ORIGINAL ARTICLE

The generality of the island rule reexamined

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ABSTRACT

Aim M.V. Lomolino and colleagues have recently reviewed the island rule in mammals and other vertebrates, claiming it is a general pattern. They have portrayed our recent analysis as weakly supporting the island rule, seeing weakness in our use of what they considered to be inadequate size indices (skulls and teeth, rather than mass or body length) and in our use of large islands. They argue that size evolution on islands points to a bauplan-specific fundamental size. We aim to test the generality of the rule and the adequacy of some of the data used to support it.

Location Insular environments world-wide.

Methods We collate and analyse data on skull sizes of carnivores and body masses of mammals in general to see whether there is a graded trend from dwarfism in large species to gigantism in smaller ones.

Results The island rule is not supported with either the carnivore or the mammal data sets. Island area does not influence size change.

Main conclusions Our results suggest that data recently advanced in support of the island rule are inadequate and that the island rule is not a general pattern for all mammals.

Keywords

Bauplan, body mass, body size evolution, carnivores, fundamental size, geographic variation, island area, island rule, size indices, skull length.

INTRODUCTION

Insular elephants are often as small as elephants get. Fossil proboscideans on islands world-wide show remarkable dwarfing compared to mainland ancestors (Hooijer, 1967; Sondaar, 1977; Roth, 1992; Cavarretta *et al.*, 2001). Not all insular elephants are small: Smith *et al.* (2003) list a higher mass for *Elephas maximus* on Sri Lanka than for continental ones; however, dwarfism seems to be the rule for proboscideans and artiodactyls (Sondaar, 1977; Lister, 1989; Endo *et al.*, 2002). Rodents, by contrast, are often relatively large on islands (e.g. Redfield, 1976; Lawlor, 1982; Smith, 1992), although many exceptions are known (e.g. Heaney, 1978; Ganem *et al.*, 1995; Nor, 1996). So it is not just that large mammals are usually smaller on islands (Kurten, 1953), small mammals often grow larger. Van Valen (1973) termed this pattern ‘the island rule’.

Lomolino (1983, 1985, 2005) quantified the direction and magnitude of size change of island mammals, obtaining a trend from gigantism in smaller species to dwarfism in larger ones. Clegg & Owens (2002) and Boback & Guyer (2003) described similar patterns for birds and snakes, respectively. Recently, Lomolino (2005) concluded that the island rule is a general pattern for vertebrate taxa (see also Lomolino *et al.*, 2005). He uses data in Lomolino (1983), the avian and reptilian data mentioned above, an unpublished manuscript on insular chelonians, Krzanowski’s (1967) data on insular bats, and two studies of continental mammal size decrease through time – Flannery (1994) and Schmidt & Jensen (2003). Finally, Lomolino uses our data on insular carnivores (Meiri *et al.*, 2004).

Reptiles and avian patterns aside, we are uncomfortable with Lomolino’s (2005) analysis of mammals and therefore performed new analyses that we hope can shed light on the

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generality of the island rule in mammals. Lomolino (2005, p. 1686) states that 'Meiri *et al.*'s (2004) recent study of skull measurements in the Carnivora also provides results that are consistent with the island rule', and then explains our 'substantial unexplained variation.' He maintains that our using teeth and skulls instead of body mass is likely to have introduced statistical noise related to differences in body shape rather than size between island and mainland populations. Finally, he rightly notes that limiting our data base to population pairs from which we measured at least five specimens from both mainland and island populations largely restricted our analysis to large islands. Such islands may be 'mainland-like' (Lomolino, 2005) and using such islands may reduce the likelihood of detecting a pattern.

Data and measures of insular size

First, we reiterate that we feel that the results of Meiri *et al.* (2004) are inconsistent with the island rule. We obtained a negative correlation between relative insular size and body mass only with one-tailed tests (Meiri *et al.*, 2004, Table 5), and then in only a small minority of our analyses (4 of 45). For CBL (condylo-basal length), a negative correlation between island : mainland size ratio and body mass was significant ($P = 0.047$, one-tailed) only when we use populations with $n \geq 10$ specimens from both islands and mainlands. Using so many specimens forced us to use exactly those data Lomolino (2005) rightfully criticizes as being biased towards large, mainland-like islands.

