

Figure 1. The arctic fox den study area between the Sagavanirktok and Staines rivers, Alaska, summer 2000.

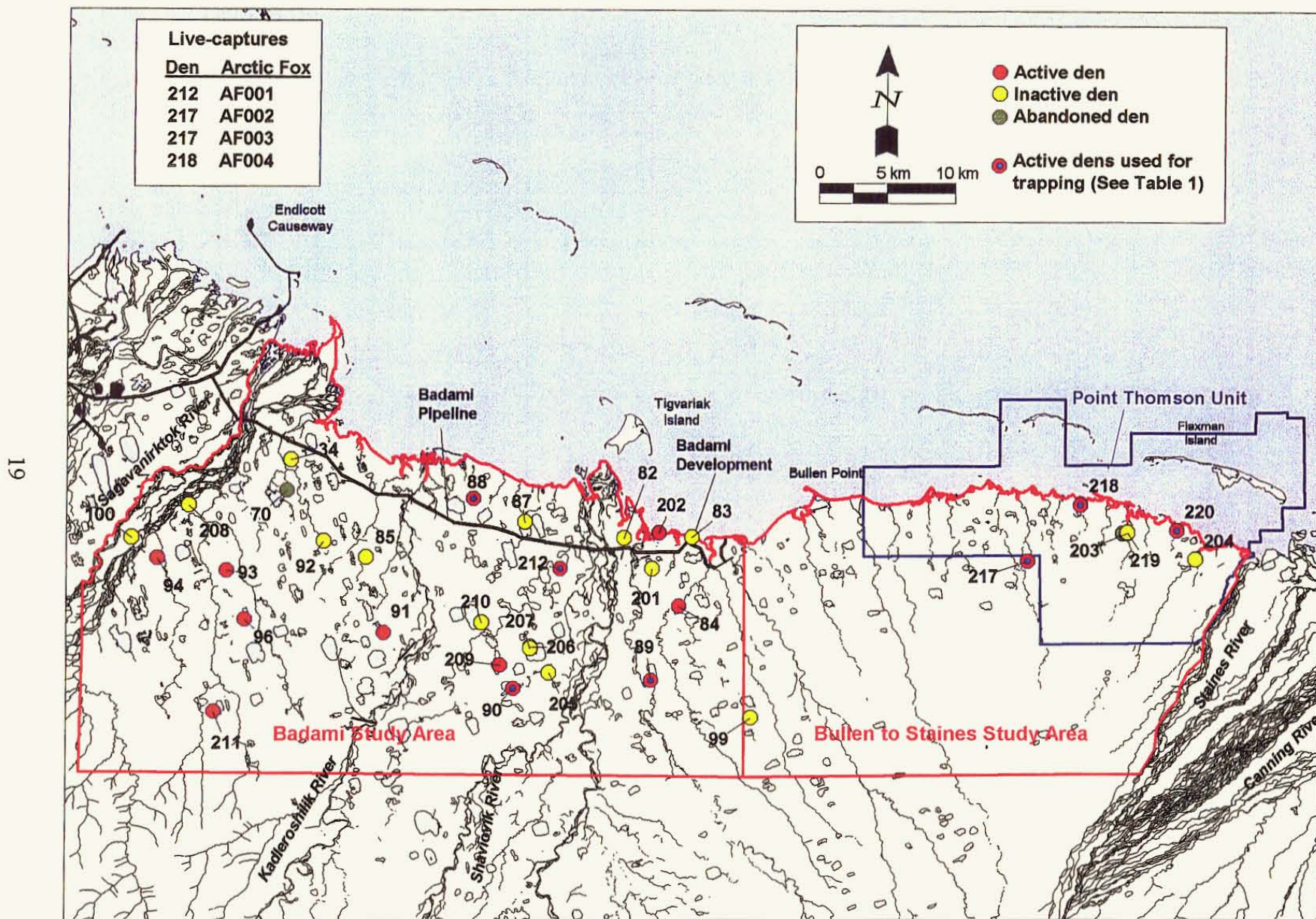


Figure 2. Arctic fox den sites visited to document den activity and characteristics, and to live-capture foxes, between the Sagavanirktok and Staines rivers, Alaska, summer 2000.

