

Future distribution of tundra refugia in northern Alaska

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Supplementary Methods.

Species Distribution Modeling. For SDM development, we used current, past, and future monthly climate data at 2.5' (4 km) spatial resolution. Models in the past were made for LGM and LIG. LGM data are based upon two GCM simulations: NCAR-CCSM, version 3.0¹ and MIROC, version 3.2², while LIG data is based only on the CCSM model. The process of past layer development is discussed more fully elsewhere^{3,4}. Future predictions were made using layers downscaled using the delta method⁵, based upon 7 GCM simulations, CCCMA-CGCM3.1⁶, CSIRO-Mk3.0⁷, IPSL-CSM4⁸, MPI-ECHAM5⁹, NCAR-CCSM3.0¹, UKMO-HADCM3¹⁰, and UKMO-HADGEM1¹¹ under the A2b medium-emission scenario¹² at three timescales: 2010-2039, referred to as 2020s, 2040-2069, referred to as 2050s, and 2070-2099, referred to as 2080s.

SDMs for present, past and future were based on bioclimatic variables from the WorldClim data set¹². These variables represent summaries of means and variation in temperature and precipitation, and characterize dimensions of climate considered particularly relevant in determining species distributions. Present-day SDMs were developed within 3 masks: for *Microtus miurus* and *Sorex ugyunak* a mask bounded by 129° W, 162° W, 50° N, and 72° N was used; for *M. pennsylvanicus* and *S. cinereus* a mask bounded by 50° W, 179° W, 25° N, and 72° N was used; for *M. oeconomus* a mask

bounded by 32° E, 162° W, 36° N, and 85° N was used. For inputted locality data, we collated georeferenced occurrence points for masked shrews (n=223), barren-ground shrews (n=21), meadow vole (n=217), root vole (n=145) and singing vole (n=72), using natural history collection data (e.g., ARCTOS <http://arctos.database.uaf.edu>). Because of the difficulty in shrew identification, we limited our records to only those genetically confirmed in Northwest Alaska where both species co-occur, and to those expertly determined in the rest of the study region.

We used Maxent, version 3.3.3k^{13,14} to construct SDMs. Maxent generates SDMs using only presence records, contrasting them with pseudo-absence or background data resampled from the remainder of the study area. In each case, we developed present-day SDMs and then projected the SDM to past and future conditions. We followed the procedures as outlined elsewhere¹⁵ using 5 replicates under the “crossvalidate” option, and initially examining both a low (minimum training presence) and high (equal training sensitivity and specificity) threshold for determining suitable habitat, with an additional variable reduction step. To reduce the number of inputs into the models and thus avoid over-fitting, we tested the 19 WorldClim bioclimatic variables¹² for multicollinearity, excluding any highly correlated variables by dropping those variables with a Pearson’s $R^2 > 0.8$ with a previous variable in the list. We generated current, past and future summary maps in ArcGIS 9.3 by averaging Maxent outputs. The SDMs for present distributions for each species varied depending on our choice of threshold. For instance, the lower, minimum training presence threshold overpredicted the distributions of both shrew species, while the higher, equal training sensitivity and specificity threshold underpredicted both distributions. To better calibrate projected models, we instead chose

thresholds based on fossil data. For the 4 species with fossil data, we used a threshold that left all Last Interglacial fossils in suitable habitat (i.e. a minimum fossil presence threshold). We used LIG fossils since they represent a stable discrete period of climate compared with the rapidly changing habitat near the LGM and uncertainty surrounding age of fossils dated to the Wisconsinan glacial. For *S. ugyunak*, we used the equal training sensitivity and specificity threshold considering a lack of fossil evidence for this species. For both the LGM and future time periods, we show predicted habitat for which 50% or more of the GCM models indicate suitable habitat (1 of 2 at LGM, and 4 of 7 for future periods; Fig. 1).

For comparisons of species predictions with current Federal lands, we summed pixel coverage for each species prediction during each timeframe and compared with pixel coverage of Federal lands based on available land-use layers, converting all pixel counts to land-area (km²; see Supplementary Table 1).

Demographic analyses. Gene sequences were either obtained from GenBank or sequenced for the current study from frozen (-80°C) heart or liver tissue obtained through standard salt extraction, polymerase chain reaction, and cycle sequencing methods (Hope et al. 2010), and subsequently deposited in GenBank (Supplementary Appendix 1). For samples sequenced in the current study, a single primer pair for the entire *Cyt b* gene was used (MSB05/MSB14)¹⁵. Automated sequencing of complementary strands was conducted using an Applied Biosystems 3110 DNA sequencer (Molecular Biological Facility, University of New Mexico). Sequences were edited and aligned in SEQUENCHER 4.8 (Genecodes, Ann Arbor, Michigan) and checked visually. Sequences

were translated to amino acids and examined for internal stop codons, rates of transition/transversion changes, and relative first, second and third position changes in codons that might indicate a pseudogene. Samples from masked shrews (n=114; 1075 bp; 34 localities), barren-ground shrews (n=68; 1075 bp; 14 localities), meadow voles (n=27; 672 bp; 17 localities), root voles (n=78; 1143 bp; 32 localities) and singing voles (n=81; 1072 bp; 17 localities) were each grouped as a single population for demographic analyses and all were originally collected within the study area as bounded by SDMs.

Summary statistics including nucleotide diversity (π) and haplotype diversity (Hd) were calculated in DnaSP¹⁶ for each population to assess genetic diversity. For tests of demographic expansion, we used DnaSP to calculate Tajima's D ¹⁷, Fu's F_s ¹⁸ and R_2 ¹⁹ and assessed significance with 10,000 coalescent simulations. We also implemented a Markov-chain Monte Carlo approach using the Metropolis-Hasting algorithm²⁰ in Lamarc v.2.1.6²¹ to investigate the population growth parameter (g) for each population and to estimate theta (θ). For each run with a starting value of $g = 1$, we used 1000 short chains (sampling increments of 20; 500 trees sampled per chain; 1000 trees discarded as burn-in), 10 long chains (sampling increments of 20; 10,000 trees sampled per chain; 1000 trees discarded as burn-in), a random starting seed within a maximum likelihood framework and two simultaneous searches with a relative heating temperature of 1.2. We used the F84 substitution model with empirical base frequencies and a Tv/Ti ratio = 15 to reflect mitochondrial evolution. All other parameters were set to default values. Results of two independent runs with different random starting seeds for each population were assessed for convergence in Tracer v1.5²² (Effective Sample Size ≥ 300) and to confirm that different runs produced equivalent results. To avoid potential upward bias, we

calculated the standard deviation (s.d.) from each mean value of g and inferred significant population growth if $g > 3 \text{ s.d.}(g)$ above zero²³.

We also visually assessed both population expansion and historical changes in population size. Pairwise mismatch distributions were produced for each population in DnaSP. Assuming panmixia with an infinite-sites model of neutral nucleotide substitution^{24,25}, a smooth unimodal distribution would indicate sudden population expansion whereas a ragged distribution would reflect stable or contracting populations. Multimodal distributions may indicate either multiple expansions or alternatively subdivision within the complex. Finally we used the program BEAST²⁶ to calculate population size change through time. An HKY model of nucleotide substitution was determined for each population using MrModeltest v2.3²⁷ under the Akaike Information Criterion. With a Bayesian skyline tree prior we ran the MCMC analyses (length of chain = 100 M logging trees every 1000) with a mutation rate of 5.5% per million years for shrews¹⁵ and 4% per million years for voles²⁸. We tested both strict clock and relaxed clock uncorrelated log-normal to check for consistency among these assumptions. Bayesian skyline plots were based on independent tree files under a relaxed clock: uncorrelated log-normal as results from runs with different clock assumptions were minimally different. Runs were again visualized in Tracer v1.4²² to confirm convergence following a burn-in of 10%.

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Supplementary Table 1 | Species Distribution Model (SDM) summaries.

Category	(a) Proportion of Present	(b) Proportion in BLM	(c) Proportion in FWS	(d) Proportion in NPS	(e) Proportion in “Other”
LGM – total barren-ground shrew	3.151 1,737,757	0.094 164,147	0.048 82,614	0.071 123,447	0.787 1,367,550
LIG – total masked shrew	0.764 421,297	0.349 147,112	0.175 73,778	0.155 65,312	0.321 135,094
2020s – masked shrew	1.013 2,167,430	0.151 327,746	0.151 326,577	0.097 211,314	0.601 1,301,793
2020s – total barren-ground shrew	0.875 482,332	0.328 158,138	0.128 61,775	0.147 70,700	0.397 191,719
2020s – only barren-ground shrew	0.688 76,782	0.285 21,919	0.387 29,704	0.066 5,076	0.262 20,084
2020s – shrew contact zone	1.022 405,550	0.336 136,219	0.079 32,072	0.162 65,623	0.423 171,636
2050s – masked shrew	1.043 2,232,166	0.156 347,918	0.154 344,796	0.097 216,184	0.593 1,323,268
2050s – total barren-ground shrew	0.736 405,653	0.331 134,147	0.128 52,022	0.157 63,847	0.384 155,637
2050s – only barren-ground shrew	0.153 17,094	0.121 2,072	0.761 13,009	0.063 1,080	0.055 932
2050s – shrew contact zone	0.979 388,559	0.340 132,075	0.100 39,013	0.162 62,767	0.398 154,704
2080s – masked shrew	1.051 2,249,778	0.156 350,005	0.159 357,509	0.097 217,693	0.589 1,324,570
2080s – total barren-ground shrew	0.574 316,809	0.353 111,784	0.116 36,882	0.160 50,675	0.371 117,468
2080s – only barren-ground shrew	0.004 488	0.000 0	0.788 385	0.212 104	0.000 0

2080s – shrew contact zone	0.797 316,320	0.353 111,784	0.115 36,497	0.160 50,572	0.371 117,468
LGM – total singing vole	2.203 2,907,016	0.116 337,677	0.121 352,388	0.053 154,719	0.709 2,062,232
LIG – total singing vole	0.849 1,119,901	0.206 230,791	0.163 182,617	0.103 115,277	0.528 591,216
2020s – meadow vole	1.023 2,203,616	0.153 336,300	0.159 350,494	0.094 207,659	0.594 1,309,164
2020s – total singing vole	0.811 1,069,374	0.234 250,416	0.201 214,896	0.120 128,212	0.445 475,850
2020s – only singing vole	0.038 37,770	0.358 13,527	0.191 7,222	0.162 6,112	0.289 10,908
2020s – vole contact zone	0.883 1,031,604	0.230 236,889	0.201 207,674	0.118 122,100	0.451 464,942
2050s – meadow vole	1.041 2,243,384	0.156 349,872	0.159 356,280	0.096 215,458	0.589 1,321,773
2050s – total singing vole	0.784 1,033,987	0.239 247,426	0.154 159,677	0.106 109,846	0.500 517,038
2050s – only singing vole	0.003 2,886	0.041 118	0.533 1,539	0.328 947	0.097 281
2050s – vole contact zone	0.882 1,031,101	0.240 247,308	0.153 158,138	0.106 108,898	0.501 516,757
2080s – meadow vole	1.043 2,248,327	0.156 350,005	0.159 357,612	0.096 216,820	0.589 1,323,890
2080s – total singing vole	0.914 1,205,593	0.201 242,468	0.166 200,126	0.069 83,694	0.563 679,305
2080s – only singing vole	0.001 873	0.000 0	0.322 281.2	0.559 488.4	0.119 104
2080s – vole contact zone	1.031 1,204,720	0.201 242,468	0.166 199,844	0.069 83,206	0.564 679,202

2080s – tundra hotspots (overlap of barren-ground shrews and singing voles)	N/A 202,967	0.453 92,012	0.166 33,744	0.151 30,740	0.229 46,472
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Top numbers represent proportions and bottom numbers represent areas (km²) from SDM maps. LGM = Last Glacial Maximum (21 ka); LIG = Last Interglacial (130 ka); Present predictions are based on a climate envelope from 1950-2009; 2020s are based on a climate projection from 2010-2039; 2050s are based on a climate projection from 2040-2069; 2080s are based on a climate projection from 2070-2099. Areas defined as “total barren-ground shrew” or “total singing vole” represent all predicted occurrence of barren-ground shrew or singing vole respectively including areas predicted suitable for both shrew and both vole species; “only barren-ground shrew” or “only singing vole” represents predicted areas for barren-ground shrew or singing vole respectively but not areas predicted suitable for both shrew or both vole species. In columns **b**, **c**, **d**, **e**, the sum of proportions = 1, and the sum of areas = total area from column **a**.

a Total area for each species from the present SDM: masked shrew = 2,140,184 km², barren-ground shrew = 551,522 km², shrew contact zone = 396,877 km²; meadow vole = 2,154,614 km², singing vole = 1,319,286 km², vole contact zone = 1,168,845 km².

Proportions in this column represent predicted coverage during each projected timeframe in relation to present SDM coverage for each category.

b Total area of Bureau of Land Management (BLM) lands in Alaska = 364,986 km².

Values represent the proportion of areas from column **a** that are coincident with BLM lands (and not the proportion of BLM lands coincident with species occurrence; latter values may be easily calculated from the data presented).

c Total area of U. S. Fish and Wildlife Service (USFWS) lands in Alaska = 346,887 km².

Values represent the proportion of areas from column “**a**” that are coincident with USFW lands (and not the proportion of USFWS lands coincident with species occurrence; latter values may be easily calculated from the data presented).

d Total area of National Park Service (NPS) lands in Alaska = 267,957. Values represent the proportion of areas from column “**a**” that are coincident with NPS lands (and not the proportion of NPS lands coincident with species occurrence; latter values may be easily calculated from the data presented).

e “Other” areas include all land use categories in Canada as well as non-Federal lands in Alaska. Values represent the proportion of areas from column “**a**” that are coincident with “Other” areas (and not the proportion of “Other” areas coincident with species occurrence).

Supplementary Table 2 | Bioclimatic variables used for SDM development.