The question of which variable best represents 'body size' has been contested for years. Mass is intuitively the best index, but mass, even of the same individual, often varies greatly on a seasonal – and even on a daily – basis and depends on reproductive and physical condition. Body length, another common index, is attractive because it measures the whole animal. However, in weasels (from which many data in Meiri *et al.*, 2004, are derived), body length was found to estimate other size variables poorly (Johnson, 1991). Skins also tend to shrink over time, introducing further error, and in addition they are often measured differently in the field than in museums (Mazak *et al.*, 1978; Winker, 1993). At least some studies used by Lomolino (1983) to formulate the island rule report measurements of both fresh and dried skins (e.g. Tate, 1933). Finally, measurements of skulls, teeth and individual bones are the only size indices available for fossil data, yielding some of the most remarkable examples of insular size evolution. We do not believe the differences between Lomolino's results and ours (Meiri *et al.*, 2004) are an artefact of his having used mass and our having used skulls and teeth. Seventy-two of the 90 studies used by Lomolino (1983, 1985) did not report mass, so the pattern reported in these works must derive to a large extent from skin and skull measurements.

Because we remain unconvinced of the rule's generality, at least as far as mammals are concerned, and to test the influence of the size index on patterns obtained, we accept Lomolino's (2005, p. 1684) urge for 'continuing advances in this research area' and examine the rule's predictions using two large data sets of insular and mainland mammals.

MATERIALS AND METHODS

Mass data and the island rule

To test whether a trend from gigantism of small mammals to dwarfism in large ones emerges with body mass as an index of size, we use data from Smith *et al.* (2003), who often report body mass for both insular and mainland conspecifics. Admittedly, Smith et al. did not ensure that data were from adjacent island and mainland populations. However, if the island rule is as prevalent as claimed (Lomolino *et al.*, 2005; Lomolino, 2005), we should expect at least some pattern in a plot spanning taxa from shrews (*Sorex minutissimus*) to elephants (*Elephas maximus*).

We omit from the data of Smith *et al.* (2003) data on extinct, introduced and feral species. We did not use body mass when no references were listed and omitted pinnipeds and sirenians. We use 62,500 g as the mass of insular populations of the bush pig *Potamochoerus larvatus* rather than the 62.5 g erroneously listed in Smith *et al.* (2003). When more than one mainland source existed for the same species, we chose mainland data based on geographic considerations. When more than one insular source existed for the same species, we used all insular populations. We omitted data where the body mass of insular and mainland populations were identical (e.g. all bats); these data probably represent incorrect assignment of the same datum to multiple populations. This procedure, which is liberal because it lowers the probability of obtaining a slope of exactly one, left us with 91 pairs (Appendix S1 in Supplementary Material). We regressed logarithms of insular masses on those of mainland masses, following Lomolino (1985, 2005). If the pattern described by Lomolino were evident in these data, the regression slope would be less than one, whereas a slope of one is predicted under the null expectation.

Island sizes and sample sizes

Lomolino stresses that the island rule should be manifest on small islands, and that it is preferable to use small sample sizes, but limit maximum island area. We concur that sample size *per se* probably does not bias results of the analysis. We therefore re-analyse our carnivore data (Meiri *et al.*, 2004), with special regard to island areas, and relaxing the demands for sample size. We now use all island–mainland pairs for which we have data, no matter the size of the sample.

Our methods of data collection and measurement are described in Meiri *et al.* (2004), supplemented with measurement in collections listed in Meiri *et al.* (2005c). Following Lomolino's (2005, p. 1685) assertion that teeth may be a poorer index than skull length, we use only skull length (CBL) as an index of size. We examine only islands less than either 50,000, 10,000 or 5000 km^2 and test for the effect of island area (data from Meiri *et al.*, 2005a,b). We examine whether the residuals of island vs. mainland body size regressions and their absolute values are correlated with area.

