



Supplementary Material

Analyzing Stopover and Wintering Habitats of Hooded Cranes (*Grus monacha*): Implications for Conservation and Species Dispersion in the East Asia

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Supplementary Table I.- Occurrence data of hooded cranes used for modeling.

No.	Long (E)	Lat (N)	Source	No.	Long (E)	Lat (N)	Source
1	128.000000	50.000000	Chan (1999)	28	132.470842	46.580022	Lin <i>et al.</i> (2002)
2	127.650000	49.916667	Chan (1999)	29	128.878000	35.083000	Harris (2010)
3	132.000000	48.500000	Chan (1999)	30	115.073425	50.095725	Harris (2010)
4	134.255650	46.561306	Chan (1999)	31	115.282236	50.166969	Harris (2010)
5	130.000000	49.166667	Chan (1999)	32	115.576675	50.170108	Harris (2010)
6	115.166667	48.666667	Chan (1999)	33	124.284728	47.323075	Luo <i>et al.</i> (2012)
7	125.449905	39.595223	Chan (1999)	34	124.196889	47.340472	Luo <i>et al.</i> (2012)
8	122.142000	40.689000	Chan (1999)	35	128.680000	32.730000	Yamaguchi and Higuchi (2008)
9	118.516667	49.816667	Chan (1999)	36	131.460000	46.180000	Yamaguchi and Higuchi (2008)
10	132.583333	46.700000	Chan (1999)	37	123.303817	45.113589	Yamaguchi and Higuchi (2008)
11	119.509832	39.838650	Chan (1999)	38	121.602817	40.853781	Yamaguchi and Higuchi (2008)
12	115.100000	49.700000	Chan (1999)	39	118.036456	38.055147	Yamaguchi and Higuchi (2008)
13	124.230364	47.455664	Li (1997)	40	115.750000	50.083333	Chan (1998)
14	122.923603	42.356278	Ding and Wang (2006)	41	126.744324	37.610232	Chan (1998)
15	132.829444	45.380000	Liu <i>et al.</i> (2006)	42	130.250000	49.500000	Chan (1998)
16	125.390000	46.911389	Su (2006)	43	127.333333	39.416667	Chan (1998)
17	125.133333	46.851944	Guo (2006)	44	127.333333	39.500000	Chan (1998)
18	125.200003	47.000000	Guo (2006)	45	115.600000	49.900000	Higuchi (1994)
19	130.543353	42.618081	Chen <i>et al.</i> (2008)	46	127.016667	36.183333	Higuchi (1994)
20	130.595472	42.591975	Chen <i>et al.</i> (2008)	47	126.410178	37.723467	Higuchi (1994)
21	132.833850	46.746542	Li (2008)	48	133.000000	48.316667	Higuchi (1994)
22	117.316469	38.739683	Yang <i>et al.</i> (2009)	49	133.183333	48.316667	Higuchi (1994)
23	131.841306	47.218942	Li (2009)	50	125.400000	39.400000	Higuchi (1994)
24	130.903128	47.360747	Li (2009)	51	132.158528	46.759764	Higuchi (1994)
25	123.173381	46.260742	Li (2009)	52	132.677531	47.784133	Higuchi (1994)
26	118.706781	38.034964	Lv <i>et al.</i> (1998)	53	132.416667	46.716667	Higuchi (1994)
27	122.765456	46.786714	He <i>et al.</i> (2001)	54	131.743172	46.622956	Higuchi (1994)

