

S1 Table. Estimated percent composition of food items based on published literature sources, used to estimate diet and relative macronutrient intake of grizzly and black bears during 24-hour periods, based on site visits of GPS-monitored individuals during 2004–2006, Grand Teton National Park, Wyoming, USA.

Food type	Sub-type	Genus or lowest taxa identified	Percent composition (fresh matter basis)					Sources (or substitutions <sup>b</sup> )
			Moisture	Protein	Carbohydrate	Lipid	Non-digestible <sup>a</sup>	
AGV <sup>c</sup>	Fern ally	<i>Equisetum</i>	74.8	5.9	10.1	0.7	8.5	8, 11, 12, 28, 29
AGV	Fern ally	<i>Equisetum arvense</i>	74.8	5.9	10.1	0.7	8.5	8, 11, 12, 28, 29
AGV	Fern ally	<i>Lycopodium</i>	74.8	5.9	10.1	0.7	8.5	mean AGV-fern ally
AGV	Forb	<i>Agoseris</i>	76.8	5.4	9.6	1.2	7.0	4, 14, 33
AGV	Forb	<i>Angelica arguta</i>	10.2	11.3	47.2	7.1	24.2	17
AGV	Forb	<i>Aquilegia</i>	75.4	4.0	10.8	1.4	8.4	mean AGV-forb
AGV	Forb	<i>Aster conspicuum</i>	76.8	5.6	4.6	0.6	12.4	32
AGV	Forb	<i>Balsamorhiza sagittata</i>	75.4	4.0	10.8	1.4	8.4	30, 44, 45
AGV	Forb	<i>Campanula rotundifolia</i>	75.4	4.0	10.8	1.4	8.4	mean AGV-forb
AGV	Forb	<i>Castilleja</i>	75.4	4.0	10.8	1.4	8.4	mean AGV-forb
AGV	Forb	<i>Castilleja miniata</i>	75.4	4.0	10.8	1.4	8.4	mean AGV-forb
AGV	Forb	<i>Cerastium</i>	73.3	11.3	8.3	1.0	6.0	12
AGV	Forb	<i>Chimaphila</i>	75.4	4.0	10.8	1.4	8.4	mean AGV-forb
AGV	Forb	<i>Cirsium</i>	89.5	1.3	5.3	0.3	3.5	6, 8, 29, 44
AGV	Forb	<i>Claytonia</i>	76.8	6.9	10.3	1.1	5.0	8, 29
AGV	Forb	<i>Claytonia lanceolata</i>	74.5	1.9	15.5	0.2	7.9	29, 45
AGV	Forb	<i>Clematis</i>	75.4	4.0	10.8	1.4	8.4	mean AGV-forb
AGV	Forb	<i>Collomia</i>	75.4	4.0	10.8	1.4	8.4	mean AGV-forb
AGV	Forb	<i>Corallorhiza maculata</i>	75.4	4.0	10.8	1.4	8.4	mean AGV-forb
AGV	Forb	<i>Epilobium</i>	81.4	2.1	8.7	1.6	6.1	20, 42, 44
AGV	Forb	<i>Epilobium angustifolium</i>	81.4	2.1	8.7	1.6	6.1	20, 42, 44
AGV	Forb	<i>Eriogonum</i>	76.8	2.9	11.0	1.3	8.0	4, 44
AGV	Forb	<i>Erythronium grandiflorum</i>	44.5	6.2	27.7	2.8	18.9	8, 28, 30, 45
AGV	Forb	<i>Fritillaria pudica</i>	74.8	2.4	15.4	0.2	7.3	20, 45

S1 Table (continued).