We use both regression techniques suggested by Lomolino (2005): a regression of insular CBL on mainland CBL (expected to have a slope significantly lower than one if the island rule holds), and a regression of island CBL divided by mainland CBL on morphospecies-specific body mass.

RESULTS

For all mammals, the regression slope of insular on mainland body mass in Appendix S1 is 0.977 ± 0.17, which translates to a 95% confidence interval of 0.943–1.01 (two-tailed) or 0.949–1.005 (one-tailed) (Fig. 1). Thus we cannot reject the null hypothesis of no consistent differences between insular and mainland masses.

Our carnivore data comprise 416 population pairs (Appendix S2). The slope of the regression of insular CBL on mainland CBL is 0.9989 ± 0.00488, which does not significantly differ from one (Fig. 2). For islands smaller than 10,000 km^2 ($n = 331$) the slope is 0.9999 ± 0.005, and for islands < 5000 km^2 ($n = 263$) it is 0.9904 ± 0.0065, again not significantly different from one. Island area (log-transformed in all analyses) is not a significant predictor of insular CBL in any of these regressions (all islands: $\beta = 0.03$, $P = 0.60$; islands < 10,000 km^2, $\beta = 0.05$, $P = 0.33$; islands < 5000 km^2, $\beta = 0.002$, $P = 0.73$).

Regressing the ratio of insular CBL to mainland CBL on body mass for the whole data base (Fig. 3) results in a non-significant positive correlation (slope = 0.0124, $\beta = 0.06$, $P = 0.19$). Adding island area to the regression model does not result in a significant relationship for either variable (body mass, $\beta = 0.06$, $P = 0.19$; area, $\beta = -0.004$, $P = 0.93$). Moreover, the relationship between insular to mainland CBL ratio and body mass was not significant when we restricted analysis to islands < 10,000 km^2 (mass alone: $\beta = 0.091$, $P = 0.099$; mass and area: mass, $\beta = 0.09$, $P = 0.10$; area, $\beta = 0.008$, $P = 0.89$) or < 5000 km^2 (mass alone: $\beta = 0.077$, $P = 0.21$; mass and area: mass, $\beta = 0.08$, $P = 0.20$; area, $\beta = -0.03$, $P = 0.62$).

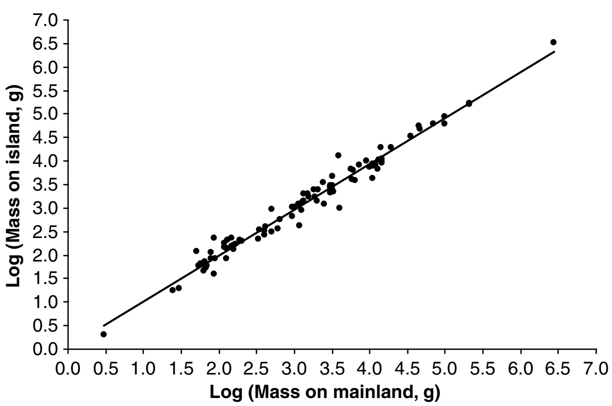

Figure 1 A regression of insular mammal mass on mainland mammal mass. Log insular mass (g) = 0.345 + 0.977 × log mainland mass (g). $R^2 = 0.974$. Data in Appendix S1.

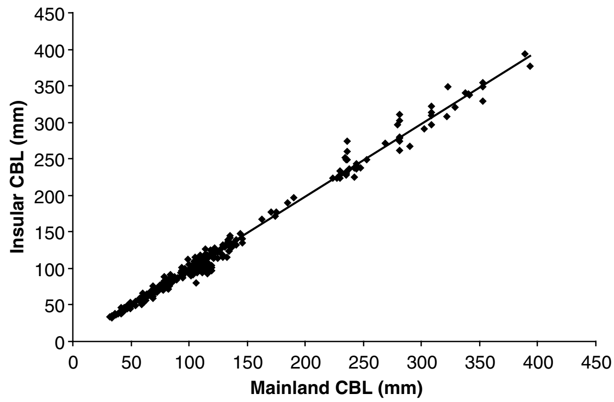

Figure 2 A regression of insular carnivore skull size (Condylo-Basal Length; CBL) on mainland carnivore skull size (CBL). Insular CBL (mm) = −1.635 + 0.99891 × Mainland CBL (mm). $R^2 = 0.99$. Data in Appendix S2.

