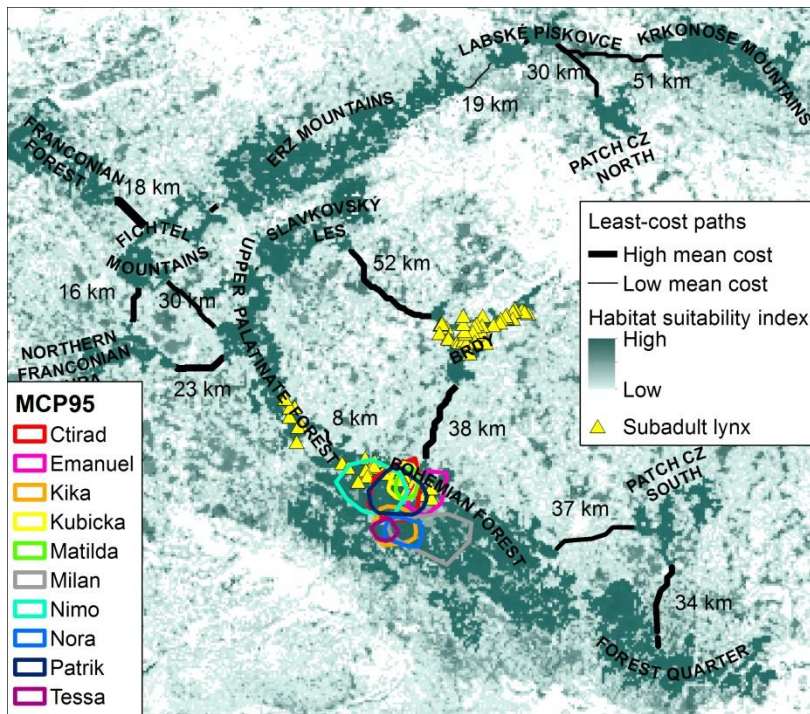


Fig. S2 Habitat suitability map for lynx *Lynx lynx* along the borders between Germany, the Czech Republic and Austria (Fig. 1), with contours of MCP95 for 10 GPS-collared lynx, and VHF locations of a dispersing subadult.