Food type	Sub-type	Genus or lowest taxa identified	Percent composition (fresh matter basis)					Sources (or substitutions <sup>b</sup> )
			Moisture	Protein	Carbohydrate	Lipid	Non-digestible <sup>a</sup>	
AGV	Forb	<i>Galium triflorum</i>	76.8	1.7	2.4	2.7	16.4	25, 49
AGV	Forb	<i>Hedysarum occidentale</i>	50.3	5.9	16.4	0.8	26.6	7, 8, 28
AGV	Forb	<i>Helianthella uniflora</i>	76.8	2.4	11.3	1.4	8.2	34
AGV	Forb	<i>Heracleum lanatum</i>	95.0	0.7	2.2	0.2	1.9	8, 20, 25, 28, 29
AGV	Forb	<i>Hieracium</i>	75.4	4.0	10.8	1.4	8.4	mean AGV-forb
AGV	Forb	<i>Hydrophyllum</i>	75.4	4.0	10.8	1.4	8.4	mean AGV-forb
AGV	Forb	<i>Iliamna rivularis</i>	75.4	4.0	10.8	1.4	8.4	mean AGV-forb
AGV	Forb	<i>Ligusticum</i>	76.8	2.3	11.3	1.4	8.2	34
AGV	Forb	<i>Ligusticum filicinum</i>	76.8	2.3	11.3	1.4	8.2	34
AGV	Forb	<i>Lupinus</i>	76.8	3.8	10.5	1.3	7.6	34, 44
AGV	Forb	<i>Medicago sativa</i>	76.8	3.5	8.3	0.7	10.7	23, 39
AGV	Forb	<i>Osmorhiza depauperata</i>	76.8	3.5	11.2	0.5	8.0	8
AGV	Forb	<i>Pedicularis</i>	75.4	4.0	10.8	1.4	8.4	mean AGV-forb
AGV	Forb	<i>Pedicularis bracteosa</i>	75.4	4.0	10.8	1.4	8.4	mean AGV-forb
AGV	Forb	<i>Perideridia gairdneri</i>	75.4	4.0	10.8	1.4	8.4	mean AGV-forb
AGV	Forb	<i>Potentilla</i>	75.4	4.0	10.8	1.4	8.4	mean AGV-forb
AGV	Forb	<i>Potentilla gracilis</i>	75.4	4.0	10.8	1.4	8.4	mean AGV-forb
AGV	Forb	<i>Prosartes trachycarpa</i>	75.4	4.0	10.8	1.4	8.4	mean AGV-forb
AGV	Forb	<i>Pterospora</i>	75.4	4.0	10.8	1.4	8.4	mean AGV-forb
AGV	Forb	<i>Rudbeckia</i>	75.4	4.0	10.8	1.4	8.4	mean AGV-forb
AGV	Forb	<i>Rumex</i>	90.6	1.7	3.9	0.7	3.1	1, 20, 25, 42
AGV	Forb	<i>Streptopus amplexifolius</i>	76.8	5.1	9.8	1.2	7.1	15
AGV	Forb	<i>Taraxacum</i>	85.6	2.7	7.6	0.7	3.5	1, 25, 42
AGV	Forb	<i>Thalictrum</i>	76.8	4.0	10.9	1.5	6.8	1, 8, 34
AGV	Forb	<i>Tragopogon</i>	75.4	4.0	10.8	1.4	8.4	44

S1 Table (continued).