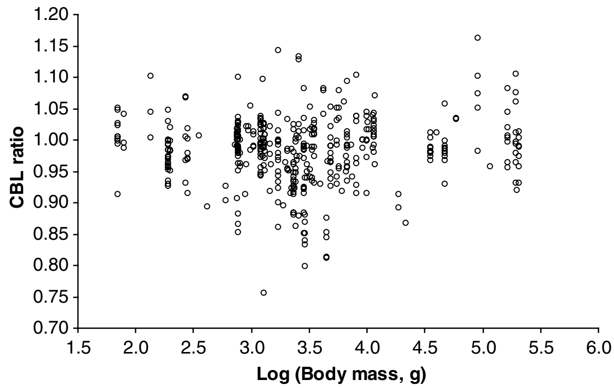

Figure 3 The ratio of insular carnivore skull length (CBL) to mainland carnivore skull length (CBL) vs. morphospecies body mass (log transformed). Data in Appendix S2.

Island area is uncorrelated with size change (island/mainland CBL) (Spearman's $r = -0.04$, $P = 0.37$) or with the absolute value of the term [1 − (size on island/size on mainland)] (Spearman's $r = -0.02$, $P = 0.70$).

An analysis of carnivore families separately again does not support the island rule (Tables 1 and 2). In regressions of insular CBL on mainland CBL, only ursids and viverrids have slopes significantly lower than one. Only bears show a pattern consistent with the island rule in regressions of island : mainland CBL ratio on mass. Correlations for all other carnivore families are positive. When we use either regression technique, canids show a significant pattern in the opposite direction to that predicted; large canids grow larger on islands while small canids grow smaller.

Table 1 Slopes of linear regressions of insular skull length (mm) on mainland skull length (mm) in different carnivore families. Data in Appendix S2

Family	n	Slope	SD
Canidae	59	1.037*	0.018
Felidae	14	0.967	0.028
Herpestidae	10	0.990	0.066
Mustelidae	206	0.994	0.009
Procyonidae	21	1.053	0.067
Ursidae	29	0.824*	0.059
Viverridae	77	0.854*	0.063

*Slope significantly different from one ($P < 0.05$).

Table 2 Spearman rank correlations of carnivore skull size (CBL) ratio on the logarithm of morphospecies body mass in different carnivore families. Data in Appendix S2

Family	n	Spearman r	P
Canidae	59	0.425	0.001
Felidae	14	0.335	0.242
Herpestidae	10	0.116	0.749
Mustelidae	206	0.103	0.139
Procyonidae	21	0.067	0.774
Ursidae	29	−0.435	0.018
Viverridae	77	0.070	0.545

DISCUSSION

We could not reject the null hypothesis that the direction and magnitude of size differences between islands and mainlands are independent of body size on the mainland using either data set. It seems that use of body mass vs. cranial and dental measurements is not why Lomolino (1985) and Meiri *et al.* (2004) obtained different patterns. Skulls (and teeth) are probably the commonest size indexes in biogeography and palaeontology. Some studies from which Lomolino (1983) derived his data explicitly claim skull measurements are superior (Corbet, 1964). Others warn about the accuracy of field measurements (Swarth, 1933). Manning & MacPherson (1958, p. 10) note that 'part of the difference in weight between the three back river specimens and the Banks Island series is undoubtedly due to the inclusion of pregnant and lactating females in the latter'. We do not maintain that cranial or tooth sizes are inherently superior to mass or body lengths, but rather argue that they are not inherently worse size indices either.

