

Table S1. Data for net cost of transport (NCOT, J/m) and body mass (kg) for animals locomoting on the level and at a range of inclines.

Species	Gradient (°)	Mass (kg)	NCOT (J/m)	Reference
<i>Pan troglodytes</i>	0	17.5	87.938	Taylor et al. (1972)
<i>Pan troglodytes</i>	15	17.5	154.770	Taylor et al. (1972)
<i>Mus musculus</i>	0	0.032	1.331	Taylor et al. (1972)
<i>Mus musculus</i>	15	0.032	1.672	Taylor et al. (1972)
<i>Mus musculus</i>	0	0.035	0.950	Snyder and Carello (2008)
<i>Mus musculus</i>	10	0.035	1.259	Snyder and Carello (2008)
<i>Coturnix chinensis</i>	0	0.043	1.219	Snyder and Carello (2008)
<i>Coturnix chinensis</i>	10	0.043	2.256	Snyder and Carello (2008)
<i>Oreortyx pictus</i>	0	0.211	3.350	Snyder and Carello (2008)
<i>Oreortyx pictus</i>	10	0.211	4.623	Snyder and Carello (2008)
<i>Rattus norvegicus</i>	0	0.217	3.010	Snyder and Carello (2008)
<i>Rattus norvegicus</i>	10	0.217	3.620	Snyder and Carello (2008)
<i>Rattus norvegicus</i>	0.6	0.2	3.337	Brooks and White (1978)
<i>Rattus norvegicus</i>	2.9	0.2	3.457	Brooks and White (1978)
<i>Rattus norvegicus</i>	5.7	0.2	3.618	Brooks and White (1978)
<i>Rattus norvegicus</i>	8.5	0.2	3.337	Brooks and White (1978)
<i>Rattus norvegicus</i>	11.3	0.2	3.578	Brooks and White (1978)
<i>Rattus norvegicus</i>	16	0.3	7.538	Armstrong et al. (1983)
<i>Rattus norvegicus</i>	0	0.3	5.306	Armstrong et al. (1983)
<i>Coturnix coturnix</i>	0	0.154	1.359	Warncke et al. (1988)
<i>Coturnix coturnix</i>	4	0.154	2.468	Warncke et al. (1988)
<i>Coturnix coturnix</i>	8	0.154	2.674	Warncke et al. (1988)
<i>Coturnix coturnix</i>	12	0.154	2.167	Warncke et al. (1988)
<i>Rangifer tarandus</i>	6	101.9	441.690	Fancy and White (1987)
<i>Rangifer tarandus</i>	4.9	101.9	352.260	Fancy and White (1987)
<i>Rangifer tarandus</i>	0	101.9	174.423	Fancy and White (1987)
<i>Rangifer tarandus</i>	5.1	96	443.808	White and Yousef (1978)
<i>Rangifer tarandus</i>	2.9	96	270.144	White and Yousef (1978)
<i>Rangifer tarandus</i>	0	96	192.960	White and Yousef (1978)
<i>Tamiasciurus hudsonicus</i>	0	0.252	3.951	Wunder and Morrison (1974)
<i>Tamiasciurus hudsonicus</i>	6	0.252	5.926	Wunder and Morrison (1974)
<i>Tamiasciurus hudsonicus</i>	18	0.252	5.774	Wunder and Morrison (1974)
<i>Tamiasciurus hudsonicus</i>	30	0.252	7.547	Wunder and Morrison (1974)
<i>Tamiasciurus hudsonicus</i>	37	0.252	8.813	Wunder and Morrison (1974)
<i>Leptoptilos crumeniferus</i>	0	4.5	23.048	Bamford and Maloiy (1980)
<i>Leptoptilos crumeniferus</i>	3	4.5	17.286	Bamford and Maloiy (1980)
<i>Leptoptilos crumeniferus</i>	5	4.5	32.897	Bamford and Maloiy (1980)
<i>Leptoptilos crumeniferus</i>	7	4.5	44.220	Bamford and Maloiy (1980)
<i>Leptoptilos crumeniferus</i>	9	4.5	51.657	Bamford and Maloiy (1980)
<i>Leptoptilos crumeniferus</i>	11	4.5	33.634	Bamford and Maloiy (1980)
<i>Lagopus muta</i>	0	0.609	4.937	Lees et al. (2013)
<i>Lagopus muta</i>	4.2	0.723	6.424	Lees et al. (2013)

