

Supplemental Information: **Differentiation and adaptation** **among fishers in Western Canada:** **Evidence for validity of *Pekania*** ***pennanti columbiana* subspecies**

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Conflicts of Interest



The author declares no conflicts of interest.

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Supplemental Information

Supplementary Information SI1.

Supplementary Information SI1. Morphometry of 281 skinned fisher carcasses by population, sex, and age class collected from throughout British Columbia, Canada, 1989-1993. Measurements with significant differences between populations, when controlled for age class and sex, are shown in bold. Juvenile age class includes fishers <1 yr, Subadults were <2 yr, and Adults were ≥2 yr. Values are shown as $\bar{x}$ (SD, *n*).

Feature	<u>Columbian</u>						<u>Boreal</u>					
		<u>Female</u>			<u>Male</u>			<u>Female</u>			<u>Male</u>	
	Juvenile	Subadult	Adult	Juvenile	Subadult	Adult	Juvenile	Subadult	Adult	Juvenile	Subadult	Adult
Body mass (kg)¹	1.9 (0.4, 71)	2.0 (0.3, 31)	2.0 (0.4, 27)	3.1 (0.5, 58)	3.4 (0.9, 15)	3.7 (0.7, 20)	2.1 (0.3, 14)	2.1 (0.3, 8)	2.3 (0.2, 4)	3.1 (0.6, 10)	3.6 (0.7, 5)	4.1 (0.5, 3)
Body length (mm)	534 (42, 36)	536 (14, 13)	527 (23, 9)	609 (59, 31)	621 (25, 9)	630 (33, 10)	554 (11, 6)	553 (30, 3)	580 (NA, 1)	646 (22, 5)	655 (NA, 1)	690 (NA, 1)
Tail length (mm)	349 (31, 64)	355 (19, 28)	345 (19, 23)	369 (39, 54)	381 (15, 13)	375 (21, 16)	353 (15, 10)	360 (20, 8)	358 (6, 4)	389 (9, 8)	390 (7, 2)	365 (49, 2)
Chest girth (mm)	178 (15, 65)	187 (14, 28)	183 (13, 24)	221 (21, 55)	240 (30, 15)	251 (22, 18)	176 (10, 9)	200 (30, 8)	188 (6, 3)	220 (25, 8)	237 (38, 2)	266 (29, 2)
Shoulder-ankle length (mm)	163 (16, 57)	168 (12, 28)	167 (12, 24)	189 (19, 46)	194 (25, 14)	201 (26, 13)	161 (13, 9)	163 (9, 7)	166 (9, 4)	180 (20, 6)	190 (NA, 1)	172 (18, 2)
Chest-ankle length (mm)	119 (15, 57)	122 (17, 28)	123 (16, 24)	138 (18, 44)	130 (21, 14)	130 (13, 14)	131 (8, 9)	127 (13, 7)	142 (6, 4)	144 (13, 6)	150 (NA, 1)	112 (11, 2)
Hip-ankle length (mm)	178 (12, 57)	182 (8, 28)	184 (13, 24)	208 (18, 46)	211 (26, 13)	208 (13, 14)	184 (7, 9)	183 (10, 7)	185 (16, 4)	200 (8, 6)	210 (NA, 1)	195 (7, 2)



Abdomen- ankle length (mm)	140 (17, 44)	146 (17, 22)	141 (12, 18)	155 (20, 32)	158 (30, 7)	161 (19, 7)	148 (11, 9)	159 (14, 7)	150 (11, 4)	150 (14, 6)	140 (NA, 1)	152 (18, 2)
Zygomatic arch (mm)	57 (4, 68)	59 (2, 29)	60 (3, 24)	68 (4, 54)	76 (6, 15)	78 (5, 18)	58 (2, 10)	60 (4, 8)	61 (2, 4)	69 (2, 8)	76 (1, 2)	82 (2, 2)
Head depth (mm)	43 (3, 68)	44 (2, 29)	44 (2, 24)	54 (7, 54)	58 (8, 15)	57 (4, 17)	44 (1, 10)	43 (2, 8)	44 (1, 4)	53 (2, 8)	55 (0, 2)	60 (11, 2)
Head length (mm)	106 (4, 68)	107 (3, 29)	107 (3, 24)	125 (6, 53)	127 (5, 15)	130 (4, 17)	107 (3, 10)	106 (3, 8)	108 (2, 4)	124 (2, 8)	126 (2, 2)	120 (1, 2)
Baculum length (mm)	--	--	--	100 (18, 36)	107 (4, 7)	110 (9, 8)	--	--	--	101 (4, 8)	108 (2, 2)	110 (NA, 1)
Total foot area (cm²)	88.1 (30.4, 29)	96.5 (31.8, 12)	77.4 (30.5, 9)	118.6 (33.2, 27)	100.7 (33.3, 8)	118.1 (41.5, 6)	117.5 (11.1, 4)	104.5 (16.7, 4)	118.6 (13.2, 2)	157.9 (3.7, 4)	--	--
Foot-loadi ng - standing (g/cm²)¹	23.9 (9.7, 29)	22.5 (7.9, 12)	27.7 (10.8, 9)	28.8 (9.8, 27)	38.2 (12.1, 8)	32.3 (9.4, 6)	16.7 (1.9, 4)	19.1 (2.3, 4)	20 (2.8, 2)	21.1 (1.4, 4)	--	--
Foot-loadi ng - galloping (g/cm²)¹	32.6 (12.4, 29)	30.7 (9.7, 12)	37.4 (13.8, 9)	39.3 (12.1, 27)	50.8 (15.5, 8)	42.5 (11, 6)	23.4 (2.7, 4)	27.1 (3.4, 4)	28.6 (4.2, 2)	29.6 (2.1, 4)	--	--