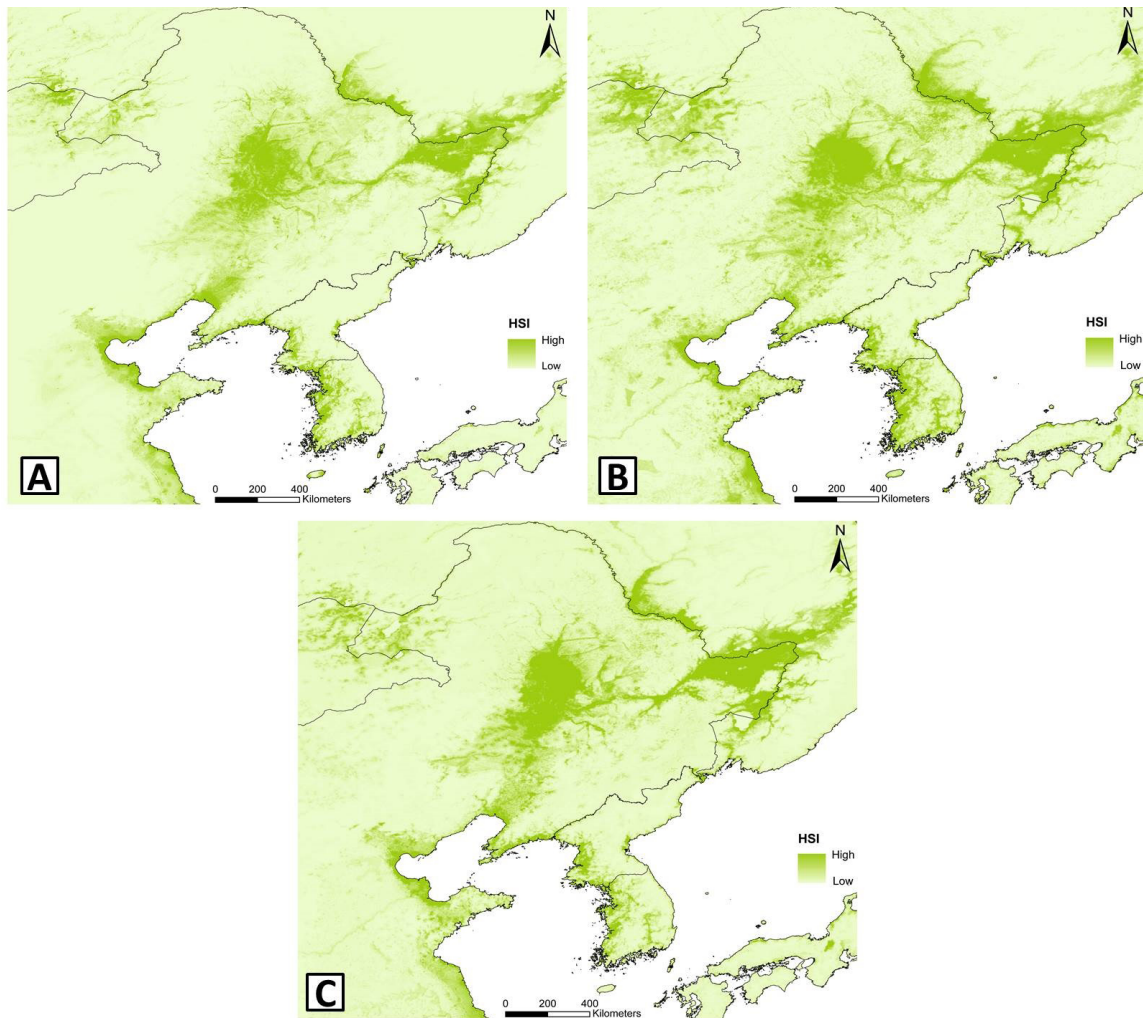
No.	Long (E)	Lat (N)	Source	No.	Long (E)	Lat (N)	Source
55	133.688253	47.676761	Higuchi (1994)	86	124.566642	47.206619	Field observation
56	120.077214	37.434614	Field observation	87	122.920508	46.252286	Field observation
57	132.814092	45.279803	Field observation	88	123.016306	46.305556	Field observation
58	128.388272	36.170422	Field observation	89	122.384550	42.948986	Field observation
59	124.750106	47.007933	Field observation	90	122.357580	45.152530	Field observation
60	124.594861	47.124000	Field observation	91	122.348955	44.993802	Field observation
61	124.822364	46.877644	Field observation	92	117.831227	38.125850	Field observation
62	124.227711	47.299981	Field observation	93	132.146658	46.714880	Field observation
63	124.037611	47.154611	Field observation	94	126.593559	37.259451	Sat. Track. (unpublished)
64	124.604628	47.168172	Field observation	95	126.327681	36.717208	Sat. Track. (unpublished)
65	124.649833	47.080417	Field observation	96	126.813517	36.026072	Sat. Track. (unpublished)
66	127.529111	48.049361	Field observation	97	126.650675	35.903611	Sat. Track. (unpublished)
67	124.464747	47.046317	Field observation	98	128.413361	35.785572	Sat. Track. (unpublished)
68	134.569000	48.129639	Field observation	99	127.899077	49.747519	Sat. Track. (unpublished)
69	125.227972	47.258339	Field observation	100	128.156058	49.661858	Sat. Track. (unpublished)
70	125.191781	47.084211	Field observation	101	127.713479	50.066367	Sat. Track. (unpublished)
71	124.932639	47.364172	Field observation	102	127.789621	50.437563	Sat. Track. (unpublished)
72	124.566525	46.852725	Field observation	103	128.203648	48.838565	Sat. Track. (unpublished)
73	124.665251	47.160552	Field observation	104	120.377200	33.582590	GBIF
74	124.520222	47.148778	Field observation	105	120.258840	33.770230	GBIF
75	129.623000	48.290806	Field observation	106	127.440959	34.843261	GBIF
76	124.659944	47.124167	Field observation	107	127.504998	34.881257	GBIF
77	124.348006	47.499375	Field observation	108	128.690387	35.322946	GBIF
78	124.598067	46.214847	Field observation	109	126.753470	36.014850	GBIF
79	124.711989	46.205042	Field observation	110	126.498326	36.646649	GBIF
80	123.307903	42.630753	Field observation	111	126.491710	36.722101	GBIF
81	123.501511	42.531128	Field observation	112	126.400000	36.950000	GBIF
82	124.819139	46.208142	Field observation	113	126.700730	37.934650	GBIF
83	119.246139	49.324667	Field observation	114	127.190750	38.273910	GBIF
84	123.250000	42.716667	Field observation	115	118.820129	39.168695	GBIF
85	124.444181	47.119350	Field observation				