Species	(a) Mean Test AUC	(b) Bioclimatic Variables Used	(c) Most Important Variables	(d) Fossil Presence- based Threshold	(e) Predicted Bioclimatic Ranges of Most Important Variables
<i>Sorex ugyunak</i>	0.828	Bio1, Bio2, Bio3, Bio4, Bio5, Bio8, Bio9, Bio12, Bio15	Bio3, Bio12	0.300*	< 22% (Isothermality)
<i>Sorex cinereus</i>	0.751	Bio1, Bio2, Bio3, Bio4, Bio5, Bio8, Bio9, Bio12, Bio15, Bio18	Bio9, Bio5	0.072	-22 – 22 °C (Mean Temperature of Driest Quarter)
<i>Microtus miurus</i>	0.667	Bio1, Bio2, Bio3, Bio4, Bio5, Bio8, Bio12, Bio15	Bio15, Bio12, Bio5	0.325	> 40 (Precipitation Seasonality – C.V)
<i>Microtus pennsylvanicus</i>	0.723	Bio1, Bio2, Bio3, Bio4, Bio5, Bio8, Bio12, Bio15	Bio3, Bio1, Bio5	0.088	14 – 54% (Isothermality)
<i>Microtus oeconomus</i>	0.876	Bio1, Bio2, Bio3, Bio4, Bio5, Bio8, Bio12, Bio15	Bio5, Bio3	0.292	10 – 24 °C (Maximum Temperature of Warmest Month)

a Mean Area Under the Curve values for the receiver operating characteristic (ROC) curve for each species.

b Uncorrelated variables used for SDM development, by species, obtained from the Bioclim website (www.worldclim.org).

c Statistically most important variables for each species as measured by the increase in training gain in Maxent.

d Fossil-based threshold values calculated in Maxent. *No fossils were available for this species and threshold value was estimated based on a threshold of equal sensitivity and specificity.

e Modeled bioclimatic range of most important variable for each species (from **c**), using the fossil-based threshold value (from **d**)

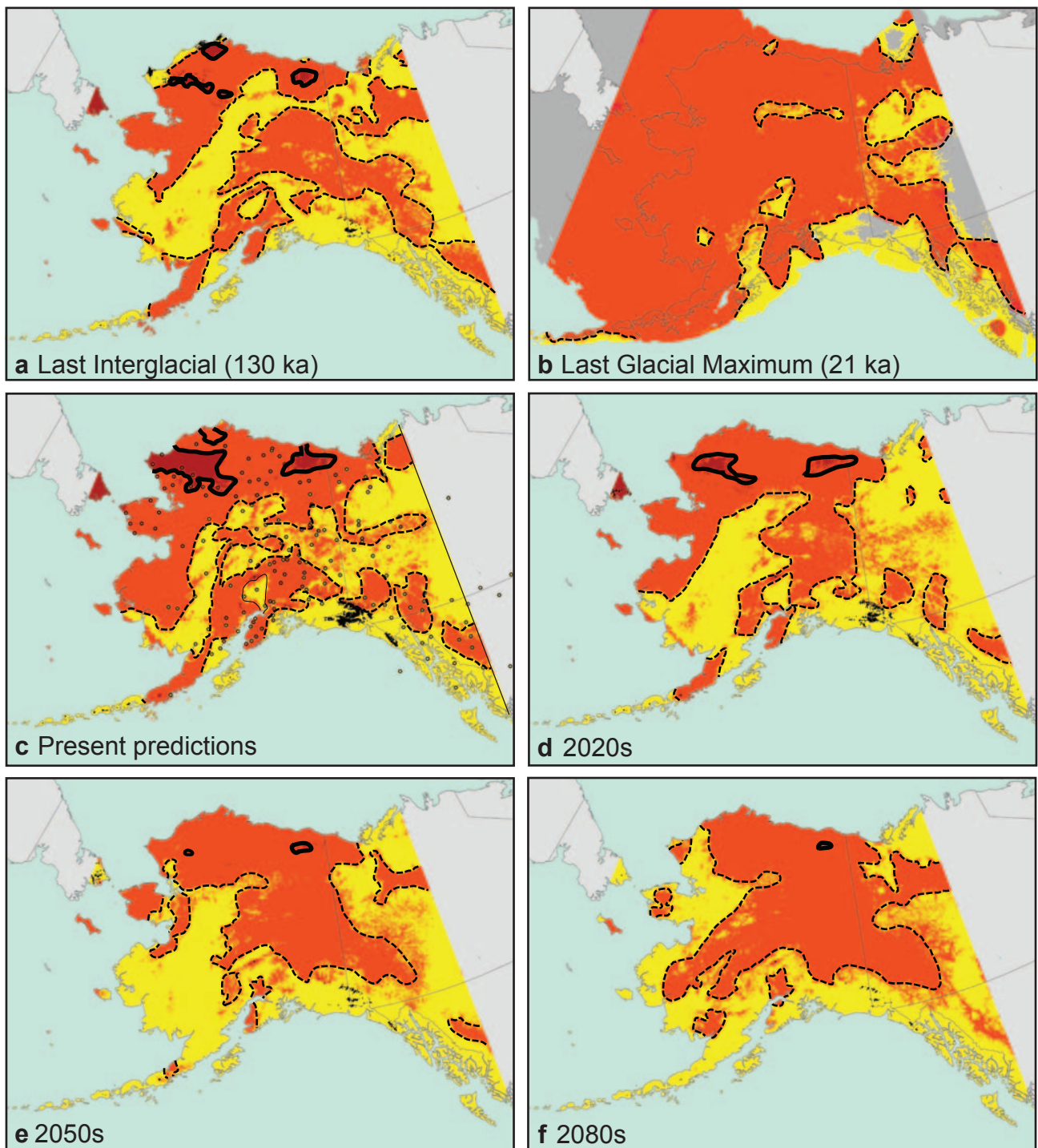
Supplementary Figure 1 | Additional species distribution models. The study area depicting modeled potential distributions for singing vole (red), meadow vole (yellow), and both species (orange) at different time frames from past to future: **a**, Last Interglacial projection to 130 thousand years ago. **b**, Last Glacial Maximum projection to 21 thousand years ago. **c**, Present predictions using a climate envelope from 1950-2000, including locality records for each species used to create SDMs. **d-f**, Future predictions using climate envelopes for years 2010-2039, 2040-2069 and 2070-2099 respectively. Dashed lines indicate extent of contact between the two study species and broadest extent of the tundra-associated singing vole predictions within the study area. Solid lines indicate areas where only the tundra-associated species is predicted through time (i.e. red areas).

Supplementary Figure 2 | Additional species distribution models (continued). The study area depicting modeled potential distributions for root vole (brown) at different time frames from past to future: **a**, Last Interglacial projection to 130 thousand years ago. **b**, Last Glacial Maximum projection to 21 thousand years ago. **c**, Present predictions using a climate envelope from 1950-2000, including locality records for each species used to create SDMs. **d-f**, Future predictions using climate envelopes for years 2010-2039, 2040-2069 and 2070-2099 respectively.

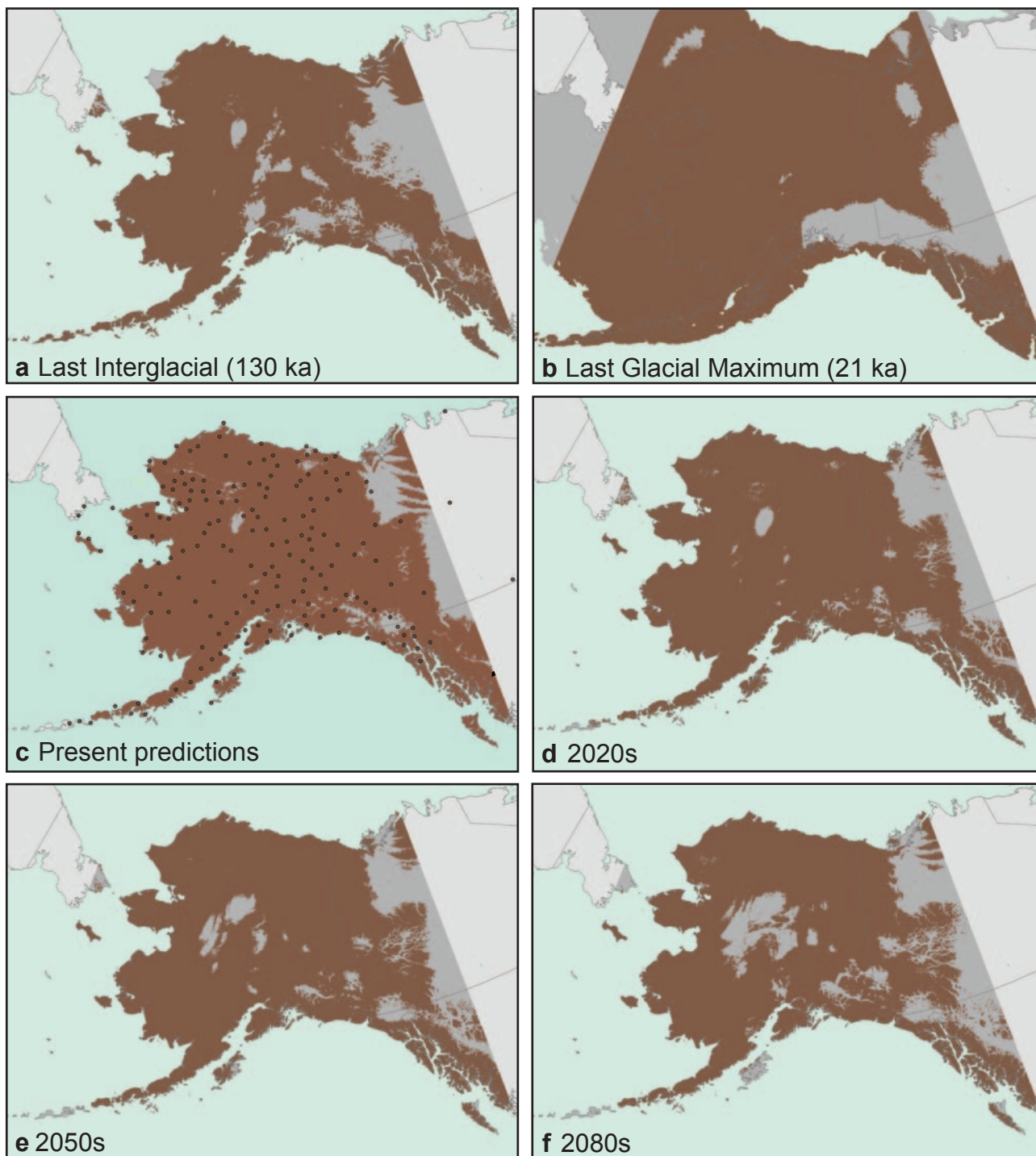
Supplementary Figure 3 | Past distributions using fossils. Fossil localities (indicated by dots) dated to the Last Interglacial period (~130 ka) as incorporated into expanded

species distribution models (SDMs) for this timeframe. **a**, SDMs for masked shrew (green) and meadow vole (yellow) through North America. **b**, SDMs for singing vole (red) and root vole (brown) through the delimited study area and Eurasia. Fossil locality records and literature sources are supplied in Supplementary Appendix 2.

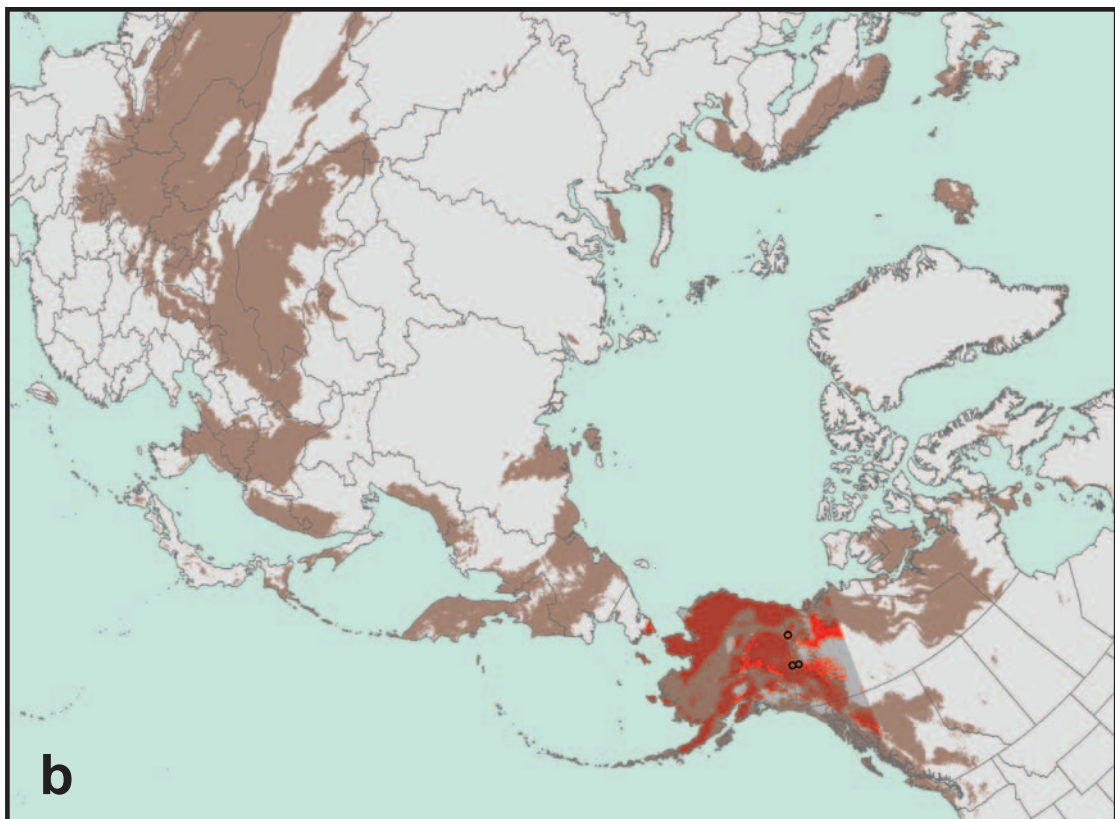
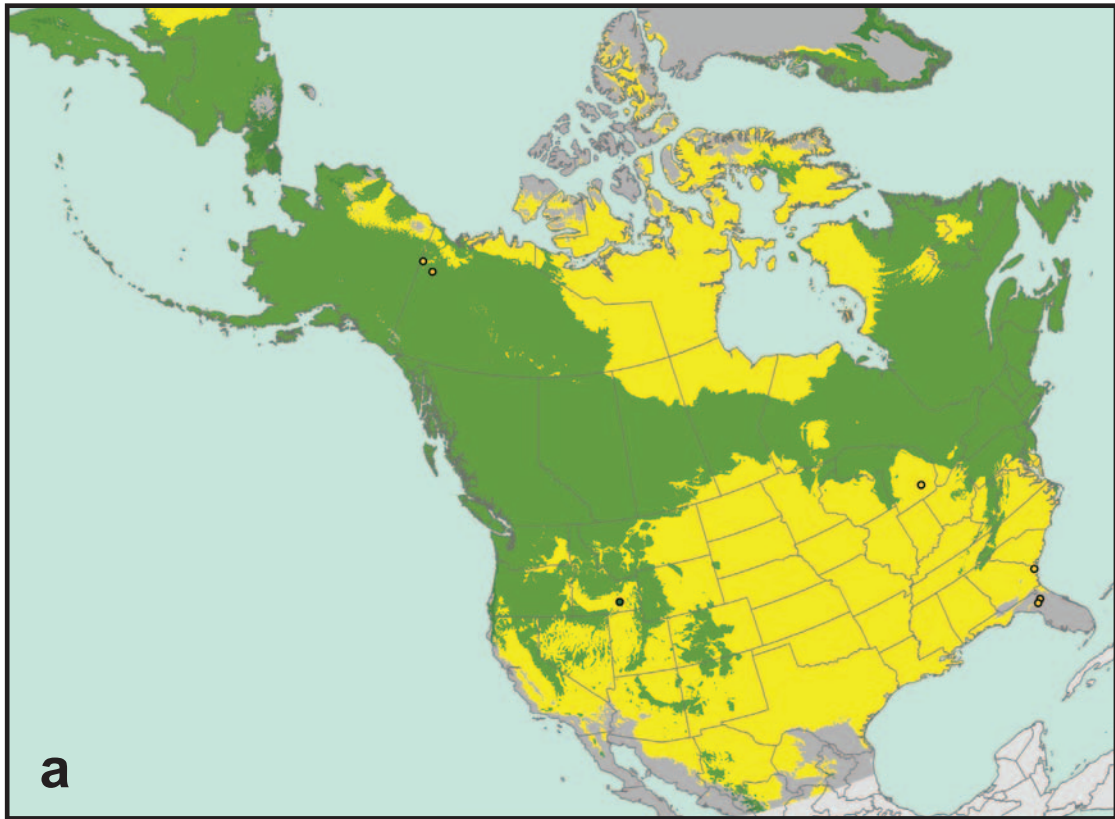
Supplementary Fig. 1