We have shown previously that using different carnivore sub-taxa, sexes and size indices results in hugely different estimates of 'optimal' or 'fundamental' size, believed to be indicated by the point where the regression equation of relative insular body size on mainland body size equals one (Lomolino *et al.*, 2005; Lomolino, 2005), ranging from very near zero to just over 18 tons (Meiri *et al.*, 2004). Using data in Appendix S2, we arrive at optimal sizes of 83 g (Viverridae), 1579 g (Procyonidae), 12,015 g (Mustelidae), 18,071 g (Herpestidae), 59,313 g (Canidae), 193,700 g (Ursidae) and 360,716 (Felidae). Viverrids and mongooses have never reached their proposed fundamental sizes, and only the largest felids, canids and mustelids do so. Furthermore, for carnivores (mink, otters and bears) hunting aquatic prey, the regression of relative insular body size on mainland body size equals one at a size of 5 g. Using the same grouping, Lomolino (2005) arrived at a figure 40,000 times higher (208,485 g). Using lower or higher taxa than those chosen by Lomolino (2005) would probably have substantially altered the fundamental sizes obtained. Solving $a + bx = x$ in a regression of data in Appendix S1 results in a fundamental size for mammals of 31 g. In sum, we find little in the size evolution of insular carnivores and other mammals to suggest an optimal size.

Our results suggest that the island rule does not apply to carnivores. Nor do we think it applies to bears – the ursid pattern probably rests on the shoulders of giant insular black bears, *Ursus americanus* Pallas, rather than on those of dwarf grizzlies (*Ursus arctos* L.). In fact, both bear species are on average larger on islands than on the adjacent mainland. Food availability may drive size patterns in these populations. P. Raia and S. Meiri (unpubl. data) suggest that ungulates usually exhibit dwarfism on islands, while carnivore size is closely related to the relative abundance and size spectrum of available resources. Under this scenario, the island rule would not be a general property for all mammalian taxa. Because many authors have at least partially attributed the island syndrome to a change in predation pressure (e.g. Smith, 1992; Michaux *et al.*, 2002), it is unsurprising that the rule does not apply to carnivores. Our analysis of the data of Smith *et al.* (2003) suggests ancestral body size may not be of overwhelming importance for other mammalian clades. Case (1978) and Lawlor (1982) sought to explain size evolution in terms of the biological attributes of different taxa, rather than in terms of ancestral body size. We believe that this issue merits more attention than it has received.

Size patterns in insular bats and size change through time

Lomolino (2005, p. 1684) stated that 'especially during the last decade, numerous authors have studied body size patterns in …vertebrates inhabiting islands' and present data on insular size changes in megachiropteran bats (Krzanowski, 1967) and size changes through time in Danish and Australian mammals. We are uneasy about using forearm length as a size index for insular volant vertebrates. Wing length is closely related to flight behaviour, which often differs between islands and mainlands. Darwin (1859) elaborated on this in the paragraph of '*The Origin*' just preceding the one quoted by Lomolino (2005, p. 1684), and it remains one of the best-known aspects of the evolution of insular biotas (e.g. McNab, 1994). Lomolino *et al.* (2005, pp. 540–546) treat this as an important and common evolutionary trend on islands and state that birds did not follow the island rule 'when wing length was used as a surrogate for body size' but do show this pattern when bill length and body mass are used (Lomolino *et al.*, 2005, pp. 558–560, data from Clegg & Owens, 2002). Specifically for insular vs. mainland bats, Iliopoulou-Georgudaki (1986) found an inverse correlation between wing length and wind speed, and Jacobs (1996) found wing size differences associated with differences in foraging strategy. The intriguing question of bat size evolution on islands should probably be explored using size indices unrelated to flight.

Other data used by Lomolino relate to patterns of size change through time: Pleistocene/Holocene dwarfism in Australian marsupials (Flannery, 1994, data from Marshall & Corruccini, 1978), and size changes in recent Danish mammals (Schmidt & Jensen, 2003). We are not sure that these data can shed much light on size evolution on islands, as both these studies are of mainland mammals only. Climatic changes may cause dwarfing, in accordance with the finding that Bergmann's rule is manifest in large mammals more than in small ones (Meiri & Dayan, 2003). Different hunting pressures on different sized animals may also cause different rates of dwarfism (Pregill, 1986). Yom-Tov (2003), studying size change in Israeli carnivores, showed that larger species increased in size more than smaller ones did; thus, patterns of size change through time in mainland mammals do not, as a rule, show dwarfism in large species and gigantism in smaller ones. Patterns of recent size change in mainland mammals are extremely difficult to ascribe unambiguously to fragmentation, rather than to global climate change or increased food availability (Yom-Tov, 2001, 2003).