Table 1. Location and characteristics of arctic fox den sites in the Badami and Bullen to Staines study areas, Alaska, summer 2000 (Datum WGS 84).

Date	Den Number	Study Area	Longitude (°W)	Latitude (°N)	Activity <sup>a</sup>	Den Site Habitat Type	Age of Den	Den Site Exposure	Number of Entrances	Width (m)	Length (m)	Approx. Surface Dimension of Den Site (m <sup>2</sup> )	Approx. den distance (km) from Deadhorse Airport	Comments
12-Jul	34	Badami	-147.8728160	70.2016740	I	pingo	Mature	open	22	10.2	11.4	116.3	22	
12-Jul	70	Badami	-147.8789240	70.1816730	N	pingo	Mature	open	15	8.1	8.5	68.9	22	
10-Jul	82	Badami	-147.2261210	70.1530720	I	river bank	Mature	E	17	8.9	9.8	87.2	47	Dead fox (in winter coat) by den
10-Jul	83	Badami	-147.0930620	70.1537400	I	coastal bank	Mature	open	16	12.2	12.4	151.3	52	20m off Pt. Thomson #3 pad
10-Jul	84	Badami	-147.1191947	70.1091820	A	streambank	Mature	SE	35	7.1	29.2	207.3	52	S facing bank of stream
12-Jul	85	Badami	-147.7250240	70.1394520	I	pingo	Old	open	54	13.9	22.9	318.3	29	
10-Jul	87	Badami	-147.4194620	70.1630690	I	pingo	Mature	SE	58	21.4	23.8	509.3	39	
10-Jul	88	Badami	-147.5191900	70.1777900	A	pingo	Mature	SE	48	6.2	9.2	57.0	36	
10-Jul	89	Badami	-147.1727730	70.0608470	A	streambank	Mature	SE	69	12.1	19.2	232.3	51	S facing bank of stream
10-Jul	90	Badami	-147.4394470	70.0550090	A	pingo	Old	E	25-30	12.5	21.4	267.5	42	Visual: 2 adults, 3 kits
12-Jul	91	Badami	-147.6900160	70.0905620	A	pingo	Old	SE	25	11.7	14	163.8	31	Visual: 1 adult
12-Jul	92	Badami	-147.8069720	70.1494510	I	pingo	Mature/Old	E	10	7.7	7.7	59.3	25	
12-Jul	93	Badami	-147.9925310	70.1297250	A	pingo	Mature	NE	17	13.2	17.5	231.0	19	
12-Jul	94	Badami	-148.1230910	70.1372230	A	pingo	Old	open	35-40	10.8	14.6	157.7	14	
12-Jul	96	Badami	-147.9572470	70.0983350	A	low pingo	Mature	SW	46	12.3	20.6	253.4	22	
12-Jul	100	Badami	-148.1711500	70.1500000	I	river bank	Old	E	10	13.7	19.4	265.8	12	W edge of Sag R. channel
10-Jul	201	Badami	-147.1714333	70.1331667	I	peat bank	Youthful	SE	1	0.5	0.5	0.3	49	
10-Jul	202	Badami	-147.1583500	70.1565666	A	sand dune	Youthful	SE	18	10.6	11.6	123.0	49	Coastal sand dune
10-Jul	205	Badami	-147.3719000	70.0657000	I	pingo	Senile	NE	21	6.4	15	96.0	44	old, collapsed den
10-Jul	206	Badami	-147.4080000	70.0825000	I	pingo	Senile	E	10	7.3	9.2	67.2	42	on ridge with den 207
10-Jul	207	Badami	-147.4079000	70.0815833	I	pingo	Senile	E	3	4.5	5.1	23.0	42	on ridge with den 206
12-Jul	208	Badami	-148.0655330	70.1713166	I	old riverbank	Senile	W	13	8	9.4	75.2	15	E side of Sag R.
12-Jul	209	Badami	-147.4659333	70.0702333	A	pingo	Old	NE	55	15.9	20.4	324.4	40	
12-Jul	210	Badami	-147.5009666	70.0979166	I	pingo	Senile	SW	19	9.7	9.9	96.0	38	
12-Jul	211	Badami	-148.0118000	70.0381166	A	pingo	Old	W	40	16.5	22	363.0	25	
12-Jul	212	Badami	-147.3503700	70.1330900	A	streambank	Old	NE	90	14.2	36	511.2	42	Visual: 1 adult
10-Jul	99 <sup>b</sup>	Bullen	-146.9780410	70.0364050	I	pingo	Old	SE	15	6.6	7.4	48.8	58	
12-Jul	203	Bullen	-146.2506000	70.1547500	N	streambank	Mature	open	40-45	11.3	29.1	328.8	83	S bank
12-Jul	204	Bullen	-146.1198166	70.1373666	I	streambank	Old	NE	42	8.2	23.4	191.9	88	E bank
11-Jul	217	Bullen	-146.4426800	70.1374900	A	streambank	Old	E	34	14	17.1	239.4	76	W bank; Visual: 1 adult, 1 kit; 30 Aug - 1 adult, 4 kits
11-Jul	218	Bullen	-146.3394800	70.1732700	A	soil mound	Youthful	SE	15	7	12.9	90.3	80	Immed. SE of PTU #1 pad; Visual: 1 adult, 1 kit
11-Jul	219	Bullen	-146.2494500	70.1552500	I	streambank	Mature	E	15	7	10	70.0	83	
12-Jul	220	Bullen	-146.1546600	70.1562000	A	sand dune	Youthful	SE	10	3.7	10.6	39.2	87	soil ridgeline close to coast; Visual: 1 adult