Supplementary Fig. 2



Supplementary Fig. 3



1 **Supplementary Appendix 1 | Sample locality and sequence information.** Specimen records in bold font were used to construct
2 species distribution models. Institutional museum mammal collections include University of Alaska Fairbanks, Museum of the North
3 (UAM) and University of New Mexico, Museum of Southwestern Biology (MSB).

Species	GenBank	Catalog	Tissue	State/Province	Locality	Latitude	Longitude
<i>Sorex cinereus</i>	AY014942	UAM:Mamm:23047	N/A	Alaska	Chandalar Shelf	68.067	-149.583
<i>Sorex cinereus</i>	AY014943	UAM:Mamm:33127	N/A	Alaska	Grayling Creek Shelter	66.129	-165.129
<i>Sorex cinereus</i>	AY014945	UAM:Mamm:76416	N/A	Alaska	Grayling Creek Shelter	66.129	-165.129
<i>Sorex cinereus</i>	AY014946	UAM:Mamm:89373	N/A	Alaska	Suprise Lake	56.935	-158.108
<i>Sorex cinereus</i>	AY014947	UAM:Mamm:23765	N/A	Alaska	Union Bay	55.750	-132.183
<i>Sorex cinereus</i>	AY014949	UAM:Mamm:24030	N/A	Alaska	NW of Willard Inlet	54.817	-130.650
<i>Sorex cinereus</i>	AY014950	UAM:Mamm:23660	N/A	Alaska	Haines	59.150	-135.350
<i>Sorex cinereus</i>	AY014951	UAM:Mamm:47276	N/A	Alaska	Mouse Lake	66.320	-151.791
<i>Sorex cinereus</i>	JN889414	MSB:Mamm:145583	NK125208	Yukon Territory	Rock River	66.886	-136.338
<i>Sorex cinereus</i>	JN889415	MSB:Mamm:145584	NK125209	Yukon Territory	Rock River	66.949	-136.235
<i>Sorex cinereus</i>	JN889416	MSB:Mamm:145673	NK125190	Yukon Territory	Rock River	66.949	-136.235
<i>Sorex cinereus</i>	JN889417	MSB:Mamm:145675	NK125192	Yukon Territory	Rock River	66.949	-136.235
<i>Sorex cinereus</i>	JN889425	MSB:Mamm:155813	NK156820	British Columbia	Glenora	57.820	-131.398
<i>Sorex cinereus</i>	JN889426	MSB:Mamm:155869	NK156840	British Columbia	Glenora	57.837	-131.390
<i>Sorex cinereus</i>	JN889427	MSB:Mamm:155870	NK156841	British Columbia	Glenora	57.837	-131.390
<i>Sorex cinereus</i>	JN889485	UAM:Mamm:22986	N/A	Alaska	Trout Lake	56.350	-132.333
<i>Sorex cinereus</i>	JN889486	UAM:Mamm:33126	N/A	Alaska	Grayling Creek Shelter	66.129	-165.129
<i>Sorex cinereus</i>	JN889487	UAM:Mamm:35396	N/A	British Columbia	Nass River Valley	55.332	-128.965

<i>Sorex cinereus</i>	JN889488	UAM:Mamm:35397	N/A	British Columbia	Nass River Valley	55.332	-128.965
<i>Sorex cinereus</i>	JN889490	UAM:Mamm:52330	N/A	British Columbia	Nass River Valley	55.332	-128.965
<i>Sorex cinereus</i>	JN889491	UAM:Mamm:52331	N/A	British Columbia	Nass River Valley	55.332	-128.965
<i>Sorex cinereus</i>	JN889492	UAM:Mamm:55636	N/A	Alaska	Serpentine Hot Springs	65.853	-164.696
<i>Sorex cinereus</i>	JN889493	UAM:Mamm:55856	N/A	Alaska	Rabbit Creek	67.516	-163.586
<i>Sorex cinereus</i>	JN889494	UAM:Mamm:55945	N/A	Alaska	Rabbit Creek	67.515	-163.583
<i>Sorex cinereus</i>	JN889495	UAM:Mamm:56469	N/A	Alaska	Aniralik Lake	68.210	-159.831
<i>Sorex cinereus</i>	JN889496	UAM:Mamm:75251	N/A	Alaska	Fox River and Lil Creek	64.779	-163.794
<i>Sorex cinereus</i>	JN889497	UAM:Mamm:76984	N/A	Alaska	Fox River and Lil Creek	64.779	-163.794
<i>Sorex cinereus</i>	JN889499	UAM:Mamm:79394	N/A	Alaska	Walker Lake	67.096	-154.267
<i>Sorex cinereus</i>	JN889500	UAM:Mamm:79575	N/A	Alaska	Takahula Lake	67.346	-153.660
<i>Sorex cinereus</i>	JN889501	UAM:Mamm:81776	N/A	Alaska	Takahula Lake	67.350	-153.645
<i>Sorex cinereus</i>	JN889502	UAM:Mamm:82015	N/A	Alaska	Lake Isiak	67.719	-156.138
<i>Sorex cinereus</i>	JN889504	UAM:Mamm:93330	N/A	Alaska	Waring Mountains	67.014	-158.497
<i>Sorex cinereus</i>	JN889505	UAM:Mamm:93333	N/A	Alaska	Baird Mountains	67.486	-158.230
<i>Sorex cinereus</i>	JN889506	UAM:Mamm:93336	N/A	Alaska	Baird Mountains	67.484	-158.244
<i>Sorex cinereus</i>	JN889507	UAM:Mamm:93388	N/A	Alaska	Baird Mountains	67.486	-158.230
<i>Sorex cinereus</i>	JN889508	UAM:Mamm:93412	N/A	Alaska	Waring Mountains	67.019	-158.490
<i>Sorex cinereus</i>	JN889509	UAM:Mamm:93438	N/A	Alaska	Baird Mountains	67.602	-159.790
<i>Sorex cinereus</i>	JN889510	UAM:Mamm:93456	N/A	Alaska	Waring Mountains	67.013	-158.499
<i>Sorex cinereus</i>	JN889511	UAM:Mamm:93458	N/A	Alaska	Baird Mountains	67.482	-158.247
<i>Sorex cinereus</i>	JN889512	UAM:Mamm:93468	N/A	Alaska	Baird Mountains	67.484	-158.244
<i>Sorex cinereus</i>	JN889513	UAM:Mamm:93478	N/A	Alaska	Waring Mountains	67.014	-158.497
<i>Sorex cinereus</i>	JN889514	UAM:Mamm:94544	N/A	Alaska	Baird Mountains	67.605	-159.798

<i>Sorex cinereus</i>	JN889593	MSB:Mamm:143101	NK123278	Alaska	Finger Mountain	66.350	-150.460
<i>Sorex cinereus</i>	JN889594	MSB:Mamm:145344	NK125271	Yukon Territory	Rock River	66.914	-136.351
<i>Sorex cinereus</i>	JN889595	MSB:Mamm:145610	NK125217	Yukon Territory	Rock River	66.920	-136.340
<i>Sorex cinereus</i>	JN889604	UAM:Mamm:20754	N/A	Alaska	Earl West Marsh	56.267	-132.133
<i>Sorex cinereus</i>	JN889664	MSB:Mamm:155663	NK156790	British Columbia	Glenora	57.837	-131.390
<i>Sorex cinereus</i>	JN889696	UAM:Mamm:34511	N/A	Alaska	Anita Bay	56.183	-132.450
<i>Sorex cinereus</i>	JN889697	UAM:Mamm:73775	N/A	Alaska	Port Frederick	57.950	-135.633
<i>Sorex cinereus</i>	JQ743213	MSB:Mamm:223100	NK196620	Alaska	Kuzitrin Lake	65.378	-163.228
<i>Sorex cinereus</i>	JQ743214	MSB:Mamm:223080	NK196636	Alaska	Kuzitrin Lake	65.378	-163.228
<i>Sorex cinereus</i>	JQ743215	MSB:Mamm:223043	NK196638	Alaska	Kuzitrin Lake	65.378	-163.228
<i>Sorex cinereus</i>	JQ778853	UAM:Mamm:93455	N/A	Alaska	Baird Mountains	67.602	-159.790
<i>Sorex cinereus</i>	JQ778854	MSB:Mamm:142994	NK123078	Alaska	10mi N. Minto	65.280	-149.290
<i>Sorex cinereus</i>	JQ778855	MSB:Mamm:144175	NK124635	Yukon Territory	Dawson City	64.084	-139.442
<i>Sorex cinereus</i>	JQ778856	MSB:Mamm:144176	NK124636	Yukon Territory	Dawson City	64.084	-139.442
<i>Sorex cinereus</i>	JQ778857	MSB:Mamm:144054	NK124658	Yukon Territory	33 mi S. Pelly Crossing	62.360	-136.436
<i>Sorex cinereus</i>	JQ778858	MSB:Mamm:144011	NK124682	Yukon Territory	32 mi S. Pelly Crossing	62.360	-136.436
<i>Sorex cinereus</i>	JQ778859	MSB:Mamm:144392	NK124836	Yukon Territory	Lake Laberge	60.059	-135.233
<i>Sorex cinereus</i>	JQ778860	MSB:Mamm:144434	NK124878	Yukon Territory	Lake Laberge	60.059	-135.233
<i>Sorex cinereus</i>	JQ778861	MSB:Mamm:144474	NK124920	Yukon Territory	7 mi. S. Keno	63.841	-135.461
<i>Sorex cinereus</i>	JQ778862	MSB:Mamm:145434	NK125340	Alaska	85.5 mi W Paxson	63.189	-147.597
<i>Sorex cinereus</i>	JQ778863	MSB:Mamm:145435	NK125341	Alaska	85.5 mi W Paxson	63.189	-147.597
<i>Sorex cinereus</i>	JQ778864	MSB:Mamm:145711	NK125500	Alaska	Peters Creek	62.536	-150.820
<i>Sorex cinereus</i>	JQ778865	MSB:Mamm:149429	NK137143	Alaska	Mendenhall Wetlands	58.362	-134.605
<i>Sorex cinereus</i>	JQ778866	MSB:Mamm:149430	NK137145	Alaska	Mendenhall Wetlands	58.362	-134.605

<i>Sorex cinereus</i>	JQ778867	MSB:Mamm:223764	NK196388	Alaska	Lake Isiak	67.719	-156.141
<i>Sorex cinereus</i>	JQ778868	MSB:Mamm:223679	NK196475	Alaska	Aniralik Lake	68.205	-159.861
<i>Sorex cinereus</i>	JQ778869	MSB:Mamm:221870	NK196500	Alaska	Aniralik Lake	68.205	-159.861
<i>Sorex cinereus</i>	JQ778870	MSB:Mamm:221869	NK196509	Alaska	E. shore of Imik Lagoon	67.490	-163.896
<i>Sorex cinereus</i>	JQ778871	MSB:Mamm:221866	NK196511	Alaska	E. shore of Imik Lagoon	67.490	-163.896
<i>Sorex cinereus</i>	JQ778872	MSB:Mamm:248416	NK213804	Alaska	Unimak Island	54.854	-163.415
<i>Sorex cinereus</i>	JQ778873	MSB:Mamm:248417	NK213805	Alaska	Unimak Island	54.854	-163.415
<i>Sorex cinereus</i>	JQ778874	MSB:Mamm:248420	NK213806	Alaska	Unimak Island	54.854	-163.415
<i>Sorex cinereus</i>	JQ778875	MSB:Mamm:248445	NK213807	Alaska	Unimak Island	54.854	-163.415
<i>Sorex cinereus</i>	JQ778876	MSB:Mamm:248418	NK213808	Alaska	Unimak Island	54.854	-163.415
<i>Sorex cinereus</i>	JQ778877	MSB:Mamm:248405	NK213813	Alaska	Unimak Island	54.854	-163.415
<i>Sorex cinereus</i>	JQ778878	MSB:Mamm:248392	NK213814	Alaska	Unimak Island	54.854	-163.415
<i>Sorex cinereus</i>	JQ778879	MSB:Mamm:248393	NK213815	Alaska	Unimak Island	54.854	-163.415
<i>Sorex cinereus</i>	JQ778880	MSB:Mamm:248400	NK213855	Alaska	Unimak Island	54.854	-163.415
<i>Sorex cinereus</i>	JQ778881	MSB:Mamm:248408	NK213860	Alaska	Unimak Island	54.854	-163.415
<i>Sorex cinereus</i>	JQ778882	MSB:Mamm:248406	NK213861	Alaska	Unimak Island	54.854	-163.415
<i>Sorex cinereus</i>	JQ778883	MSB:Mamm:248409	NK213862	Alaska	Unimak Island	54.854	-163.415
<i>Sorex cinereus</i>	JQ778884	MSB:Mamm:248395	NK213865	Alaska	Unimak Island	54.854	-163.415
<i>Sorex cinereus</i>	JQ778885	MSB:Mamm:248397	NK213867	Alaska	Unimak Island	54.854	-163.415
<i>Sorex cinereus</i>	JQ778886	MSB:Mamm:248403	NK213868	Alaska	Unimak Island	54.854	-163.415
<i>Sorex cinereus</i>	JQ778887	MSB:Mamm:248388	NK213869	Alaska	Unimak Island	54.854	-163.415
<i>Sorex cinereus</i>	JQ778888	MSB:Mamm:248391	NK213872	Alaska	Unimak Island	54.854	-163.415
<i>Sorex cinereus</i>	JQ778889	MSB:Mamm:248398	NK213873	Alaska	Unimak Island	54.854	-163.415
<i>Sorex cinereus</i>	JQ778890	MSB:Mamm:248411	NK213874	Alaska	Unimak Island	54.854	-163.415