CONCLUSIONS

We agree with Lomolino (2005) that the island rule should be critically re-examined, for mammals as well as for other vertebrate and invertebrate taxa. Whether a single, general pattern will emerge or a much more complicated one (see e.g. Case, 1978) remains to be established.

While some taxa may well follow the island rule, such generalizations warrant great caution (Lawlor, 1982). Carnivores do not seem to adhere to this rule (Meiri *et al.*, 2004, this study), and as does Lomolino (2005) we encourage further investigation into the generality of the pattern, but we also urge that greater attention be paid to attributes such as diet (Lawlor, 1982), behaviour (Case, 1978), community composition (Smith, 1992; Dayan & Simberloff, 1998) and phylogeny.

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SUPPLEMENTARY MATERIAL

The following supplementary material is available for this article online:

Appendix S1. Data on body mass of insular and mainland mammals.

Appendix S2. Data on insular and mainland carnivores.

This material is available as part of the online article from http://www.blackwell-synergy.com

BIOSKETCHES

Shai Meiri is a postdoctoral fellow studying macroecological patterns in diverse vertebrate groups. He is interested in the evolution of body size and its implications, in other aspects of functional morphology, and in the biogeographic and morphological implications of predation. Other fields of interest include biogeographic correlates of morphology and the morphological signatures of speciation.

Tamar Dayan is an Associate Professor of Zoology, with a research interest in the evolution of mammals within ecological communities. Her research involves both recent mammals (museum specimens and ecological communities in the field) and fossil and subfossil specimens. Previous morphological studies include character displacement and sexual size dimorphism.

Daniel Simberloff is Nancy Gore Hunger Professor of Environmental Studies. He is interested in biogeography, population and community ecology, evolution and invasion biology – patterns displayed by species introduced outside their geographic ranges, the impacts such species have on the communities they invade, and the means by which such invasions can be managed.

Editor: Bradford Hawkins

Appendix S1 – Body masses of insular and mainland mammals

Data are from Smith, F. A., Lyons, S. K., Morgan Ernest, S. K., Jones, K. E., Kaufman, D. M., Dayan, T., Marquet, P. A., Brown, J. H., And Haskell, J. P. 2003. Body mass of late Quaternary mammals. Ecology, 84: 3403. *Ecological Archives* E084-094.