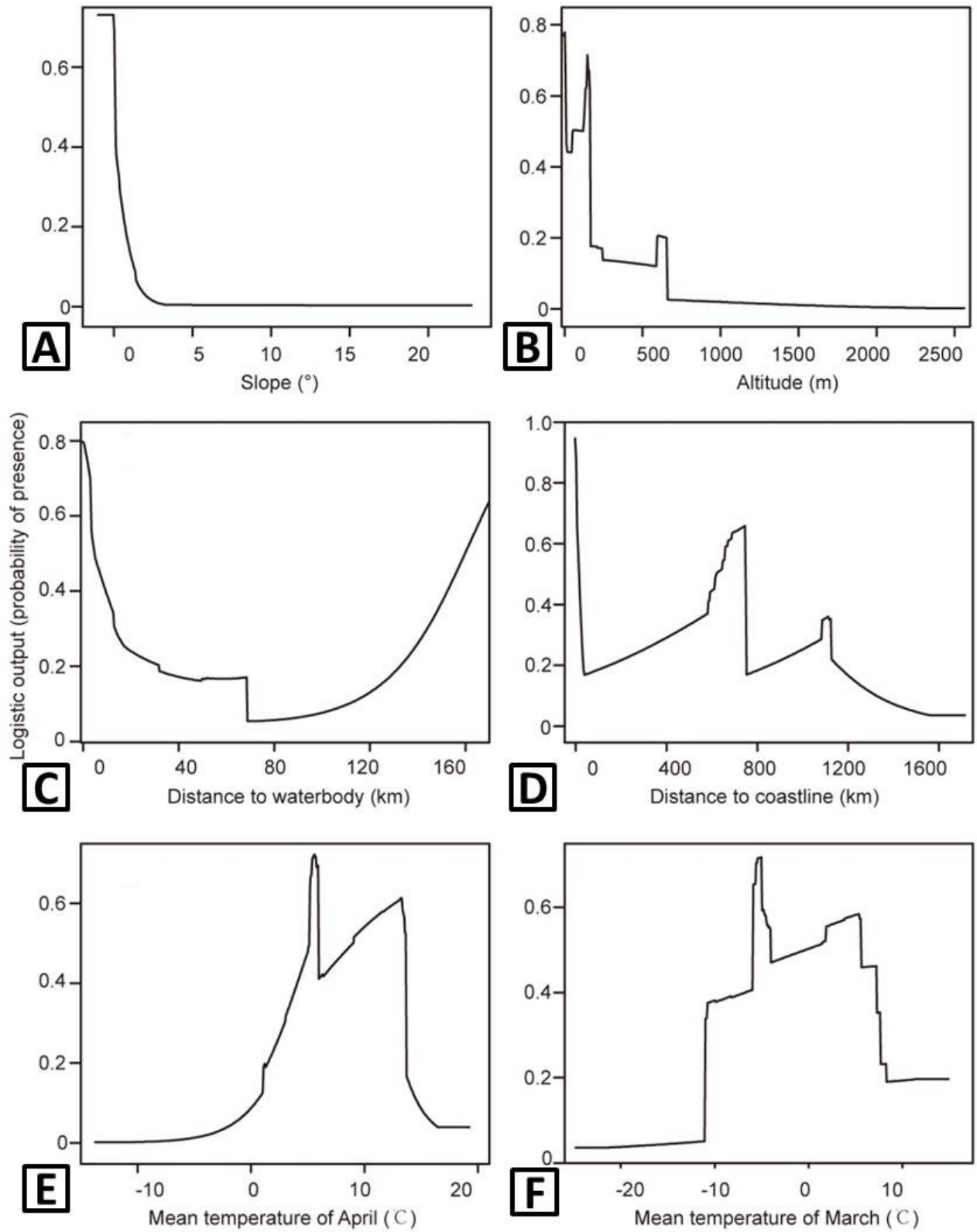
GBIF, Global Biodiversity Information Facility; Sat. Track., Satellite tracking. These data are publicly available for download in a digital format and with metadata at the UAF library site of dSPACE under <https://scholarworks.alaska.edu/handle/11122/4797>.

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Table SII.- Variable importance calculated by MaxEnt, Stochastic Gradient Boosting (SGB) and Random Forests (RF).

Variables	Ranking (MaxEnt)	Ranking (SGB)	Ranking (RF)
Slope	1	1	2
Altitude	2	2	1
Distance to waterbody	3	5	3
Distance to coastline	4	6	6
Mean temperature of April	5	4	5
Mean temperature of March	6	9	9
Mean temperature of October	7	12	8
Land use	8	3	4
Mean temperature of November	9	8	7
Mean precipitation of November	10	11	14
Mean precipitation of October	11	14	13
Human influence index	12	7	10
Mean precipitation of April	13	10	12
Mean precipitation of March	14	13	11

Supplementary Fig. S1. The habitat suitability index (HSI) of stopover habitat predicted by three different models. **A**, MaxEnt; **B**, Stochastic Gradient Boosting; **C**, Random Forests.



Supplementary Fig. S2. Response curves of the most important predictors. The curve is the mean of ten runs result in the model.