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<i>Lagopus muta</i>	7.4	0.723	7.930	Lees et al. (2013)
<i>Ovis aries</i>	0	40.9	90.450	Clapperton (1964)
<i>Ovis aries</i>	2.7	40.9	139.786	Clapperton (1964)
<i>Ovis aries</i>	5.1	40.9	189.123	Clapperton (1964)
<i>Branta leucopsis</i>	7	1.79	13.457	Nudds and Codd (2012)
<i>Branta leucopsis</i>	0	1.79	12.345	Nudds and Codd (2012)
<i>Equus caballus</i>	0	431	787.941	Wickler et al. (2000)
<i>Equus caballus</i>	5.8	431	1988.823	Wickler et al. (2000)
<i>Equus caballus</i>	2.9	492	1878.948	Eaton et al. (1995)
<i>Equus caballus</i>	4.3	492	2112.992	Eaton et al. (1995)
<i>Equus caballus</i>	5.8	492	2370.112	Eaton et al. (1995)
<i>Numida meleagris</i>	0	1.44	11.578	Ellerby et al. (2003)
<i>Numida meleagris</i>	5.7	1.44	14.810	Ellerby et al. (2003)
<i>Numida meleagris</i>	11.3	1.44	23.010	Ellerby et al. (2003)
<i>Cervus canadensis</i>	0.46	48.4	223.892	Cohen et al. (1978)
<i>Cervus canadensis</i>	4.2	48.4	262.830	Cohen et al. (1978)
<i>Cervus canadensis</i>	11.7	48.4	330.971	Cohen et al. (1978)
<i>Canis lupus</i>	11.5	12.8	127.868	Raab et al. (1976)
<i>Canis lupus</i>	6.7	12.8	87.990	Raab et al. (1976)
<i>Canis lupus</i>	4.2	12.8	67.665	Raab et al. (1976)
<i>Canis lupus</i>	0	12.8	45.796	Raab et al. (1976)
<i>Panthera leo</i>	17.1	53.5	602.196	Chassin et al. (1976)
<i>Panthera leo</i>	12.6	53.5	408.633	Chassin et al. (1976)
<i>Panthera leo</i>	0	53.5	387.126	Chassin et al. (1976)
<i>Homo sapiens</i>	8.5	70	520.590	Margarita et al. (1963)
<i>Homo sapiens</i>	5.7	70	422.100	Margarita et al. (1963)
<i>Homo sapiens</i>	2.9	70	337.680	Margarita et al. (1963)
<i>Homo sapiens</i>	0	70	281.400	Margarita et al. (1963)
<i>Equus asinus</i>	9.6	253.5	1528.605	Yousef et al. (1972)
<i>Equus asinus</i>	5.7	253.5	815.256	Yousef et al. (1972)
<i>Equus asinus</i>	1.1	253.5	458.582	Yousef et al. (1972)
<i>Equus asinus</i>	0	253.5	254.768	Yousef et al. (1972)
<i>Bos taurus</i>	0	161.5	430.173	Ribeiro et al. (1977)
<i>Bos taurus</i>	6	161.5	655.186	Ribeiro et al. (1977)
<i>Ovis canadensis</i>	0	40.7	200.550	Dailey and Hobbs (1989)
<i>Ovis canadensis</i>	3.5	40.7	302.872	Dailey and Hobbs (1989)
<i>Ovis canadensis</i>	21.5	40.7	858.137	Dailey and Hobbs (1989)
<i>Oreamnos americanus</i>	0	30.7	160.602	Dailey and Hobbs (1989)
<i>Oreamnos americanus</i>	3.4	30.7	247.079	Dailey and Hobbs (1989)
<i>Oreamnos americanus</i>	21.5	30.7	662.481	Dailey and Hobbs (1989)
<i>Cervus elaphus</i>	0	68.3	179.446	Brockway and Gessaman (1977)
<i>Cervus elaphus</i>	7	68.3	332.058	Brockway and Gessaman (1977)
<i>Cervus elaphus</i>	14	68.3	525.038	Brockway and Gessaman (1977)
<i>Homo sapiens</i>	24.2	61.2	1186.859	Minetti et al. (2002)

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<i>Homo sapiens</i>	21.8	61.2	1055.195	Minetti et al. (2002)
<i>Homo sapiens</i>	19.3	61.2	904.721	Minetti et al. (2002)
<i>Homo sapiens</i>	16.7	61.2	784.970	Minetti et al. (2002)
<i>Homo sapiens</i>	11.3	61.2	559.259	Minetti et al. (2002)
<i>Homo sapiens</i>	5.7	61.2	361.763	Minetti et al. (2002)
<i>Homo sapiens</i>	0	61.2	213.171	Minetti et al. (2002)
<i>Pavo cristatus</i>	0	4.58	22.845	Wilkinson et al. (2015)
<i>Pavo cristatus</i>	5	4.58	40.406	Wilkinson et al. (2015)
<i>Pavo cristatus</i>	7	4.58	38.082	Wilkinson et al. (2015)

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