<sup>a</sup> A = active den site at time of ground survey; I = inactive den site at time of ground survey; N = abandoned den site, active earlier in the season, but vacant at time of ground survey.

<sup>b</sup> Misassigned to the Badami Study Area in 1999. Assigned to the Bullen to Staines Study Area in 2000.

Table 2. Evidence of arctic fox presence at active den sites in the Badami and Bullen to Staines study areas, Alaska, summer 2000.

Den Number	Date	Study Area	Activity <sup>a</sup>	Evidence of Arctic Fox Presence									
				Visual		Recent Scats		Tracks		Hair	Odor	Fresh Diggings	Other
				Adult	Pup	Adult	Pup	Adult	Pup				
70	12-Jul	Badami	N	-	-	-	-	-	-	yes	-	yes	-
84	10-Jul	Badami	A	-	-	yes	-	yes	-	yes	yes	-	-
88	10-Jul	Badami	A	-	-	-	-	-	-	yes	-	fresh diggings	prey remains
89	10-Jul	Badami	A	-	-	yes	yes	yes	yes	yes	yes	fresh diggings	-
90	10-Jul	Badami	A	2	3	-	yes	-	yes	-	yes	-	-
91	12-Jul	Badami	A	1	-	-	-	-	-	-	-	fresh diggings	-
93	12-Jul	Badami	A	-	-	-	-	-	-	yes	-	fresh diggings	prey remains
94	12-Jul	Badami	A	-	-	-	-	-	-	yes	yes	fresh diggings	-
96	12-Jul	Badami	A	-	-	-	-	-	-	yes	yes	fresh diggings	-
202	10-Jul	Badami	A	-	-	yes	-	yes	-	-	yes	-	-
209	12-Jul	Badami	A	yes	-	yes	-	-	-	-	-	fresh diggings	-
211	12-Jul	Badami	A	-	-	yes	-	yes	-	-	-	-	fresh prey remains
212	12-Jul	Badami	A	1	-	yes	yes	-	-	-	-	-	visual on 1 ad and 2 pups, 30 Aug
203	12-Jul	Bullen	N	-	-	-	-	-	-	yes	yes	-	-
217	11-Jul	Bullen	A	1	1	-	-	-	-	-	-	-	visual on 1 ad and 4 pups, 30 Aug
218	11-Jul	Bullen	A	1	1	-	-	-	-	-	-	fresh diggings	-
220	12-Jul	Bullen	A	1	-	yes	yes	-	-	-	-	fresh diggings	-

<sup>1</sup> A = active den site at time of ground survey; N = abandoned den site (Active earlier in the season, but abandoned at the time of ground survey). Den activity based on physical evidence at time of ground survey).