<i>Sorex cinereus</i>	JQ778891	MSB:Mamm:248412	NK213875	Alaska	Unimak Island	54.854	-163.415
<i>Sorex cinereus</i>	JQ778892	MSB:Mamm:248413	NK213876	Alaska	Unimak Island	54.854	-163.415
<i>Sorex cinereus</i>	JQ778893	MSB:Mamm:247483	NK213907	Alaska	Nogabahara Sand Dunes	65.670	-157.530
<i>Sorex cinereus</i>	JQ778894	MSB:Mamm:247484	NK213908	Alaska	Nogabahara Sand Dunes	65.670	-157.530
<i>Sorex cinereus</i>	JQ778895	MSB:Mamm:247495	NK213939	Alaska	Needle Lake	65.639	-157.144
<i>Sorex cinereus</i>	JQ778896	MSB:Mamm:247476	NK213940	Alaska	Needle Lake	65.639	-157.144
<i>Sorex cinereus</i>	JQ778897	MSB:Mamm:247496	NK213942	Alaska	Needle Lake	65.639	-157.144
<i>Sorex cinereus</i>	JQ778898	MSB:Mamm:247497	NK213943	Alaska	Needle Lake	65.639	-157.144
<i>Sorex cinereus</i>	JQ778899	MSB:Mamm:247499	NK213947	Alaska	Needle Lake	65.639	-157.144
<i>Sorex cinereus</i>	JQ778900	MSB:Mamm:247500	NK213950	Alaska	Needle Lake	65.639	-157.144
<i>Sorex cinereus</i>	JQ778901	MSB:Mamm:247510	NK213952	Alaska	Needle Lake	65.639	-157.144
<i>Sorex cinereus</i>	JQ778902	MSB:Mamm:247511	NK213953	Alaska	Needle Lake	65.639	-157.144
<i>Sorex cinereus</i>	JQ778903	MSB:Mamm:247513	NK213955	Alaska	Needle Lake	65.639	-157.144
<i>Sorex cinereus</i>	JQ778904	MSB:Mamm:247502	NK213957	Alaska	Needle Lake	65.639	-157.144
<i>Sorex cinereus</i>	JQ778905	MSB:Mamm:247503	NK213958	Alaska	Needle Lake	65.639	-157.144
<i>Sorex cinereus</i>	JQ778906	MSB:Mamm:247516	NK213960	Alaska	Needle Lake	65.639	-157.144
<i>Sorex cinereus</i>	JQ778907	MSB:Mamm:247399	NK213967	Alaska	Caribou Bluff	65.491	-157.586
<i>Sorex cinereus</i>	JQ778908	MSB:Mamm:247490	NK213968	Alaska	Caribou Bluff	65.491	-157.586
<i>Sorex cinereus</i>	JQ778909	MSB:Mamm:247505	NK213982	Alaska	Nogabahara Sand Dunes	65.651	-157.482
<i>Sorex cinereus</i>	JQ778910	MSB:Mamm:247480	NK213983	Alaska	Nogabahara Sand Dunes	65.651	-157.482
<i>Sorex cinereus</i>	JQ778911	MSB:Mamm:247393	NK213984	Alaska	Nogabahara Sand Dunes	65.651	-157.482
<i>Sorex cinereus</i>	JQ778912	MSB:Mamm:247395	NK213986	Alaska	Nogabahara Sand Dunes	65.651	-157.482
<i>Sorex cinereus</i>	JQ778913	MSB:Mamm:247482	NK213987	Alaska	Nogabahara Sand Dunes	65.651	-157.482
<i>Sorex cinereus</i>	JQ778914	MSB:Mamm:247397	NK213989	Alaska	Nogabahara Sand Dunes	65.651	-157.482

<i>Sorex cinereus</i>	N/A	DGR:Mamm:10001008		Alaska	Portage Lake	58.676	-155.420
<i>Sorex cinereus</i>	N/A	UAM:Mamm:45881	N/A	Alaska	Goodnews River	59.301	-161.114
<i>Sorex cinereus</i>	N/A	UAM:Mamm:20295	N/A	Alaska	Shepherd Creek	60.300	-144.233
<i>Sorex cinereus</i>	N/A	MSB:Mamm:193251	NK152301	Alaska	Lower Trail Lake	60.442	-149.372
<i>Sorex cinereus</i>	N/A	UAM:Mamm:52740	N/A	Yukon Territory	Alaska Highway	60.838	-137.329
<i>Sorex cinereus</i>	N/A	UAM:Mamm:72468	N/A	Alaska	Sparrevohn Air Base	61.087	-155.581
<i>Sorex cinereus</i>	N/A	MSB:Mamm:90109	N/A	Alaska	Fort Richardson	61.254	-149.688
<i>Sorex cinereus</i>	N/A	MSB:Mamm:193337	NK152203	Alaska	Tiegel River	61.348	-145.304
<i>Sorex cinereus</i>	N/A	UAM:Mamm:64668	N/A	Alaska	Chokosna Lake	61.457	-143.796
<i>Sorex cinereus</i>	N/A	UAM:Mamm:73003	N/A	Alaska	Red Devil Lodge	61.706	-157.192
<i>Sorex cinereus</i>	N/A	MSB:Mamm:193531	NK152261	Alaska	Matanuska River	61.768	-148.530
<i>Sorex cinereus</i>	N/A	N/A	N/A	Alaska	Glennallen	62.110	-145.640
<i>Sorex cinereus</i>	N/A	UAM:Mamm:58893	N/A	Yukon Territory	Snag Junction	62.235	-140.682
<i>Sorex cinereus</i>	N/A	UAM:Mamm:72365	N/A	Alaska	Farewell Lake	62.564	-153.663
<i>Sorex cinereus</i>	N/A	UAM:Mamm:72625	N/A	Alaska	mouth of Takotna River	62.964	-155.604
<i>Sorex cinereus</i>	N/A	MSB:Mamm:144094	NK124556	Alaska	Dot lake	63.678	-144.156
<i>Sorex cinereus</i>	N/A	UAM:Mamm:78012	N/A	Alaska	Kiki Creek	63.726	-149.055
<i>Sorex cinereus</i>	N/A	UAM:Mamm:65348	N/A	Alaska	mouth of Stampede Creek	63.753	-150.336
<i>Sorex cinereus</i>	N/A	UAM:Mamm:13573	N/A	Alaska	Delta Junction	64.017	-145.650
<i>Sorex cinereus</i>	N/A	MSB:Mamm:82455	NK21996	Alaska	Fairbanks	64.944	-147.988
<i>Sorex cinereus</i>	N/A	UAM:Mamm:59795	N/A	Alaska	mouth of Logan Creek	65.271	-141.990
<i>Sorex cinereus</i>	N/A	UAM:Mamm:57383	N/A	Alaska	Slavens Cabin, Coal Creek	65.323	-143.119
<i>Sorex ugyunak</i>	AY014927	UAM:Mamm:36761	N/A	Alaska	Barrow	71.350	-156.600
<i>Sorex ugyunak</i>	AY014928	UAM:Mamm:33128	N/A	Alaska	Grayling Creek Shelter	66.129	-165.129

<i>Sorex ugyunak</i>	AY014929	UAM:Mamm:34141	N/A	Alaska	Lake Galbraith	68.493	-149.493
<i>Sorex ugyunak</i>	AY014930	UAM:Mamm:33139	N/A	Alaska	Grayling Creek Shelter	66.129	-165.129
<i>Sorex ugyunak</i>	EU088307	UWBM:Mamm:39815	N/A	Alaska	Barrow	71.350	-156.600
<i>Sorex ugyunak</i>	JN889413	MSB:Mamm:143121	NK125515	Alaska	Lake Galbraith	68.450	-149.470
<i>Sorex ugyunak</i>	JN889489	UAM:Mamm:46994	N/A	Alaska	Kougarok Airfield	65.425	-164.643
<i>Sorex ugyunak</i>	JN889574	MSB:Mamm:143102	NK123279	Alaska	Finger Mountain	66.350	-150.460
<i>Sorex ugyunak</i>	JN889575	UAM:Mamm:55850	N/A	Alaska	Rabbit Creek	67.520	-163.582
<i>Sorex ugyunak</i>	JN889576	UAM:Mamm:56121	N/A	Alaska	Situkuyok River	67.205	-163.162
<i>Sorex ugyunak</i>	JN889577	UAM:Mamm:56384	N/A	Alaska	Kaluich Creek Upland	67.664	-158.191
<i>Sorex ugyunak</i>	JN889578	UAM:Mamm:56475	N/A	Alaska	Aniralik Lake	68.210	-159.831
<i>Sorex ugyunak</i>	JN889579	UAM:Mamm:78479	N/A	Alaska	Fortress Mountain	68.581	-152.948
<i>Sorex ugyunak</i>	JN889580	UAM:Mamm:82014	N/A	Alaska	Lake Isiak	67.719	-156.138
<i>Sorex ugyunak</i>	JN889581	UAM:Mamm:82017	N/A	Alaska	Lake Isiak	67.728	-156.164
<i>Sorex ugyunak</i>	JN889582	UAM:Mamm:82018	N/A	Alaska	Lake Isiak	67.727	-156.159
<i>Sorex ugyunak</i>	JN889583	UAM:Mamm:82020	N/A	Alaska	Lake Isiak	67.719	-156.138
<i>Sorex ugyunak</i>	JN889584	UAM:Mamm:82073	N/A	Alaska	Lake Tulilik	68.117	-154.120
<i>Sorex ugyunak</i>	JN889585	UAM:Mamm:82135	N/A	Alaska	Lake Tulilik	68.117	-154.120
<i>Sorex ugyunak</i>	JN889586	UAM:Mamm:82243	N/A	Alaska	Lake Tulilik	68.117	-154.120
<i>Sorex ugyunak</i>	JN889587	UAM:Mamm:82247	N/A	Alaska	Lake Tulilik	68.117	-154.120
<i>Sorex ugyunak</i>	JQ743216	MSB:Mamm:222052	NK196565	Alaska	Kuzitrin Lake	65.378	-163.228
<i>Sorex ugyunak</i>	JQ743217	MSB:Mamm:223006	NK196606	Alaska	Kuzitrin Lake	65.378	-163.228
<i>Sorex ugyunak</i>	JQ743218	MSB:Mamm:223101	NK196622	Alaska	Kuzitrin Lake	65.378	-163.228
<i>Sorex ugyunak</i>	JQ743219	MSB:Mamm:223108	NK196623	Alaska	Kuzitrin Lake	65.378	-163.228
<i>Sorex ugyunak</i>	JQ743220	MSB:Mamm:223083	NK196624	Alaska	Kuzitrin Lake	65.378	-163.228

<i>Sorex ugyunak</i>	JQ743221	MSB:Mamm:223119	NK196635	Alaska	Kuzitrin Lake	65.378	-163.228
<i>Sorex ugyunak</i>	JQ778915	MSB:Mamm:247458	NK158863	Alaska	Teshekpuk Lake	70.722	-153.837
<i>Sorex ugyunak</i>	JQ778916	MSB:Mamm:247373	NK158865	Alaska	Teshekpuk Lake	70.722	-153.837
<i>Sorex ugyunak</i>	JQ778917	MSB:Mamm:247406	NK158866	Alaska	Teshekpuk Lake	70.722	-153.837
<i>Sorex ugyunak</i>	JQ778918	MSB:Mamm:247459	NK158867	Alaska	Teshekpuk Lake	70.722	-153.837
<i>Sorex ugyunak</i>	JQ778919	MSB:Mamm:247437	NK158868	Alaska	Teshekpuk Lake	70.722	-153.837
<i>Sorex ugyunak</i>	JQ778920	MSB:Mamm:247461	NK158962	Alaska	Teshekpuk Lake	70.722	-153.837
<i>Sorex ugyunak</i>	JQ778921	MSB:Mamm:247439	NK158963	Alaska	Teshekpuk Lake	70.722	-153.837
<i>Sorex ugyunak</i>	JQ778922	MSB:Mamm:247462	NK158964	Alaska	Teshekpuk Lake	70.722	-153.837
<i>Sorex ugyunak</i>	JQ778923	MSB:Mamm:247387	NK158967	Alaska	Teshekpuk Lake	70.722	-153.837
<i>Sorex ugyunak</i>	JQ778924	MSB:Mamm:247388	NK158968	Alaska	Teshekpuk Lake	70.722	-153.837
<i>Sorex ugyunak</i>	JQ778925	MSB:Mamm:247465	NK158969	Alaska	Teshekpuk Lake	70.722	-153.837
<i>Sorex ugyunak</i>	JQ778926	MSB:Mamm:247409	NK158976	Alaska	Teshekpuk Lake	70.722	-153.837
<i>Sorex ugyunak</i>	JQ778927	MSB:Mamm:247463	NK158977	Alaska	Teshekpuk Lake	70.722	-153.837
<i>Sorex ugyunak</i>	JQ778928	MSB:Mamm:247464	NK158978	Alaska	Teshekpuk Lake	70.722	-153.837
<i>Sorex ugyunak</i>	JQ778929	MSB:Mamm:247485	NK158979	Alaska	Teshekpuk Lake	70.722	-153.837
<i>Sorex ugyunak</i>	JQ778930	MSB:Mamm:247376	NK158980	Alaska	Teshekpuk Lake	70.722	-153.837
<i>Sorex ugyunak</i>	JQ778931	MSB:Mamm:221836	NK196255	Alaska	Lake Tulilik	68.117	-154.124
<i>Sorex ugyunak</i>	JQ778932	MSB:Mamm:221838	NK196264	Alaska	Lake Tulilik	68.117	-154.124
<i>Sorex ugyunak</i>	JQ778933	MSB:Mamm:221828	NK196283	Alaska	Lake Tulilik	68.117	-154.124
<i>Sorex ugyunak</i>	JQ778934	MSB:Mamm:221795	NK196284	Alaska	Lake Tulilik	68.117	-154.124
<i>Sorex ugyunak</i>	JQ778935	MSB:Mamm:221819	NK196285	Alaska	Lake Tulilik	68.117	-154.124
<i>Sorex ugyunak</i>	JQ778936	MSB:Mamm:223692	NK196322	Alaska	Lake Isiak	67.704	-156.967
<i>Sorex ugyunak</i>	JQ778937	MSB:Mamm:223689	NK196325	Alaska	Lake Isiak	67.704	-156.967