Food type	Sub-type	Genus or lowest taxa identified	Percent composition (fresh matter basis)					Sources (or substitutions <sup>b</sup> )
			Moisture	Protein	Carbohydrate	Lipid	Non-digestible <sup>a</sup>	
AGV	Forb	<i>Tragopogon dubius</i>	75.4	4.0	10.8	1.4	8.4	44
AGV	Forb	<i>Trifolium</i>	85.9	3.6	5.2	0.3	5.1	4, 8, 29, 32, 36
AGV	Forb	Unidentified Apiaceae	75.4	4.0	10.8	1.4	8.4	mean AGV-forb
AGV	Forb	Unidentified Asteraceae	75.4	4.0	10.8	1.4	8.4	mean AGV-forb
AGV	Forb	Unidentified forb	75.4	4.0	10.8	1.4	8.4	mean AGV-forb
AGV	Forb	<i>Valerian</i>	75.4	4.0	10.8	1.4	8.4	mean AGV-forb
AGV	Forb	<i>Viola</i>	75.4	4.0	10.8	1.4	8.4	mean AGV-forb
AGV	Forb	<i>Wyethia</i>	75.4	4.0	10.8	1.4	8.4	mean AGV-forb
AGV	Graminoid	<i>Agropyron</i>	35.1	6.9	22.6	1.9	33.5	33, 34
AGV	Graminoid	<i>Bromus</i>	35.1	6.5	22.8	1.9	33.7	33, 34, 44
AGV	Graminoid	<i>Calamagrostis</i>	35.1	9.6	24.8	2.5	28.0	8, 29, 32
AGV	Graminoid	<i>Calamagrostis canadensis</i>	35.1	9.6	24.8	2.5	28.0	8, 29, 32
AGV	Graminoid	<i>Calamagrostis rubescens</i>	35.1	9.6	24.8	2.5	28.0	8, 29, 32
AGV	Graminoid	<i>Carex</i>	74.8	4.6	8.8	0.6	11.2	8, 12, 15, 33, 34
AGV	Graminoid	<i>Deschampsia</i>	46.0	6.8	18.3	1.7	27.2	15, 26
AGV	Graminoid	<i>Elymus</i>	35.1	5.6	23.1	1.9	34.2	15, 34
AGV	Graminoid	<i>Festuca</i>	35.1	9.6	13.9	3.7	37.7	8, 28, 30, 45
AGV	Graminoid	<i>Melica</i>	35.1	7.5	22.2	1.9	33.4	mean AGV-graminoid
AGV	Graminoid	<i>Phleum</i>	10.2	6.2	47.0	2.1	34.5	38
AGV	Graminoid	<i>Phleum pratense</i>	10.2	6.2	47.0	2.1	34.5	38
AGV	Graminoid	<i>Poa</i>	64.5	9.9	7.7	1.4	16.5	12, 26, 29, 43, 44
AGV	Graminoid	<i>Scirpus</i>	5.1	0.4	13.1	0.0	81.4	45
AGV	Graminoid	<i>Stipa</i>	35.1	6.3	22.9	1.9	33.8	34
AGV	Graminoid	Unidentified graminoid	35.1	7.5	22.2	1.9	33.4	mean AGV-graminoid
AGV	Woody plant	<i>Geranium viscosissimum</i>	76.8	3.5	3.2	2.4	14.1	25

S1 Table (continued).