Figure 3. Pingos are dominant land features used by arctic foxes for den sites in the Sagavanirktok to Staines rivers Study Area.



Figure 4. A typical fox den burrow entrance in the Sagavanirktok to Staines study area, summer 2000.

Table 3. Comparison of den characteristics (den site habitat type, burrow entrance orientation, and den age) between the Badami and Bullen to Staines study areas, Alaska, summer 2000.

	<b>Badami Study Area (n = 26 dens)</b>	<b>Bullen to Staines Study Area (n = 7 dens)</b>
<b>Den Site Habitat Type</b>	<b>% of dens exhibiting characteristic</b>	<b>% of dens exhibiting characteristic</b>
Pingos	65	14
Streambanks	23	58
Sand dunes	8	14
Lake Margin	4	-
Peat Mound	-	14
<b>Predominant Burrow Entrance Orientation</b>		
East	65	86
West	15	-
Open	20	14
<b>Den Age</b>		
Youthful	8	29
Old/Mature	73	71
Senile	19	-

Table 4. Type of refuse found at arctic fox den sites and the distance to the nearest human-affected area from fox dens between the Sagavanirktok and Staines rivers, Alaska, summer 2000.

Den Number	Study Area	Type of Refuse	Distance from Nearest Human-affected Area <sup>a</sup>	
83	Badami	styrofoam, plastic	20 m	N of Badami 1 facility
89	Badami	vinyl tape	8.3 km	S of Mobil Mikkelsen Bay State 1
202	Badami	styrofoam cup pieces	2.2 km	W of Badami 1 facility
203	Bullen to Staines	styrofoam pieces, rusted metal fragment	1.8 km	S of Pt. Thomson #3 pad
204	Bullen to Staines	survey tape, drink can lid	1 km	N of Staines River State #1 and 1.2 km SW of N. Staines River #1
217	Bullen to Staines	empty beer can	1.9 km	W of W. Staines State 18-09-23-180
218	Bullen to Staines	industrial rubber pieces (3 grades), survey spike, electrical tape	5 m	SE of Pt. Thomson Unit #1 Pad

<sup>a</sup> Human-affected area included industrial areas, airstrips, gravel pads, etc., active or inactive, at the time of the study.

Table 5. Density and activity of arctic fox dens in the Badami and Bullen to Staines study areas, Alaska, summers 1999 and 2000.

Area	Area (km <sup>2</sup> )	Number of Active Fox Dens	Total Number of Fox Dens	Active Den Sites 2000 (Percent)	2000 Fox Den Density (1 den/km <sup>2</sup> )	Active Den Sites 1999 <sup>b</sup> (Percent)	1999 Fox Den Density <sup>b</sup> (1 den/km <sup>2</sup> )
Sagavanirktok to Staines Study Area	1700	17	33	52%	51	46%	61
Badami Study Area	1060	13	26	50%	41	44%	42
Bullen to Staines Study Area	640	4	7	57%	91	66%	213
Point Thomson Unit (mainland) <sup>a</sup>	180	2	5	40%	36	100%	90

<sup>a</sup> The mainland portion of the Point Thomson Unit is located within the Bullen to Staines Study Area.

<sup>b</sup> Den activity and density recalculated from Perham (2000) with the addition of den 99 to the Bullen to Staines Study Area. Den 99 was misassigned to the Badami Study Area in 1999 and assigned to the Bullen to Staines Study Area in 2000.