<i>Sorex ugyunak</i>	JQ778938	MSB:Mamm:223691	NK196326	Alaska	Lake Isiak	67.704	-156.967
<i>Sorex ugyunak</i>	JQ778939	MSB:Mamm:223690	NK196329	Alaska	Lake Isiak	67.704	-156.967
<i>Sorex ugyunak</i>	JQ778940	MSB:Mamm:223826	NK196463	Alaska	Aniralik Lake	68.212	-159.869
<i>Sorex ugyunak</i>	JQ778941	MSB:Mamm:223834	NK196464	Alaska	Aniralik Lake	68.213	-159.836
<i>Sorex ugyunak</i>	JQ778942	MSB:Mamm:223739	NK196478	Alaska	Aniralik Lake	68.205	-159.861
<i>Sorex ugyunak</i>	JQ778943	MSB:Mamm:223782	NK196485	Alaska	Aniralik Lake	68.212	-159.869
<i>Sorex ugyunak</i>	JQ778944	MSB:Mamm:223823	NK196488	Alaska	Aniralik Lake	68.212	-159.869
<i>Sorex ugyunak</i>	JQ778945	MSB:Mamm:221872	NK196501	Alaska	Aniralik Lake	68.205	-159.861
<i>Sorex ugyunak</i>	JQ778946	MSB:Mamm:221964	NK196516	Alaska	Imik Lagoon	67.490	-163.896
<i>Sorex ugyunak</i>	JQ778947	MSB:Mamm:221991	NK196536	Alaska	Imik Lagoon	67.490	-163.896
<i>Sorex ugyunak</i>	JQ778948	MSB:Mamm:247421	NK213915	Alaska	Teshekpuk Lake	70.722	-153.837
<i>Sorex ugyunak</i>	JQ778949	MSB:Mamm:247422	NK213916	Alaska	Teshekpuk Lake	70.722	-153.837
<i>Sorex ugyunak</i>	JQ778950	MSB:Mamm:247467	NK213919	Alaska	Teshekpuk Lake	70.722	-153.837
<i>Sorex ugyunak</i>	JQ778951	MSB:Mamm:247433	NK213930	Alaska	Teshekpuk Lake	70.722	-153.837
<i>Sorex ugyunak</i>	JQ778952	MSB:Mamm:247434	NK213931	Alaska	Teshekpuk Lake	70.722	-153.837
<i>Sorex ugyunak</i>	JQ778953	MSB:Mamm:247418	NK213932	Alaska	Teshekpuk Lake	70.722	-153.837
<i>Sorex ugyunak</i>	JQ778954	MSB:Mamm:247435	NK213933	Alaska	Teshekpuk Lake	70.722	-153.837
<i>Sorex ugyunak</i>	JQ778955	MSB:Mamm:247419	NK213934	Alaska	Teshekpuk Lake	70.722	-153.837
<i>Sorex ugyunak</i>	N/A	UAM:Mamm:55565	N/A	Alaska	Kuzitrin Lake	65.389	-163.264
<i>Sorex ugyunak</i>	N/A	N/A	N/A	Northwest Territories	S of Aklavik	67.710	-135.000
<i>Sorex ugyunak</i>	N/A	N/A	N/A	Northwest Territories	SW of Aklavik	68.130	-135.300
<i>Sorex ugyunak</i>	N/A	N/A	N/A	Northwest Territories	Aklavik	68.230	-135.000
<i>Sorex ugyunak</i>	N/A	N/A	N/A	Northwest Territories	N of Aklavik	68.430	-135.010
<i>Sorex ugyunak</i>	N/A	N/A	N/A	Yukon Territory	Head Point	69.260	-138.350

<i>Sorex ugunak</i>	N/A	N/A	N/A	Northwest Territories	N/A	69.700	-129.180
<i>Sorex ugunak</i>	N/A	UAM:Mamm:85499	N/A	Alaska	Canning River Delta	70.095	-145.737
<i>Microtus pennsylvanicus</i>	KC473470	MSB:Mamm:246736	NK122563	Alaska	Idavain Lake	58.765	-155.891
<i>Microtus pennsylvanicus</i>	KC473471	MSB:Mamm:247079	NK122580	Alaska	Idavain Lake	58.765	-155.891
<i>Microtus pennsylvanicus</i>	KC473472	MSB:Mamm:246775	NK122606	Alaska	Portage Lake	58.676	-155.420
<i>Microtus pennsylvanicus</i>	KC473473	MSB:Mamm:143033	NK123146	Alaska	North of Minto	65.280	-149.290
<i>Microtus pennsylvanicus</i>	KC473474	MSB:Mamm:144049	NK124593	Alaska	SW of Eagle	64.753	-141.230
<i>Microtus pennsylvanicus</i>	KC473475	MSB:Mamm:144037	NK124608	Alaska	SW of Eagle	64.753	-141.230
<i>Microtus pennsylvanicus</i>	KC473476	MSB:Mamm:144179	NK124633	Yukon Territory	Dawson City	64.084	-139.442
<i>Microtus pennsylvanicus</i>	KC473477	MSB:Mamm:144083	NK124677	Yukon Territory	S of Pelly Crossing	62.399	-136.555
<i>Microtus pennsylvanicus</i>	KC473478	MSB:Mamm:144084	NK124678	Yukon Territory	S of Pelly Crossing	62.399	-136.555
<i>Microtus pennsylvanicus</i>	KC473479	MSB:Mamm:144161	NK124729	Yukon Territory	Fox Creek	61.100	-135.293
<i>Microtus pennsylvanicus</i>	KC473480	MSB:Mamm:144164	NK124732	Yukon Territory	Fox Creek	61.100	-135.293
<i>Microtus pennsylvanicus</i>	KC473481	MSB:Mamm:144328	NK124870	Yukon Territory	Lake Laberge Campground	60.059	-135.233
<i>Microtus pennsylvanicus</i>	KC473482	MSB:Mamm:144329	NK124871	Yukon Territory	Lake Laberge Campground	60.059	-135.233
<i>Microtus pennsylvanicus</i>	KC473483	MSB:Mamm:144463	NK124907	Yukon Territory	S of Keno	63.841	-135.461
<i>Microtus pennsylvanicus</i>	KC473484	MSB:Mamm:144464	NK124910	Yukon Territory	S of Keno	63.841	-135.461
<i>Microtus pennsylvanicus</i>	KC473485	MSB:Mamm:144497	NK124944	Yukon Territory	Minto Lake	63.696	-136.137
<i>Microtus pennsylvanicus</i>	KC473486	MSB:Mamm:144287	NK124993	Yukon Territory	W of Stewart Crossing	63.543	-137.195
<i>Microtus pennsylvanicus</i>	KC473487	MSB:Mamm:144288	NK124994	Yukon Territory	W of Stewart Crossing	63.543	-137.195
<i>Microtus pennsylvanicus</i>	KC473488	MSB:Mamm:145714	NK125043	Yukon Territory	North Fork of Klondike River	64.026	-138.579
<i>Microtus pennsylvanicus</i>	KC473489	MSB:Mamm:145611	NK125218	Yukon Territory	N of Rock River	66.920	-136.340
<i>Microtus pennsylvanicus</i>	KC473490	MSB:Mamm:145612	NK125219	Yukon Territory	N of Rock River	66.920	-136.340
<i>Microtus pennsylvanicus</i>	KC473491	MSB:Mamm:145401	NK125330	Alaska	85.5 mi W of Paxson	63.189	-147.597

<i>Microtus pennsylvanicus</i>	KC473492	MSB:Mamm:193344	NK152199	Alaska	Tiekel River	61.348	-145.304
<i>Microtus pennsylvanicus</i>	KC473493	MSB:Mamm:195107	NK152399	Alaska	Chilkat River Valley	59.267	-135.600
<i>Microtus pennsylvanicus</i>	KC473494	MSB:Mamm:195108	NK152400	Alaska	Chilkat River Valley	59.267	-135.600
<i>Microtus pennsylvanicus</i>	KC473495	MSB:Mamm:155817	NK156865	British Columbia	Stikine River at Hudson Flats	57.820	-131.398
<i>Microtus pennsylvanicus</i>	KC473496	MSB:Mamm:155818	NK156866	British Columbia	Stikine River at Hudson Flats	57.820	-131.398
<i>Microtus pennsylvanicus</i>	N/A	CAS:Mamm:21087	N/A	Alaska	W of Hollis	55.484	-132.820
<i>Microtus pennsylvanicus</i>	N/A	CAS:Mamm:22484	N/A	British Columbia	Dease River at French Creek	59.583	-129.217
<i>Microtus pennsylvanicus</i>	N/A	CAS:Mamm:8053	N/A	Alaska	Anchorage Bay	56.308	-158.392
<i>Microtus pennsylvanicus</i>	N/A	FMNH:Mamm:7359	N/A	Alberta	Blindman River	52.346	-113.884
<i>Microtus pennsylvanicus</i>	N/A	FMNH:Mamm:7360	N/A	Alberta	Red Deer River	50.967	-110.000
<i>Microtus pennsylvanicus</i>	N/A	KU:Mamm:140355	N/A	Yukon Territory	Coyote Creek	60.910	-132.960
<i>Microtus pennsylvanicus</i>	N/A	KU:Mamm:143270	N/A	Alaska	Dalton Highway	69.820	-148.770
<i>Microtus pennsylvanicus</i>	N/A	KU:Mamm:153755	N/A	Yukon Territory	Burwash Flats campground	61.430	-139.210
<i>Microtus pennsylvanicus</i>	N/A	KU:Mamm:153760	N/A	British Columbia	Dease Lake	58.690	-130.010
<i>Microtus pennsylvanicus</i>	N/A	KU:Mamm:21640	N/A	British Columbia	Beatton River	57.230	-121.450
<i>Microtus pennsylvanicus</i>	N/A	KU:Mamm:21642	N/A	British Columbia	NW of Fort St. John	56.290	-120.970
<i>Microtus pennsylvanicus</i>	N/A	KU:Mamm:21647	N/A	Alberta	NE of Kinuso	55.350	-115.170
<i>Microtus pennsylvanicus</i>	N/A	KU:Mamm:29010	N/A	British Columbia	Trout and Liard rivers	59.390	-126.000
<i>Microtus pennsylvanicus</i>	N/A	KU:Mamm:43068	N/A	British Columbia	Indian Creek	58.170	-122.580
<i>Microtus pennsylvanicus</i>	N/A	KU:Mamm:43072	N/A	Alberta	High Prairie	55.330	-116.880
<i>Microtus pennsylvanicus</i>	N/A	KU:Mamm:43105	N/A	Alberta	N of Morinville	53.860	-113.640
<i>Microtus pennsylvanicus</i>	N/A	KU:Mamm:43121	N/A	Alberta	ESE of Cochrane	51.150	-114.340
<i>Microtus pennsylvanicus</i>	N/A	KU:Mamm:64334	N/A	British Columbia	Kerry Lake	54.690	-122.790
<i>Microtus pennsylvanicus</i>	N/A	LACM:Mamm:23265	N/A	Alaska	Kachemak Bay	59.599	-151.186

<i>Microtus pennsylvanicus</i>	N/A	MSB:Mamm:144057	N/A	Yukon Territory	S of Pelly Crossing	62.360	-136.436
<i>Microtus pennsylvanicus</i>	N/A	MSB:Mamm:144337	N/A	Yukon Territory	LaBiche River	60.124	-124.054
<i>Microtus pennsylvanicus</i>	N/A	MSB:Mamm:144598	N/A	Northwest Territories	4 Way Pass, Yukon border	64.417	-130.783
<i>Microtus pennsylvanicus</i>	N/A	MSB:Mamm:145318	N/A	Yukon Territory	McQuesten River	63.555	-137.412
<i>Microtus pennsylvanicus</i>	N/A	MSB:Mamm:148900	N/A	Alaska	Twin Lakes Cabin	56.781	-132.269
<i>Microtus pennsylvanicus</i>	N/A	MSB:Mamm:155974	N/A	Northwest Territories	Cardinal Lake	67.616	-133.589
<i>Microtus pennsylvanicus</i>	N/A	MSB:Mamm:158220	N/A	British Columbia	S side Stakine Creek	56.040	-129.950
<i>Microtus pennsylvanicus</i>	N/A	MSB:Mamm:221652	N/A	Yukon Territory	Engineer Creek campground	65.549	-138.212
<i>Microtus pennsylvanicus</i>	N/A	MSU:Mamm:434	N/A	Alaska	ESE of Northway	62.868	-141.439
<i>Microtus pennsylvanicus</i>	N/A	MVZ:Mamm:30768	N/A	British Columbia	Sawmill Lake	57.917	-131.183
<i>Microtus pennsylvanicus</i>	N/A	MVZ:Mamm:37579	N/A	Alaska	Savage River	63.750	-149.289
<i>Microtus pennsylvanicus</i>	N/A	MVZ:Mamm:40250	N/A	British Columbia	Indianpoint Lake	53.267	-121.267
<i>Microtus pennsylvanicus</i>	N/A	MVZ:Mamm:45415	N/A	British Columbia	Lake Pennask	50.000	-120.117
<i>Microtus pennsylvanicus</i>	N/A	MVZ:Mamm:53674	N/A	British Columbia	Anahim Lake	52.467	-125.317
<i>Microtus pennsylvanicus</i>	N/A	MVZ:Mamm:54269	N/A	British Columbia	Mt. Robson Post Office	53.033	-119.233
<i>Microtus pennsylvanicus</i>	N/A	MVZ:Mamm:77483	N/A	British Columbia	Monashee Pass	50.100	-118.517
<i>Microtus pennsylvanicus</i>	N/A	PSM:Mamm:4728	N/A	British Columbia	Big Bend Hwy	52.117	-118.433
<i>Microtus pennsylvanicus</i>	N/A	PSM:Mamm:8924	N/A	British Columbia	Lillooet District	51.217	-122.667
<i>Microtus pennsylvanicus</i>	N/A	PSM:Mamm:9918	N/A	Alberta	N of Peers	53.739	-115.992
<i>Microtus pennsylvanicus</i>	N/A	PSM:Mamm:9942	N/A	British Columbia	Ruth Lake	51.833	-121.067
<i>Microtus pennsylvanicus</i>	N/A	UAM:Mamm:13398	N/A	Yukon Territory	Lewes Lake	60.370	-134.830
<i>Microtus pennsylvanicus</i>	N/A	UAM:Mamm:13712	N/A	Alaska	Innoko River	63.083	-156.433
<i>Microtus pennsylvanicus</i>	N/A	UAM:Mamm:14943	N/A	Alaska	Jonesville	61.717	-148.933
<i>Microtus pennsylvanicus</i>	N/A	UAM:Mamm:18573	N/A	Alaska	Tuluksak River	61.000	-159.950