Food type	Sub-type	Genus or lowest taxa identified	Percent composition (fresh matter basis)					Sources (or substitutions <sup>b</sup> )
			Moisture	Protein	Carbohydrate	Lipid	Non-digestible <sup>a</sup>	
AGV	Woody plant	<i>Salix</i>	76.8	3.5	3.2	2.4	14.1	mean AGV-woody plant
AGV	Woody plant	<i>Spiraea</i>	76.8	3.5	3.2	2.4	14.1	mean AGV-woody plant
AGV	Woody plant	Unidentified shrub	76.8	3.5	3.2	2.4	14.1	mean AGV-woody plant
BGV <sup>c</sup>	Aquatic	<i>Potamogeton</i>	7.2	13.5	37.5	2.2	39.7	24, 31
BGV	Forb	<i>Claytonia</i>	74.5	1.9	15.5	0.2	7.9	29, 45
BGV	Forb	<i>Lomatium</i>	37.2	4.1	34.2	0.9	23.6	8, 29, 45
BGV	Forb	<i>Perideridia</i>	44.1	2.7	42.0	0.3	11.0	8, 16, 29, 45
BGV	Forb	<i>Polygonum</i>	79.2	1.9	12.4	0.2	6.3	8, 12, 29, 49
BGV	Forb	Unidentified root	53.2	3.1	25.9	0.8	17.1	mean BGV
BGV	Graminoid	<i>Melica</i>	50.3	2.2	39.9	0.4	7.2	8, 29
Cambium		<i>Abies lasiocarpa</i>	90.1	1.2	4.2	0.2	4.3	mean cambium (10, 14, 21, 38)
Cambium		<i>Picea engelmannii</i>	90.1	1.2	4.2	0.2	4.3	mean cambium (10, 14, 21, 38)
Cambium		<i>Pinus contorta</i>	87.9	3.6	6.6	0.6	1.3	10, 13
Cambium		<i>Populus tremuloides</i>	92.0	0.2	5.0	0.5	2.3	20
Cambium		Unidentified cambium	90.1	1.2	4.2	0.2	4.3	mean cambium (10, 14, 21, 38)
Fruit		<i>Amelanchier alnifolia</i>	78.4	1.0	14.4	0.9	5.3	8, 19, 46
Fruit		<i>Arctostaphylos uva-ursi</i>	75.0	0.7	10.4	1.3	12.7	8, 19
Fruit		<i>Crataegus douglasii</i>	70.1	1.3	21.0	1.2	6.5	1, 6, 8, 19, 46
Fruit		<i>Fragaria virginiana</i>	59.1	3.4	24.6	2.7	10.3	1, 8, 18, 19, 29
Fruit		<i>Juniperus communis</i>	28.5	2.7	45.9	7.5	15.5	6, 8
Fruit		<i>Lonicera involucrata</i>	8.4	7.2	66.5	4.7	13.3	8, 18, 40
Fruit		<i>Lonicera utahensis</i>	8.4	7.2	66.5	4.7	13.3	8, 18, 40
Fruit		<i>Mahonia repens</i>	12.5	10.7	52.4	6.3	18.2	8, 18
Fruit		<i>Prunus virginiana</i>	28.2	7.3	39.7	4.2	20.7	8, 18, 40, 46
Fruit		<i>Rhamnus alnifolia</i>	51.9	3.6	29.6	2.9	12.1	mean fruit

S1 Table (continued).

Food type	Sub-type	Genus or lowest taxa identified	Percent composition (fresh matter basis)					Sources (or substitutions <sup>b</sup> )
			Moisture	Protein	Carbohydrate	Lipid	Non-digestible <sup>a</sup>	
Fruit		<i>Ribes</i>	83.7	1.0	9.0	1.0	5.3	1, 8, 19, 29, 42
Fruit		<i>Rosa</i>	29.7	6.1	35.6	3.6	25.0	1, 6, 18, 19, 42
Fruit		<i>Rubus</i>	72.5	2.2	15.5	1.7	8.0	1, 6, 8, 18, 19, 21, 40, 42, 46
Fruit		<i>Rubus parviflora</i>	72.5	2.2	15.5	1.7	8.0	1, 6, 8, 18, 19, 21, 40, 42, 46
Fruit		<i>Shepherdia canadensis</i>	81.0	1.6	11.3	0.6	5.5	8, 19, 28
Fruit		<i>Sorbus scopulina</i>	73.7	1.4	19.0	1.2	4.9	8, 46
Fruit		<i>Symphoricarpos</i>	3.8	6.1	60.2	4.9	25.1	8, 18, 40
Fruit		<i>Vaccinium</i>	73.4	1.9	18.1	1.5	5.0	1, 8, 19, 21, 28, 40, 42, 46
Fruit		<i>Vaccinium cespitosum</i>	73.4	1.9	18.1	1.5	5.0	1, 8, 19, 21, 28, 40, 42, 46
Fruit		<i>Vaccinium membranaceum</i>	73.4	1.9	18.1	1.5	5.0	1, 8, 19, 21, 28, 40, 42, 46
Fruit		<i>Vaccinium scoparium</i>	73.4	1.9	18.1	1.5	5.0	1, 8, 19, 21, 28, 40, 42, 46
Fungi		Unidentified mushroom	89.5	1.9	5.4	0.5	2.7	1, 29, 43
Insect		Formicidae	61.7	17.1	5.2	9.6	6.4	2, 32, 35, 41, 47
Insect		Unidentified insect	61.7	15.0	1.5	7.3	14.5	50
Insect		Unidentified insect larva	40.3	13.3	35.8	7.7	2.9	3, 5, 48
Insect		Vespidae	61.7	18.3	1.4	8.2	10.4	50
Nut		<i>Pinus albicaulis</i>	5.9	11.7	15.8	25.1	41.5	8, 22, 29, 45
Vertebrate	Large	<i>Alces alces</i>	71.1	19.4	0.0	8.4	1.2	27
Vertebrate	Large	<i>Bison bison</i>	71.1	19.4	0.0	8.4	1.2	27
Vertebrate	Large	<i>Bos taurus</i>	70.3	16.6	0.0	9.0	4.2	9, 36
Vertebrate	Large	<i>Cervus elaphus</i>	71.1	19.9	0.0	8.2	0.8	27, 29
Vertebrate	Large	<i>Cervus elaphus (neonate)</i>	77.7	18.0	0.0	1.4	2.9	Odocoileus (neonate)
Vertebrate	Large	<i>Odocoileus</i>	65.3	16.6	0.0	13.9	4.2	9, 28, 36
Vertebrate	Large	<i>Odocoileus (neonate)</i>	77.7	18.0	0.0	1.4	2.9	9
Vertebrate	Large	<i>Odocoileus hemionus</i>	65.3	16.6	0.0	13.9	4.2	9, 28, 36