¹ pelt removed



Supplementary Information SI2.

Supplementary Information SI2. Morphometry, by population, sex, and age class, of 105 fishers live-captured from throughout British Columbia, Canada, 1996-2023. Measurements with significant differences between populations, when controlled for age class and sex, are shown in bold. Juvenile age class includes fishers <1 yr, Subadults were <2 yr, and Adults were ≥2 yr. Values are shown as $\bar{x}$ (SD, *n*).

Feature	<u>Columbian</u>						<u>Boreal</u>					
	<u>Female</u>			<u>Male</u>			<u>Female</u>			<u>Male</u>		
	Juvenile	Subadult	Adult	Juvenile	Subadult	Adult	Juvenile	Subadult	Adult	Juvenile	Subadult	Adult
Body mass (kg)	2.35 (0.21, 6)	2.45 (0.34, 10)	2.69 (0.43, 18)	3.70 (NA, 1)	4.15 (0.6, 8)	5.01 (0.64, 11)	2.82 (0.28, 6)	2.84 (0.16, 5)	2.85 (0.26, 16)	4.70 (0.62, 7)	4.25 (NA, 1)	5.64 (0.78, 7)
Body length (mm)	53.9 (2, 6)	54.5 (2.4, 9)	55.2 (4.4, 19)	65.3 (NA, 1)	59.9 (5.4, 6)	64.4 (5.4, 13)	58.2 (3.3, 6)	59.4 (1.9, 5)	58.7 (2.6, 16)	61.5 (8.2, 5)	--	67.0 (2.8, 10)
Tail length (mm)	34.1 (2.2, 6)	34.4 (2, 9)	35.7 (2.2, 18)	39.4 (NA, 1)	36.7 (0.8, 6)	38.1 (2.2, 13)	35.9 (3.1, 6)	38.6 (2.1, 5)	36.4 (2.5, 15)	38.4 (2.2, 5)	--	38.5 (2.4, 10)
Chest girth (mm)	223 (11, 6)	219 (12, 9)	246 (15, 18)	261 (NA, 1)	288 (20, 6)	311 (17, 13)	252 (27, 6)	230 (8, 5)	253 (16, 14)	295 (18, 5)	--	312 (19, 10)
Neck girth (mm)	169 (12, 4)	168 (11, 6)	183 (21, 8)	192 (NA, 1)	212 (39, 2)	246 (14, 7)	189 (11, 6)	184 (5, 4)	188 (8, 15)	237 (9, 4)	--	254 (21, 9)
Zygomatic arch (mm)	57 (2, 3)	59 (2, 5)	62 (2, 2)	66 (NA, 1)	80 (13, 2)	75 (4, 2)	61 (4, 4)	60 (6, 5)	60 (7, 9)	73 (4, 4)	--	80 (9, 9)
Head depth (mm)	45 (2, 3)	46 (4, 5)	50 (6, 2)	52 (NA, 1)	58 (9, 2)	74 (1, 2)	--	--	--	--	--	--
Head circumference (mm)	180 (10, 3)	191 (15, 6)	186 (12, 3)	22 (NA, 1)	248 (32, 2)	276 (23, 3)	--	--	--	--	--	--
Neck girth – zygomatic arch ratio	2.9 (0.1, 3)	2.8 (0.1, 5)	2.6 (0.1, 2)	2.9 (NA, 1)	2.7 (0.1, 2)	3.2 (0, 2)	3 (0.1, 4)	3.1 (0.4, 4)	3.1 (0.4, 8)	3.1 (0.1, 3)	--	3.2 (0.5, 8)
Chest girth – zygomatic arch ratio	3.9 (0.1, 3)	3.6 (0.1, 5)	3.6 (0.1, 2)	4.0 (NA, 1)	3.4 (0.1, 2)	3.9 (0.2, 2)	3.9 (0.4, 4)	3.9 (0.3, 5)	4.1 (0.6, 7)	4.1 (0.3, 4)	--	4.0 (0.5, 9)