<i>Microtus pennsylvanicus</i>	N/A	UAM:Mamm:2909	N/A	Alaska	not recorded	64.667	-144.250
<i>Microtus pennsylvanicus</i>	N/A	UAM:Mamm:3103	N/A	Alaska	Small Lake	67.367	-143.800
<i>Microtus pennsylvanicus</i>	N/A	UAM:Mamm:33575	N/A	Alaska	SW of Beaver	66.103	-148.108
<i>Microtus pennsylvanicus</i>	N/A	UAM:Mamm:34074	N/A	Alaska	E of Bishop Rock	64.801	-157.227
<i>Microtus pennsylvanicus</i>	N/A	UAM:Mamm:34238	N/A	Alaska	Taku River and Fish Creek	58.533	-133.683
<i>Microtus pennsylvanicus</i>	N/A	UAM:Mamm:3893	N/A	Alaska	Huslia River	66.000	-156.833
<i>Microtus pennsylvanicus</i>	N/A	UAM:Mamm:48624	N/A	Alaska	Hood Bay	57.433	-134.550
<i>Microtus pennsylvanicus</i>	N/A	UAM:Mamm:48625	N/A	British Columbia	Iskut River Valley	57.136	-137.286
<i>Microtus pennsylvanicus</i>	N/A	UAM:Mamm:50660	N/A	Alaska	W of Klukwan	59.428	-136.003
<i>Microtus pennsylvanicus</i>	N/A	UAM:Mamm:62866	N/A	Alaska	McNeil River	59.121	-154.241
<i>Microtus pennsylvanicus</i>	N/A	UAM:Mamm:65485	N/A	Alaska	Peters Creek	62.385	-150.724
<i>Microtus pennsylvanicus</i>	N/A	UAM:Mamm:65760	N/A	Alaska	Mt. Fairplay	63.699	-142.250
<i>Microtus pennsylvanicus</i>	N/A	UAM:Mamm:66043	N/A	Alaska	Chilchukabena Lake	63.928	-151.492
<i>Microtus pennsylvanicus</i>	N/A	UAM:Mamm:72409	N/A	Alaska	Farewell Lake	62.546	-153.636
<i>Microtus pennsylvanicus</i>	N/A	UAM:Mamm:72448	N/A	Alaska	not recorded	60.102	-155.577
<i>Microtus pennsylvanicus</i>	N/A	UAM:Mamm:72845	N/A	Alaska	Red Devil Creek	61.792	-157.356
<i>Microtus pennsylvanicus</i>	N/A	UAM:Mamm:77272	N/A	Northwest Territories	Gordon Lake	63.000	-113.110
<i>Microtus pennsylvanicus</i>	N/A	UAM:Mamm:77313	N/A	Northwest Territories	Fort Liard	60.390	-117.290
<i>Microtus pennsylvanicus</i>	N/A	UAM:Mamm:77936	N/A	Northwest Territories	Horn Lake	67.753	-136.067
<i>Microtus pennsylvanicus</i>	N/A	UAM:Mamm:78345	N/A	Alaska	North Fork Koyukuk River	67.453	-150.850
<i>Microtus pennsylvanicus</i>	N/A	UAM:Mamm:79622	N/A	Alaska	S side of Takahula Lake	67.346	-153.660
<i>Microtus pennsylvanicus</i>	N/A	UAM:Mamm:85909	N/A	Alaska	Swanson River Field	60.829	-150.829
<i>Microtus pennsylvanicus</i>	N/A	UAM:Mamm:92253	N/A	Alaska	N of Kvichak River	59.232	-156.699
<i>Microtus pennsylvanicus</i>	N/A	UAM:Mamm:92786	N/A	Alaska	Tlikakila River	60.396	-153.830

<i>Microtus pennsylvanicus</i>	N/A	UAM:Mamm:97253	N/A	Northwest Territories	Norman Wells	65.282	-126.829
<i>Microtus pennsylvanicus</i>	N/A	UWBM:Mamm:39559	N/A	Alaska	Gakona area	62.302	-145.302
<i>Microtus pennsylvanicus</i>	N/A	UWBM:Mamm:63584	N/A	Alberta	Lake Louise	51.433	-116.183
<i>Microtus pennsylvanicus</i>	N/A	UWBM:Mamm:63587	N/A	British Columbia	W of Burns Lake	54.233	-126.244
<i>Microtus pennsylvanicus</i>	N/A	UWBM:Mamm:63603	N/A	British Columbia	S of Prince George	53.570	-122.750
<i>Microtus pennsylvanicus</i>	N/A	UWBM:Mamm:65976	N/A	Alaska	S of Ruby	64.732	-153.848
<i>Microtus miurus</i>	AF163899	UAM:Mamm:22997	N/A	Alaska	Chandalar Shelf	68.070	-149.580
<i>Microtus miurus</i>	GU809090	UAM:Mamm:53067	N/A	Alaska	Jago River	69.720	-143.620
<i>Microtus miurus</i>	GU809091	UAM:Mamm:53068	N/A	Alaska	Jago River	69.720	-143.620
<i>Microtus miurus</i>	GU809092	UAM:Mamm:53080	N/A	Alaska	Jago River	69.720	-143.620
<i>Microtus miurus</i>	GU809093	UAM:Mamm:75318	N/A	Alaska	E of Skookum River	64.720	-163.970
<i>Microtus miurus</i>	GU809094	UAM:Mamm:75332	N/A	Alaska	E of Skookum River	64.720	-163.970
<i>Microtus miurus</i>	GU809095	UAM:Mamm:75341	N/A	Alaska	E of Skookum River	64.720	-163.970
<i>Microtus miurus</i>	GU809096	UAM:Mamm:75345	N/A	Alaska	E of Skookum River	64.720	-163.970
<i>Microtus miurus</i>	GU809097	UAM:Mamm:75353	N/A	Alaska	E of Skookum River	64.720	-163.970
<i>Microtus miurus</i>	GU809098	UAM:Mamm:75415	N/A	Alaska	E of Skookum River	64.720	-163.970
<i>Microtus miurus</i>	GU809099	UAM:Mamm:75416	N/A	Alaska	E of Skookum River	64.720	-163.970
<i>Microtus miurus</i>	GU809100	UAM:Mamm:75419	N/A	Alaska	E of Skookum River	64.720	-163.970
<i>Microtus miurus</i>	GU809101	UAM:Mamm:75427	N/A	Alaska	E of Skookum River	64.720	-163.970
<i>Microtus miurus</i>	GU809102	UAM:Mamm:75349	N/A	Alaska	E of Skookum River	64.720	-163.970
<i>Microtus miurus</i>	GU809103	UAM:Mamm:75810	N/A	Alaska	Toolik Lake Research Station	68.620	-149.590
<i>Microtus miurus</i>	GU809104	UAM:Mamm:76019	N/A	Alaska	Toolik Lake Research Station	68.620	-149.590
<i>Microtus miurus</i>	GU809105	UAM:Mamm:76039	N/A	Alaska	Toolik Lake Research Station	68.620	-149.590
<i>Microtus miurus</i>	GU809106	UAM:Mamm:76116	N/A	Alaska	Toolik Lake Research Station	68.620	-149.590

<i>Microtus miurus</i>	GU809107	UAM:Mamm:78042	N/A	Alaska	Rock Creek	63.720	-148.990
<i>Microtus miurus</i>	GU809108	UAM:Mamm:78109	N/A	Alaska	Rock Creek	63.720	-148.990
<i>Microtus miurus</i>	GU809109	UAM:Mamm:78051	N/A	Alaska	Rock Creek	63.720	-148.990
<i>Microtus miurus</i>	GU809110	UAM:Mamm:78048	N/A	Alaska	Rock Creek	63.720	-148.990
<i>Microtus miurus</i>	GU809111	UAM:Mamm:78108	N/A	Alaska	Rock Creek	63.720	-148.990
<i>Microtus miurus</i>	GU809112	UAM:Mamm:78017	N/A	Alaska	Rock Creek	63.720	-148.990
<i>Microtus miurus</i>	GU809113	UAM:Mamm:78041	N/A	Alaska	Rock Creek	63.720	-148.990
<i>Microtus miurus</i>	GU809114	UAM:Mamm:78012	N/A	Alaska	Rock Creek	63.720	-148.990
<i>Microtus miurus</i>	GU809115	UAM:Mamm:56150	N/A	Alaska	Devil Mountain Lakes	66.390	-164.450
<i>Microtus miurus</i>	GU809116	UAM:Mamm:56153	N/A	Alaska	Devil Mountain Lakes	66.390	-164.450
<i>Microtus miurus</i>	GU809117	UAM:Mamm:56154	N/A	Alaska	Devil Mountain Lakes	66.390	-164.450
<i>Microtus miurus</i>	GU809118	UAM:Mamm:56368	N/A	Alaska	Kaluich Creek Upland	67.660	-158.190
<i>Microtus miurus</i>	GU809119	UAM:Mamm:56383	N/A	Alaska	Kaluich Creek Upland	67.660	-158.190
<i>Microtus miurus</i>	GU809120	UAM:Mamm:56402	N/A	Alaska	Kaluich Creek Upland	67.660	-158.190
<i>Microtus miurus</i>	GU809121	UAM:Mamm:56354	N/A	Alaska	W of Copter Peak	68.470	-161.480
<i>Microtus miurus</i>	GU809122	UAM:Mamm:61378	N/A	Alaska	SW of Pilgrim Peak	63.710	-150.590
<i>Microtus miurus</i>	GU809123	UAM:Mamm:61377	N/A	Alaska	SW of Pilgrim Peak	63.710	-150.590
<i>Microtus miurus</i>	GU809124	UAM:Mamm:85562	N/A	Alaska	Lake Peters	69.320	-145.050
<i>Microtus miurus</i>	GU809125	UAM:Mamm:85818	N/A	Alaska	Lake Peters	69.320	-145.050
<i>Microtus miurus</i>	GU809126	UAM:Mamm:85794	N/A	Alaska	Lake Peters	69.320	-145.050
<i>Microtus miurus</i>	GU809127	UAM:Mamm:85819	N/A	Alaska	Lake Peters	69.320	-145.050
<i>Microtus miurus</i>	GU809128	UAM:Mamm:85817	N/A	Alaska	Lake Peters	69.320	-145.050
<i>Microtus miurus</i>	GU809131	UAM:Mamm:64502	N/A	Alaska	W of The Cone, Iliamna	59.520	-153.920
<i>Microtus miurus</i>	GU809132	UAM:Mamm:64503	N/A	Alaska	W of The Cone, Iliamna	59.520	-153.920

<i>Microtus miurus</i>	GU809133	UAM:Mamm:64389	N/A	Alaska	S of Max Lake, Tyonek	61.350	-152.870
<i>Microtus miurus</i>	GU809134	UAM:Mamm:64398	N/A	Alaska	S of Max Lake, Tyonek	61.350	-152.870
<i>Microtus miurus</i>	GU809135	UAM:Mamm:64399	N/A	Alaska	S of Max Lake, Tyonek	61.350	-152.870
<i>Microtus miurus</i>	GU809136	UAM:Mamm:64404	N/A	Alaska	S of Max Lake, Tyonek	61.350	-152.870
<i>Microtus miurus</i>	GU809137	UAM:Mamm:64406	N/A	Alaska	S of Max Lake, Tyonek	61.350	-152.870
<i>Microtus miurus</i>	GU809138	UAM:Mamm:64353	N/A	Alaska	N of Bold Peak	61.360	-148.910
<i>Microtus miurus</i>	GU809139	UAM:Mamm:64357	N/A	Alaska	N of Bold Peak	61.360	-148.910
<i>Microtus miurus</i>	GU809140	UAM:Mamm:64358	N/A	Alaska	N of Bold Peak	61.360	-148.910
<i>Microtus miurus</i>	GU809141	UAM:Mamm:64360	N/A	Alaska	N of Bold Peak	61.360	-148.910
<i>Microtus miurus</i>	GU809142	UAM:Mamm:64375	N/A	Alaska	N of Bold Peak	61.360	-148.910
<i>Microtus miurus</i>	GU809143	UAM:Mamm:81971	N/A	Alaska	Lake Isiak	67.720	-156.160
<i>Microtus miurus</i>	GU809144	UAM:Mamm:81972	N/A	Alaska	Lake Isiak	67.720	-156.160
<i>Microtus miurus</i>	GU809145	UAM:Mamm:81973	N/A	Alaska	Lake Isiak	67.720	-156.160
<i>Microtus miurus</i>	GU809146	UAM:Mamm:81974	N/A	Alaska	Lake Isiak	67.720	-156.160
<i>Microtus miurus</i>	GU809147	UAM:Mamm:81924	N/A	Alaska	Lake Isiak	67.720	-156.160
<i>Microtus miurus</i>	GU809148	UAM:Mamm:81976	N/A	Alaska	Lake Isiak	67.720	-156.160
<i>Microtus miurus</i>	GU809149	UAM:Mamm:81977	N/A	Alaska	Lake Isiak	67.720	-156.160
<i>Microtus miurus</i>	GU809150	UAM:Mamm:81978	N/A	Alaska	Lake Isiak	67.720	-156.160
<i>Microtus miurus</i>	GU809151	UAM:Mamm:81926	N/A	Alaska	Lake Isiak	67.720	-156.160
<i>Microtus miurus</i>	GU809152	UAM:Mamm:81979	N/A	Alaska	Lake Isiak	67.720	-156.160
<i>Microtus miurus</i>	GU809153	UAM:Mamm:79610	N/A	Alaska	W of Lake Takahula	67.350	-153.670
<i>Microtus miurus</i>	GU809154	UAM:Mamm:79637	N/A	Alaska	W of Lake Takahula	67.350	-153.670
<i>Microtus miurus</i>	GU809155	UAM:Mamm:79805	N/A	Alaska	W of Lake Takahula	67.350	-153.670
<i>Microtus miurus</i>	GU809156	UAM:Mamm:79084	N/A	Alaska	Lake Agiak	68.080	-152.960