S1 Table (continued).

Food type	Sub-type	Genus or lowest taxa identified	Percent composition (fresh matter basis)					Sources (or substitutions <sup>b</sup> )
			Moisture	Protein	Carbohydrate	Lipid	Non-digestible <sup>a</sup>	
Vertebrate	Large	Unidentified Cervidae	71.3	18.5	0.0	8.0	2.3	mean Cervidae
Vertebrate	Large	Unidentified large mammal	71.1	18.3	0.0	8.2	2.4	mean large mammal
Vertebrate	Large	<i>Ursus americanus</i>	71.1	18.3	0.0	8.2	2.4	mean large mammal
Vertebrate	Large	<i>Ursus arctos</i>	71.1	18.3	0.0	8.2	2.4	mean large mammal
Vertebrate	Small	<i>Ondatra zibethicus</i>	82.0	13.1	0.0	2.1	2.8	9
Vertebrate	Small	<i>Tamiasciurus</i>	75.5	16.2	0.2	3.6	4.4	mean small mammal (9, 36)
Vertebrate	Small	<i>Thomomys talpoides</i>	75.5	16.2	0.2	3.6	4.4	mean small mammal (9, 36)
Vertebrate	Small	Unidentified Aves	65.4	24.7	0.0	6.4	3.4	mean Aves
Vertebrate	Small	Unidentified Phasianidae	65.4	24.7	0.0	6.4	3.4	9
Vertebrate	Small	Unidentified small mammal	75.5	16.2	0.2	3.6	4.4	mean small mammal (9, 36)
Vertebrate	Small	Unidentified Aves (egg)	72.0	13.4	2.1	12.5	0.0	42
Vertebrate	Small	Unidentified vertebrate	72.5	18.0	0.1	6.1	3.3	mean small mammal (9, 36)

<sup>a</sup> Non-digestible matter included fiber, ash, and minerals.

<sup>b</sup> When values for some or all constituents were unavailable, mean values for similar food types were substituted as shown.

<sup>c</sup> AGV (above-ground vegetation)

<sup>d</sup> BGV (below-ground vegetation)

## S1 Table (continued).

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## S1 Table (continued).

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