Continent	Order	Family	Species	mainland mass (g)	island mass (g)
EA	Insectivora	Soricidae	*Sorex minutissimus*	3	2
EA	Rodentia	Muridae	*Chiropodomys gliroides*	25	18
AUS	Diprotodontia	Burramyidae	*Cercartetus caudatus*	30	20
EA	Rodentia	Sciuridae	*Hylopetes spadiceus*	50	119
EA	Rodentia	Muridae	*Maxomys whiteheadi*	54	58
EA	Rodentia	Muridae	*Golunda ellioti*	57	65
AUS	Rodentia	Muridae	*Pogonomys macrourus*	63	45
EA	Rodentia	Muridae	*Niviventer cremoriventer*	66	73
EA	Insectivora	Soricidae	*Suncus murinus*	68	54
EA	Insectivora	Soricidae	*Suncus murinus*	68	54
EA	Scandentia	Tupaiidae	*Tupaia minor*	70	59
EA	Primates	Tarsiidae	*Tarsius bancanus*	78	111
EA	Rodentia	Muridae	*Niviventer fulvescens*	80	84
AF	Insectivora	Soricidae	*Suncus murinus*	87	40
EA	Rodentia	Muridae	*Rattus tanezumi*	87	228
EA	Rodentia	Sciuridae	*Sundasciurus lowii*	90	85
EA	Rodentia	Sciuridae	*Iomys horsfieldi*	120	175
EA	Rodentia	Muridae	*Lenothrix canus*	120	150
EA	Rodentia	Muridae	*Rattus tiomanicus*	128	136
AUS	Diprotodontia	Petauridae	*Petaurus breviceps*	128	85
AUS	Rodentia	Muridae	*Rattus leucopus*	132	212
EA	Rodentia	Muridae	*Maxomys rajah*	150	157
EA	Rodentia	Muridae	*Bandicota bengalensis*	150	227
EA	Scandentia	Tupaiidae	*Tupaia glis*	159	159
EA	Rodentia	Sciuridae	*Pteromys volans*	158	130
EA	Rodentia	Muridae	*Tatera indica*	165	168
EA	Rodentia	Sciuridae	*Callosciurus notatus*	190	205
EA	Rodentia	Sciuridae	*Lariscus insignis*	200	200
EA	Rodentia	Muridae	*Sundamys muelleri*	334	217
AF	Rodentia	Sciuridae	*Heliosciurus undulatus*	347	347
EA	Rodentia	Sciuridae	*Callosciurus prevostii*	400	323
EA	Rodentia	Sciuridae	*Pteromyscus pulverulentus*	400	269
AUS	Diprotodontia	Petauridae	*Dactylopsila trivirgata*	423	404
EA	Rodentia	Muridae	*Bandicota indica*	500	940
EA	Rodentia	Sciuridae	*Sundasciurus hippurus*	500	313
AUS	Rodentia	Muridae	*Hydromys chrysogaster*	606	354
AUS	Rodentia	Muridae	*Uromys caudimaculatus*	646	568
EA	Carnivora	Mustelidae	*Melogale moschata*	939	672
EA	Rodentia	Sciuridae	*Petaurista elegans*	954	1040
EA	Dermoptera	Cynocephalidae	*Cynocephalus variegatus*	1000	1025
EA	Rodentia	Sciuridae	*Ratufa affinis*	1125	1188
EA	Primates	Loridae	*Nycticebus coucang*	1187	420
EA	Rodentia	Sciuridae	*Aeromys tephromelas*	1250	900
EA	Rodentia	Sciuridae	*Ratufa macroura*	1280	1374
EA	Rodentia	Sciuridae	*Petaurista petaurista*	1335	1985
EA	Carnivora	Felidae	*Prionailurus rubiginosus*	1350	1419