<i>Microtus miurus</i>	GU809157	UAM:Mamm:79080	N/A	Alaska	Lake Agiak	68.080	-152.960
<i>Microtus miurus</i>	GU809158	UAM:Mamm:78849	N/A	Alaska	Lake Agiak	68.080	-152.960
<i>Microtus miurus</i>	GU809159	UAM:Mamm:78877	N/A	Alaska	Lake Agiak	68.080	-152.960
<i>Microtus miurus</i>	GU809160	UAM:Mamm:78878	N/A	Alaska	Lake Agiak	68.080	-152.960
<i>Microtus miurus</i>	GU809161	UAM:Mamm:78692	N/A	Alaska	North Fork Koyukuk River	67.450	-150.860
<i>Microtus miurus</i>	GU809162	UAM:Mamm:98727	N/A	Alaska	North Fork Koyukuk River	67.450	-150.860
<i>Microtus miurus</i>	GU809163	UAM:Mamm:98982	N/A	Alaska	North Fork Koyukuk River	67.450	-150.860
<i>Microtus miurus</i>	GU809164	UAM:Mamm:98726	N/A	Alaska	North Fork Koyukuk River	67.450	-150.860
<i>Microtus miurus</i>	GU809165	UAM:Mamm:98983	N/A	Alaska	North Fork Koyukuk River	67.450	-150.860
<i>Microtus miurus</i>	GU809166	UAM:Mamm:98935	N/A	Alaska	North Fork Koyukuk River	67.450	-150.860
<i>Microtus miurus</i>	GU809167	UAM:Mamm:55927	N/A	Alaska	Molybdenum Ridge	63.810	-146.580
<i>Microtus miurus</i>	GU809168	UAM:Mamm:56347	N/A	Alaska	W of Copter Peak	68.470	-161.480
<i>Microtus miurus</i>	GU809169	UAM:Mamm:56691	N/A	Alaska	W of Copter Peak	68.470	-161.480
<i>Microtus miurus</i>	GU809170	UAM:Mamm:56352	N/A	Alaska	W of Copter Peak	68.470	-161.480
<i>Microtus miurus</i>	GU809171	UAM:Mamm:56354	N/A	Alaska	W of Copter Peak	68.470	-161.480
<i>Microtus miurus</i>	N/A	CU:Mamm:13009	N/A	Alaska	North Star Borough	64.868	-147.823
<i>Microtus miurus</i>	N/A	FMNH:Mamm:20073	N/A	Alaska	Seldovia	59.438	-151.711
<i>Microtus miurus</i>	N/A	KU:Mamm:140504	N/A	Northwest Territories	S of James Creek	67.180	-135.790
<i>Microtus miurus</i>	N/A	KU:Mamm:143276	N/A	Alaska	Gulkana Glacier	63.210	-145.390
<i>Microtus miurus</i>	N/A	LACM:Mamm:23101	N/A	Alaska	Meade River	70.072	-157.154
<i>Microtus miurus</i>	N/A	MSB:Mamm:145412	N/A	Alaska	85.5 mi W Paxson	63.189	-147.597
<i>Microtus miurus</i>	N/A	MSB:Mamm:234147	N/A	Yukon Territory	Pinguicula Lake	64.699	-133.430
<i>Microtus miurus</i>	N/A	MVZ Mammals123941	N/A	Alaska	Kaolak River	69.856	-160.081
<i>Microtus miurus</i>	N/A	MVZ Mammals187513	N/A	Alaska	Cape Sabine	68.914	-164.633

<i>Microtus miurus</i>	N/A	MVZ Mammals189302	N/A	Alaska	Umiat	69.387	-152.176
<i>Microtus miurus</i>	N/A	PBDB:Mamm:198250	N/A	Yukon Territory	Old Crow River	68.200	-140.000
<i>Microtus miurus</i>	N/A	PSM:Mamm:4136	N/A	Alaska	Schrader Lake	66.818	-143.725
<i>Microtus miurus</i>	N/A	PSM:Mamm:8486	N/A	Alaska	Kivalina	67.727	-164.533
<i>Microtus miurus</i>	N/A	UAM:Mamm:106213	N/A	Alaska	Slope Mountain	68.721	-149.021
<i>Microtus miurus</i>	N/A	UAM:Mamm:14363	N/A	Alaska	Fin Creek oil drill site	69.517	-147.633
<i>Microtus miurus</i>	N/A	UAM:Mamm:14932	N/A	Alaska	SW of Mt Tozi	65.633	-150.850
<i>Microtus miurus</i>	N/A	UAM:Mamm:15794	N/A	Yukon Territory	not recorded	64.583	-138.217
<i>Microtus miurus</i>	N/A	UAM:Mamm:1968	N/A	Alaska	not recorded	68.600	-143.750
<i>Microtus miurus</i>	N/A	UAM:Mamm:20990	N/A	Alaska	not recorded	65.400	-167.100
<i>Microtus miurus</i>	N/A	UAM:Mamm:4502	N/A	Alaska	Golden Gate Creek	65.083	-164.667
<i>Microtus miurus</i>	N/A	UAM:Mamm:56876	N/A	Alaska	Woodchopper Roadhouse	65.366	-143.248
<i>Microtus miurus</i>	N/A	UAM:Mamm:64381	N/A	Alaska	E of Bold Peak	61.344	-148.860
<i>Microtus miurus</i>	N/A	UAM:Mamm:65620	N/A	Alaska	SW of Pilgrim Peak	63.711	-150.589
<i>Microtus miurus</i>	N/A	UAM:Mamm:86247	N/A	Alaska	Twin Lakes	60.279	-150.159
<i>Microtus oeconomus</i>	AY305079	UAM:Mamm:19851	N/A	Alaska	not recorded	60.417	-146.650
<i>Microtus oeconomus</i>	AY305080	UAM:Mamm:20347	N/A	Alaska	Doame River	59.100	-138.267
<i>Microtus oeconomus</i>	AY305081	UAM:Mamm:20348	N/A	Alaska	Doame River	59.100	-138.267
<i>Microtus oeconomus</i>	AY305082	UAM:Mamm:20349	N/A	Alaska	Doame River	59.100	-138.267
<i>Microtus oeconomus</i>	AY305083	UAM:Mamm:20377	N/A	Alaska	Doame River	59.100	-138.267
<i>Microtus oeconomus</i>	AY305084	UAM:Mamm:20378	N/A	Alaska	Doame River	59.100	-138.267
<i>Microtus oeconomus</i>	AY305085	UAM:Mamm:43320	N/A	Alaska	Harlequin Lake	59.415	-139.009
<i>Microtus oeconomus</i>	AY305086	UAM:Mamm:43321	N/A	Alaska	Harlequin Lake	59.415	-139.009
<i>Microtus oeconomus</i>	AY305087	UAM:Mamm:43322	N/A	Alaska	Harlequin Lake	59.415	-139.009

<i>Microtus oeconomus</i>	AY305088	UAM:Mamm:34217	N/A	Alaska	Harlequin Lake	59.415	-139.009
<i>Microtus oeconomus</i>	AY305089	UAM:Mamm:34231	N/A	Alaska	Harlequin Lake	59.415	-139.009
<i>Microtus oeconomus</i>	AY305100	UAM:Mamm:22873	N/A	Alaska	Rock Creek watershed	63.733	-148.967
<i>Microtus oeconomus</i>	AY305116	UAM:Mamm:32812	N/A	Alaska	Fort Richardson	61.343	-149.540
<i>Microtus oeconomus</i>	AY305117	UAM:Mamm:31466	N/A	Alaska	Fort Richardson	61.000	-149.000
<i>Microtus oeconomus</i>	AY305118	UAM:Mamm:31467	N/A	Alaska	Fort Richardson	61.233	-149.594
<i>Microtus oeconomus</i>	AY305119	UAM:Mamm:31468	N/A	Alaska	Fort Richardson	61.288	-149.616
<i>Microtus oeconomus</i>	AY305120	UAM:Mamm:31472	N/A	Alaska	Fort Richardson	61.216	-149.694
<i>Microtus oeconomus</i>	AY305121	UAM:Mamm:31473	N/A	Alaska	Fort Richardson	61.216	-149.694
<i>Microtus oeconomus</i>	AY305122	UAM:Mamm:31470	N/A	Alaska	Fort Richardson	61.291	-149.626
<i>Microtus oeconomus</i>	AY305123	UAM:Mamm:31471	N/A	Alaska	Fort Richardson	61.291	-149.626
<i>Microtus oeconomus</i>	AY305124	UAM:Mamm:22060	N/A	Alaska	Fairbanks	64.871	-147.733
<i>Microtus oeconomus</i>	AY305125	UAM:Mamm:22075	N/A	Alaska	Fairbanks	64.871	-147.733
<i>Microtus oeconomus</i>	AY305126	UAM:Mamm:22068	N/A	Alaska	Fairbanks	64.871	-147.733
<i>Microtus oeconomus</i>	AY305127	UAM:Mamm:22207	N/A	Alaska	Fairbanks	64.871	-147.733
<i>Microtus oeconomus</i>	AY305128	UAM:Mamm:50571	N/A	Alaska	Quakenbush Rd.	64.960	-147.625
<i>Microtus oeconomus</i>	AY305129	UAM:Mamm:50568	N/A	Alaska	Quakenbush Rd.	64.960	-147.625
<i>Microtus oeconomus</i>	AY305130	UAM:Mamm:54614	N/A	Alaska	Fairbanks	64.858	-147.808
<i>Microtus oeconomus</i>	AY305131	UAM:Mamm:54613	N/A	Alaska	Murphy Dome Road	64.933	-148.100
<i>Microtus oeconomus</i>	AY305132	UAM:Mamm:36603	N/A	Alaska	not recorded	65.425	-164.643
<i>Microtus oeconomus</i>	AY305133	UAM:Mamm:41782	N/A	Alaska	Pilgrim Springs	65.094	-164.915
<i>Microtus oeconomus</i>	AY305134	UAM:Mamm:51945	N/A	Alaska	Pilgrim Springs	65.100	-164.117
<i>Microtus oeconomus</i>	AY305135	UAM:Mamm:36265	N/A	Alaska	Pilgrim Hot Springs	65.094	-164.915
<i>Microtus oeconomus</i>	AY305136	UAM:Mamm:82867	N/A	Alaska	Pilgrim Hot Springs	65.086	-164.901

<i>Microtus oeconomus</i>	AY305137	UAM:Mamm:82868	N/A	Alaska	Pilgrim Hot Springs	65.086	-164.901
<i>Microtus oeconomus</i>	AY305138	UAM:Mamm:82922	N/A	Alaska	Pilgrim Hot Springs	65.054	-164.729
<i>Microtus oeconomus</i>	AY305139	UAM:Mamm:82923	N/A	Alaska	Pilgrim Hot Springs	65.054	-164.729
<i>Microtus oeconomus</i>	AY305140	UAM:Mamm:82975	N/A	Alaska	Pilgrim Hot Springs	65.096	-164.923
<i>Microtus oeconomus</i>	AY305141	UAM:Mamm:82976	N/A	Alaska	Pilgrim Hot Springs	65.096	-164.923
<i>Microtus oeconomus</i>	AY305142	UAM:Mamm:41783	N/A	Alaska	Barrier Islands	55.258	-162.967
<i>Microtus oeconomus</i>	AY305143	UAM:Mamm:34310	N/A	Alaska	Barrier Islands	55.258	-162.967
<i>Microtus oeconomus</i>	AY305144	UAM:Mamm:63955	N/A	Alaska	Barrier Islands	55.258	-162.967
<i>Microtus oeconomus</i>	AY305145	UAM:Mamm:63951	N/A	Alaska	Barrier Islands	55.258	-162.967
<i>Microtus oeconomus</i>	AY305146	UAM:Mamm:63948	N/A	Alaska	Barrier Islands	55.258	-162.967
<i>Microtus oeconomus</i>	AY305147	UAM:Mamm:63962	N/A	Alaska	Barrier Islands	55.258	-162.967
<i>Microtus oeconomus</i>	AY305148	UAM:Mamm:34350	N/A	Alaska	Cold Bay	55.267	-162.842
<i>Microtus oeconomus</i>	AY305149	UAM:Mamm:34351	N/A	Alaska	Cold Bay	55.267	-162.842
<i>Microtus oeconomus</i>	AY305150	UAM:Mamm:34352	N/A	Alaska	Cold Bay	55.181	-162.746
<i>Microtus oeconomus</i>	AY305151	UAM:Mamm:34353	N/A	Alaska	Cold Bay	55.181	-162.746
<i>Microtus oeconomus</i>	AY305152	UAM:Mamm:47143	N/A	Alaska	Fireweed Mountain	61.433	-143.167
<i>Microtus oeconomus</i>	AY305153	UAM:Mamm:47138	N/A	Alaska	Fireweed Mountain	61.433	-143.167
<i>Microtus oeconomus</i>	AY305154	UAM:Mamm:47140	N/A	Alaska	Fireweed Mountain	61.433	-143.167
<i>Microtus oeconomus</i>	AY305155	UAM:Mamm:47137	N/A	Alaska	Fireweed Mountain	61.433	-143.167
<i>Microtus oeconomus</i>	AY305156	UAM:Mamm:47139	N/A	Alaska	Fireweed Mountain	61.433	-143.167
<i>Microtus oeconomus</i>	AY305157	UAM:Mamm:47145	N/A	Alaska	Fireweed Mountain	61.433	-143.167
<i>Microtus oeconomus</i>	AY305158	UAM:Mamm:47142	N/A	Alaska	Fireweed Mountain	61.433	-143.167
<i>Microtus oeconomus</i>	AY305159	UAM:Mamm:47141	N/A	Alaska	Fireweed Mountain	61.433	-143.167
<i>Microtus oeconomus</i>	AY305160	UAM:Mamm:47144	N/A	Alaska	Fireweed Mountain	61.433	-143.167

