

Track Transects - Kluane LYNX

Winters (October-May)

Densities calculated using two methods:

- 1- Mark O'Donoghue's regression against Jolly index of tracks ($2.1853 + 0.4184 * \text{Tracks/TN}/100 \text{ km}$) (robust regression using O'D, NWT and Snafu data, $r^2 = .83$)
- 2- FMP formula with bootstrapped 95% CI and mean daily movement rate of 6.85 km
 - Density $= (\pi/2) * (\text{total track count} / (\text{total km searched} * \text{mean daily mvmt rate}))$
 - movement rate 6.85km/day from Emily Studd's collared lynx based on n=2288 daily movements during December to March time periods
 - Stephens PA, Zaumyslova OY, Miquelle DG, et al (2006) Estimating population density from indirect sign: Track counts and the Formozov-Malyshev-Pereleshin formula. Anim Conserv 9:339–348. doi: 10.1111/j.1469-1795.2006.00044.x

										[Method 2 of Jolly 1969 (the ratio method). C. Krebs 1999 p 149.]					
Season	Num Track Days	Total No. Segments	Total TN	Total Length	Total Tracks	Mean Tracks /TN/100km	St. E.	Lower 95% CL	Upper 95% CL	Mean Tracks /TN/100km	St. E.	Lower 95% CL	Upper 95% CL	Density - Mark O'D (95% CI)	Density - FMP (95% CI)
LYNX															
1987/1988	84	561	810	1765.0	163	9.071	0.997	7.115	11.028	7.918	0.874	6.203	9.633	5.5 (4.8-6.2)	2.1 (1.6-2.5)
1988/1989	99	609	747	2128.0	306	13.196	1.135	10.969	15.423	13.855	1.208	11.484	16.226	8.0 (7.0-9.0)	3.2 (2.7-3.8)
1989/1990	55	225	278	780.0	197	21.835	2.436	17.040	26.630	22.415	2.386	17.718	27.111	11.6 (9.6-13.5)	5.6 (5.1-6.1)
1990/1991	69	378	418	1308.0	749	55.259	4.315	46.779	63.739	53.867	4.125	45.762	61.972	24.7 (21.3-28.1)	12.7 (11.5-13.9)
1991/1992	50	368	386	1178.0	436	37.923	2.905	32.214	43.632	35.781	2.833	30.214	41.348	17.2 (14.8-19.5)	8.2 (7.5-9.2)
1992/1993	38	277	374	888.0	149	16.005	1.947	12.172	19.837	13.776	1.672	10.485	17.067	7.9 (6.6-9.3)	3.7 (3.1-4.3)
1993/1994	46	286	401	978.0	54	5.831	1.608	2.666	8.995	4.576	0.970	2.666	6.485	4.1 (3.3-4.9)	1.2 (1.0-1.5)
1994/1995	34	244	267	780.0	86	13.101	2.799	7.592	18.610	10.513	2.155	6.272	14.754	6.6 (4.8-8.4)	2.5 (2.1-2.9)
1995/1996	28	204	269	649.0	126	19.116	2.997	13.218	25.015	14.792	1.868	11.116	18.468	8.4 (6.8-9.9)	4.3 (3.7-5.0)
1996/1997	23	133	133	411.0	112	31.192	4.173	22.946	39.439	27.251	3.888	19.568	34.934	13.6 (10.4-16.8)	6.1 (4.7-7.5)
1997/1998	17	120	120	388.0	209	65.407	8.155	49.293	81.521	53.866	6.933	40.166	67.566	24.7 (19.0-30.5)	12.0 (9.6-14.5)
1998/1999	18	105	197	350.0	386	80.393	8.343	63.907	96.878	82.296	8.767	64.972	99.620	36.6 (29.4-43.9)	24.5 (19.8-28.5)
1999/2000	20	135	168	436.0	384	73.774	6.421	61.087	86.462	72.592	6.293	60.158	85.026	32.6 (27.4-37.8)	19.6 (17.0-22.6)
2000/2001	26	229	372	821.0	24	4.044	1.296	1.495	6.594	2.619	0.724	1.193	4.044	3.3 (2.7-3.9)	0.7 (0.4-0.8)
2001/2002	14	120	255	421.0	28	3.540	1.330	0.912	6.168	2.890	0.832	1.245	4.534	3.4 (2.7-4.1)	1.5 (0.8-2.2)
2002/2003	15	133	311	466.0	56	7.682	1.782	4.161	11.203	5.365	1.076	3.238	7.492	4.4 (3.5-5.3)	2.7 (1.8-3.5)
2003/2004	16	132	274	446.0	52	9.181	2.070	5.091	13.271	6.383	1.472	3.474	9.291	4.9 (3.6-6.1)	2.6 (1.8-3.4)
2004/2005	16	140	289	484.0	106	15.603	3.213	9.254	21.952	11.433	1.846	7.785	15.080	7.0 (5.4-8.5)	4.9 (3.8-5.8)
2005/2006	11	86	135	301.0	94	27.542	5.783	16.067	39.016	21.595	3.640	14.372	28.817	11.2 (8.2-14.2)	6.9 (5.1-8.8)
2006/2007	19	152	250	542.0	375	52.453	10.137	32.463	72.443	39.145	5.439	28.419	49.871	18.6 (14.1-23.1)	15.4 (11.9-18.4)
2007/2008	15	107	211	352.0	114	19.835	3.553	12.815	26.856	16.241	3.916	8.503	23.978	9.0 (5.7-12.2)	7.2 (4.6-10.2)
2008/2009	13	102	194	335.0	129	24.038	3.696	16.735	31.341	21.343	3.453	14.520	28.167	11.1 (8.3-14.0)	8.6 (6.6-10.8)