<i>Microtus oeconomus</i>	AY305173	UAM:Mamm:68535	N/A	Alaska	Colville River Delta	70.331	-150.924
<i>Microtus oeconomus</i>	AY305174	UAM:Mamm:68538	N/A	Alaska	Colville River Delta	70.331	-150.924
<i>Microtus oeconomus</i>	AY305175	UAM:Mamm:68537	N/A	Alaska	Colville River Delta	70.331	-150.924
<i>Microtus oeconomus</i>	AY305176	UAM:Mamm:68548	N/A	Alaska	Colville River Delta	70.331	-150.924
<i>Microtus oeconomus</i>	AY305177	UAM:Mamm:68549	N/A	Alaska	Colville River Delta	70.331	-150.924
<i>Microtus oeconomus</i>	AY305178	UAM:Mamm:68551	N/A	Alaska	Colville River Delta	70.331	-150.924
<i>Microtus oeconomus</i>	AY305179	UAM:Mamm:68553	N/A	Alaska	Colville River Delta	70.331	-150.924
<i>Microtus oeconomus</i>	AY305180	UAM:Mamm:68569	N/A	Alaska	Kuparuk Oil Field	70.322	-149.601
<i>Microtus oeconomus</i>	AY305181	UAM:Mamm:72941	N/A	Alaska	Red Devil	61.781	-157.323
<i>Microtus oeconomus</i>	AY305182	UAM:Mamm:72972	N/A	Alaska	Red Devil Lodge	61.773	-157.326
<i>Microtus oeconomus</i>	AY305189	UAM:Mamm:19794	N/A	Alaska	Cordova	60.450	-145.250
<i>Microtus oeconomus</i>	AY305190	UAM:Mamm:19795	N/A	Alaska	Cordova	60.450	-145.250
<i>Microtus oeconomus</i>	AY305191	UAM:Mamm:19796	N/A	Alaska	Cordova	60.450	-145.250
<i>Microtus oeconomus</i>	AY305192	UAM:Mamm:19797	N/A	Alaska	Cordova	60.450	-145.250
<i>Microtus oeconomus</i>	AY305193	UAM:Mamm:19798	N/A	Alaska	Cordova	60.450	-145.250
<i>Microtus oeconomus</i>	AY305194	UAM:Mamm:19867	N/A	Alaska	Alaganik Slough	60.433	-145.267
<i>Microtus oeconomus</i>	AY305195	UAM:Mamm:19868	N/A	Alaska	Alaganik Slough	60.433	-145.267
<i>Microtus oeconomus</i>	AY305196	UAM:Mamm:19869	N/A	Alaska	Alaganik Slough	60.433	-145.267
<i>Microtus oeconomus</i>	AY305197	UAM:Mamm:20275	N/A	Alaska	Whiteshed Road, Nicolet Creek	60.517	-145.800
<i>Microtus oeconomus</i>	AY305198	UAM:Mamm:20276	N/A	Alaska	Whiteshed Road, Nicolet Creek	60.517	-145.800
<i>Microtus oeconomus</i>	AY305200	UAM:Mamm:77847	N/A	Northwest Territories	Rat River Pass	67.730	-136.350
<i>Microtus oeconomus</i>	N/A	CAS:Mamm:20375	N/A	Alaska	Karluk	57.572	-154.456
<i>Microtus oeconomus</i>	N/A	CAS:Mamm:8054	N/A	Alaska	Cape Yakataga	60.061	-142.432
<i>Microtus oeconomus</i>	N/A	KU:Mamm:140488	N/A	Northwest Territories	S of James Creek	67.180	-135.790

<i>Microtus oeconomus</i>	N/A	KU:Mamm:145063	N/A	Alaska	Copper River Delta	60.390	-145.320
<i>Microtus oeconomus</i>	N/A	KU:Mamm:153669	N/A	Alaska	Circle	65.820	-144.060
<i>Microtus oeconomus</i>	N/A	KU:Mamm:21540	N/A	Alaska	NE of Fish Creek	63.100	-145.450
<i>Microtus oeconomus</i>	N/A	KU:Mamm:21547	N/A	YUKON	SW of Kluane	60.970	-138.500
<i>Microtus oeconomus</i>	N/A	KU:Mamm:21609	N/A	YUKON	Grafe and Edth Creeks	61.800	-140.030
<i>Microtus oeconomus</i>	N/A	KU:Mamm:41402	N/A	Alaska	Litnik	58.030	-152.800
<i>Microtus oeconomus</i>	N/A	KU:Mamm:43534	N/A	Alaska	Kaolak	69.990	-159.910
<i>Microtus oeconomus</i>	N/A	KU:Mamm:43726	N/A	Alaska	Bettles	66.910	-151.510
<i>Microtus oeconomus</i>	N/A	KU:Mamm:51327	N/A	Alaska	Umiat	69.390	-152.070
<i>Microtus oeconomus</i>	N/A	LACM:Mamm:009899	N/A	Alaska	St Lawrence Island	63.780	-171.741
<i>Microtus oeconomus</i>	N/A	LACM:Mamm:022843	N/A	Alaska	E Oumalik	69.690	-155.640
<i>Microtus oeconomus</i>	N/A	MSB:Mamm:142947	N/A	Alaska	120 mi. W of Paxson	63.370	-148.370
<i>Microtus oeconomus</i>	N/A	MSB:Mamm:143164	N/A	Alaska	Peter's Creek	62.530	-150.810
<i>Microtus oeconomus</i>	N/A	MSB:Mamm:144132	N/A	Yukon Territory	LaBiche River	60.124	-124.054
<i>Microtus oeconomus</i>	N/A	MSB:Mamm:144244	N/A	Alaska	SW of Eagle	64.753	-141.230
<i>Microtus oeconomus</i>	N/A	MSB:Mamm:144275	N/A	Yukon Territory	W of Stewart Crossing	63.543	-137.195
<i>Microtus oeconomus</i>	N/A	MSB:Mamm:149195	N/A	Yukon Territory	Canol Highway	61.200	-133.047
<i>Microtus oeconomus</i>	N/A	MSB:Mamm:149402	N/A	Yukon Territory	E of Carmacks	62.116	-136.144
<i>Microtus oeconomus</i>	N/A	MSB:Mamm:149995	N/A	Chukotka	Keveem River	68.933	173.533
<i>Microtus oeconomus</i>	N/A	MSB:Mamm:193254	N/A	Alaska	Matanuska River	61.768	-148.530
<i>Microtus oeconomus</i>	N/A	MSB:Mamm:193502	N/A	Alaska	Kenai Peninsula	60.444	-149.369
<i>Microtus oeconomus</i>	N/A	MSB:Mamm:216221	N/A	Yukon Territory	Mount Turner	65.409	-136.282
<i>Microtus oeconomus</i>	N/A	MVZ:Mamm:188062	N/A	Alaska	Pitmegea River	68.771	-164.130
<i>Microtus oeconomus</i>	N/A	MVZ:Mamm:51242	N/A	Alaska	Unalakleet	63.873	-160.788

<i>Microtus oeconomus</i>	N/A	MVZ:Mamm:529	N/A	Alaska	Prince William Sound	60.666	-145.621
<i>Microtus oeconomus</i>	N/A	OMNH:Mamm:305	N/A	Alaska	Circle Hot Springs	65.483	-144.634
<i>Microtus oeconomus</i>	N/A	PSM:Mamm:13443	N/A	Alaska	Ugamak	54.212	-164.822
<i>Microtus oeconomus</i>	N/A	PSM:Mamm:4121	N/A	Alaska	Beaver	66.359	-147.396
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:100770	N/A	Alaska	W of Horner Hot Springs	64.906	-154.872
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:11165	N/A	Alaska	Feniak Lake	68.250	-158.333
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:111830	N/A	Alaska	Minto Flats	65.054	-149.010
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:11669	N/A	Alaska	Happy Valley Pipeline camp	69.250	-148.083
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:11968	N/A	Alaska	not recorded	59.550	-135.100
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:14399	N/A	Alaska	Cape Thompson	68.150	-165.967
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:15774	N/A	Yukon Territory	not recorded	64.583	-138.217
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:18983	N/A	Alaska	Anchor River	59.733	-151.733
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:1947	N/A	Alaska	not recorded	68.667	-143.750
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:20066	N/A	Alaska	Hanning Bay	59.933	-147.683
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:20158	N/A	Alaska	Little Bay	60.167	-147.783
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:20524	N/A	Alaska	Nyac	61.000	-159.950
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:22915	N/A	Alaska	campground	58.600	-159.967
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:23222	N/A	Chukotka	Chaun	68.783	170.500
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:34656	N/A	Alaska	Clear Creek	66.218	-155.761
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:350	N/A	Alaska	Old Chevak	61.500	-165.000
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:37729	N/A	Alaska	Candle	65.917	-161.933
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:37735	N/A	Alaska	near American Creek	64.817	-163.450
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:37749	N/A	Alaska	Nome River	64.483	-165.300
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:5291	N/A	Alaska	not recorded	70.167	-143.583

<i>Microtus oeconomus</i>	N/A	UAM:Mamm:5317	N/A	Alaska	Holikachuk	62.917	-159.500
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:54973	N/A	Alaska	Wesley Creek	64.913	-166.194
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:57969	N/A	Northwest Territories	Amundsen Gulf	69.767	-122.117
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:58000	N/A	Yukon Territory	Ivvavik National Park	69.417	-139.600
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:58639	N/A	Alaska	Rex Creek	61.310	-142.516
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:64301	N/A	Alaska	Ursus Cove	59.524	-153.773
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:64390	N/A	Alaska	S of Max Lake	61.358	-152.869
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:64984	N/A	Alaska	Chilchukabena Lake	63.928	-151.492
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:66066	N/A	Alaska	Mt. Fairplay	63.698	-142.255
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:66203	N/A	Alaska	Twin Lakes	62.529	-143.259
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:67867	N/A	Alaska	Richardson Highway	61.783	-145.250
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:6831	N/A	Alaska	S end of Tugidak Island	56.417	-154.750
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:68714	N/A	Alaska	Colville River Delta	70.433	-150.400
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:72494	N/A	Alaska	Sparrevohn air strip	61.087	-155.569
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:72600	N/A	Alaska	S of McGrath	62.947	-155.561
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:728	N/A	Yukon Territory	Old Crow Village	67.583	-139.833
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:75800	N/A	Alaska	Tenakee Inlet	57.700	-135.217
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:76684	N/A	Alaska	Fish Creek	58.550	-133.850
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:78929	N/A	Alaska	Nanushuk River	68.277	-150.655
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:8136	N/A	Alaska	Northeast Cape	63.295	-168.692
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:81854	N/A	Alaska	SE side of Takahula Lake	67.350	-153.645
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:81927	N/A	Alaska	Lake Isiak	67.721	-156.133
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:83161	N/A	Alaska	Noatak and Kelly rivers	67.945	-162.232
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:83721	N/A	Alaska	not recorded	55.418	-163.120

<i>Microtus oeconomus</i>	N/A	UAM:Mamm:83948	N/A	Chukotka	not recorded	64.650	-172.533
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:84181	N/A	Chukotka	Markovka and Anadyr rivers	64.680	170.418
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:84411	N/A	Chukotka	Volchya River and Liman Sea	64.806	177.554
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:91977	N/A	Alaska	Kaskanak Creek	59.370	-156.078
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:94656	N/A	Alaska	W of Contact Creek	58.221	-155.982
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:96683	N/A	Alaska	Lower Ugashik Lake	57.421	-156.821
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:97267	N/A	Northwest Territories	Norman Wells	65.282	-126.829
<i>Microtus oeconomus</i>	N/A	UAM:Mamm:97429	N/A	Alaska	W of Twin Moutains	59.384	-161.682
<i>Microtus oeconomus</i>	N/A	UCLA:Mamm:13201	N/A	Alaska	Popof Island	55.317	-160.400
<i>Microtus oeconomus</i>	N/A	UCLA:Mamm:15151	N/A	Alaska	Barrow	71.400	-156.483
<i>Microtus oeconomus</i>	N/A	USNM:Mamm:287632	N/A	Alaska	Wales Island	65.667	-169.000
<i>Microtus oeconomus</i>	N/A	USNM:Mamm:288302	N/A	Alaska	Black River	66.733	-143.583
<i>Microtus oeconomus</i>	N/A	USNM:Mamm:288322	N/A	Alaska	Salcha River	64.667	-144.333
<i>Microtus oeconomus</i>	N/A	USNM:Mamm:293109	N/A	Alaska	Point Lay	69.767	-163.067
<i>Microtus oeconomus</i>	N/A	USNM:Mamm:506851	N/A	Alaska	N of Killeak Lake	63.383	-164.068
<i>Microtus oeconomus</i>	N/A	USNM:Mamm:506852	N/A	Alaska	Cape Espenberg	66.573	-163.748
<i>Microtus oeconomus</i>	N/A	UWBM:Mamm:41992	N/A	Alaska	Fortuna Lodge	61.886	-161.197

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6 **Supplementary Appendix 2 | Fossil locality records.**

Species	Reference	State/Province	Locality	Latitude	Longitude
<i>Sorex cinereus</i>	1	Idaho	American Falls	42.783	-112.861
<i>Microtus pennsylvanicus</i>	2	Florida	Arredondo IA	29.8	-82.1
<i>Microtus pennsylvanicus</i>	3	Florida	Arredondo IIA	29.6	-82.4
<i>Microtus pennsylvanicus</i>	4	Georgia	Isle of Hope	32	-81.1
<i>Microtus pennsylvanicus</i>	5	Michigan	Adams site (= Fowlerville, west)	42.7	-84.2
<i>Microtus pennsylvanicus</i>	6	Yukon Territory	Whitestone Mammoth Site	66.4	-138.5
<i>Microtus pennsylvanicus</i>	6	Yukon Territory	Bluefish Caves	66.87	-140.62
<i>Microtus miurus</i>	6	Yukon Territory	Sixtymile Area	64.06	-140.72
<i>Microtus miurus</i>	6	Yukon Territory	Dawson City area	64.06	-139.43
<i>Microtus miurus</i>	6	Yukon Territory	Bluefish Caves	66.87	-140.62
<i>Microtus oeconomus</i>	6	Yukon Territory	Sixtymile Area	64.06	-140.72
<i>Microtus oeconomus</i>	6	Yukon Territory	Dawson City area	64.06	-139.43

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