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2009/2010	13	94	113	301.0	81	26.212	4.215	17.851	34.574	21.982	3.224	15.586	28.379	11.4 (8.7-14.1)	6.0 (4.7-7.2)
2010/2011	11	82	156	271.0	90	25.052	4.054	17.009	33.095	16.790	2.717	11.399	22.181	9.2 (7.0-11.5)	7.4 (5.8-9.1)
2011/2012	10	78	156	241.0	69	20.818	3.682	13.490	28.146	14.315	2.689	8.964	19.667	8.2 (5.9-10.4)	6.4 (4.4-8.4)
2012/2013	10	47	84	206.0	71	27.652	5.134	17.317	37.987	21.359	4.235	12.834	29.884	11.1 (7.6-14.7)	7.7 (5.4-10.7)
2013/2014	4	20	40	87.0	33	22.722	5.617	10.965	34.480	18.966	4.576	9.387	28.544	10.1 (6.1-14.1)	8.4 (5.1-12.5)
2014/2015	12	57	62	250.0	99	40.897	5.788	29.321	52.473	38.800	5.999	26.803	50.797	18.4 (13.4-23.4)	8.8 (6.5-11.3)
2015/2016	9	40	59	178.0	74	29.278	4.410	20.356	38.200	30.899	4.638	21.517	40.281	15.1 (11.2-19.0)	9.2 (6.9-11.5)
2016/2017	14	54	69	238.0	171	61.413	6.145	49.122	73.704	59.874	6.424	47.027	72.721	27.2 (21.9-32.6)	16.0 (13.0-19.5)
2017/2018	9	44	44	194.0	116	67.273	12.992	41.068	93.477	59.794	8.250	43.154	76.433	27.2 (20.2-34.2)	13.3 (9.5-17.0)
2018/2019	8	39	39	173.0	50	26.553	5.090	16.251	36.854	28.902	5.369	18.035	39.769	14.3 (9.7-18.8)	6.6 (4.2-8.6)
2019/2020	23	86	100	372.0	128	32.180	3.290	25.652	38.708	35.721	3.405	28.964	42.477	17.1 (14.3-20.0)	7.9 (6.8-9.2)
2020/2021	18	90	127	392.0	104	24.441	6.639	11.270	37.613	21.296	4.537	12.293	30.298	11.1 (7.3-14.9)	6.1 (4.6-7.5)