Continent	**Order**	**Family**	**Species**	**mainland mass (g)**	**island mass (g)**
EA	Carnivora	Viverridae	*Hemigalus derbyanus*	1500	1968
EA	Rodentia	Hystricidae	*Trichys fasciculata*	1560	1750
EA	Carnivora	Herpestidae	*Herpestes smithii*	1861	1703
AUS	Diprotodontia	Phalangeridae	*Phalanger orientalis*	1850	2488
EA	Carnivora	Herpestidae	*Herpestes brachyurus*	2000	1414
EA	Lagomorpha	Leporidae	*Lepus nigricollis*	2100	2497
EA	Artiodactyla	Tragulidae	*Moschiola meminna*	2450	3426
EA	Carnivora	Mustelidae	*Martes flavigula*	2500	1185
EA	Carnivora	Viverridae	*Viverricula indica*	2980	2686
EA	Carnivora	Viverridae	*Viverricula indica*	2980	2896
EA	Carnivora	Viverridae	*Viverricula indica*	2980	3000
EA	Carnivora	Herpestidae	*Herpestes vitticollis*	2995	2157
EA	Carnivora	Felidae	*Pardofelis marmorata*	3250	2459
EA	Carnivora	Viverridae	*Paradoxurus hermaphroditus*	3200	3027
EA	Primates	Cercopithecidae	*Macaca fascicularis*	3233	4750
EA	Artiodactyla	Tragulidae	*Tragulus javanicus*	3300	2250
EA	Pholidota	Manidae	*Manis crassicaudata*	3900	13015
EA	Carnivora	Mustelidae	*Amblonyx cinereus*	3990	1000
EA	Primates	Hylobatidae	*Hylobates concolor*	5700	6685
EA	Artiodactyla	Tragulidae	*Tragulus napu*	5900	4000
EA	Primates	Cercopithecidae	*Macaca nemestrina*	6093	6500
AUS	Diprotodontia	Phalangeridae	*Spilocuscus maculatus*	6400	3814
EA	Carnivora	Felidae	*Felis chaus*	7257	8172
EA	Carnivora	Viverridae	*Viverra zibetha*	9000	10000
EA	Carnivora	Viverridae	*Viverra tangalunga*	10000	7350
EA	Carnivora	Mustelidae	*Lutra lutra*	11000	4356
EA	Carnivora	Felidae	*Prionailurus viverrinus*	10850	7718
EA	Carnivora	Felidae	*Prionailurus viverrinus*	10850	8853
EA	Carnivora	Canidae	*Canis aureus*	11958	8077
EA	Carnivora	Viverridae	*Arctictis binturong*	13000	6750
EA	Primates	Cercopithecidae	*Trachypithecus johnii*	13400	10442
EA	Artiodactyla	Cervidae	*Muntiacus muntjak*	14000	19777
EA	Primates	Cercopithecidae	*Semnopithecus entellus*	14500	9080
EA	Primates	Cercopithecidae	*Semnopithecus entellus*	14500	11010
EA	Rodentia	Hystricidae	*Hystrix indica*	14650	10222
EA	Carnivora	Felidae	*Neofelis nebulosa*	19500	19852
EA	Artiodactyla	Cervidae	*Axis porcinus*	35000	33256
EA	Carnivora	Ursidae	*Helarctos malayanus*	46000	47000
EA	Carnivora	Felidae	*Panthera pardus*	45500	55615
EA	Artiodactyla	Cervidae	*Axis axis*	70000	62346
AF	Artiodactyla	Suidae	*Potamochoerus larvatus*	97500	62500
EA	Carnivora	Ursidae	*Melursus ursinus*	100000	86260
EA	Artiodactyla	Cervidae	*Cervus unicolor*	211620	160413
EA	Artiodactyla	Cervidae	*Cervus unicolor*	211620	169000
EA	Proboscidea	Elephantidae	*Elephas maximus*	2720000	3305120

Appendix S2 – Data on insular and mainland carnivores

Species	Sex	Island	Mainland	Insular CBL (mm)	Insular n	Mainland CBL (mm)	Mainland n	Island area (km2)	Body mass (g)	Mass source
Alopex lagopus	Female	Flaherty	Quebec 55-60N, W. of 76W	117.05	3	120.18	15	1585	2611	9
Alopex lagopus	Male	Flaherty	Quebec 55-60N, W. of 76W	123.23	5	124.64	16	1585	3368	9
Alopex lagopus	Male	Prince of Wales - Nunavut	Nunavut N. of 68N, 95-100N	119.47	3	127.95	1	33339	3368	9
Alopex lagopus	Male	Southampton	Nunavut N. of 62N, E. of 98W	119.73	24	118.82	2	41214	3368	9
Alopex lagopus	Male	Tukarak	Quebec 55-60N, W. of 76W	122.52	4	124.64	16	349	3368	9
Alopex lagopus	Male	Ymer	Greenland	118.04	3	115.69	24	2437	3368	9
Aonyx cinerea	Male	Bintang	Malay Peninsula	91.02	1	84.34	4	1140	4250	5
Aonyx cinerea	Female	Galang	Malay Peninsula	89.07	1	78.60	2	74	2590	9
Aonyx cinerea	Male	Karimon	Malay Peninsula	91.27	1	84.34	4	131	4250	5
Aonyx cinerea	Female	Laut	Borneo	84.68	1	84.42	9	2057	2590	9
Aonyx cinerea	Female	Palawan	Borneo	85.56	1	84.42	9	12189	2590	9
Aonyx cinerea	Male	Palawan	Borneo	87.35	2	83.90	4	12189	4250	5
Aonyx cinerea	Female	Setoko	Malay Peninsula	88.68	1	78.60	2	17	2590	9
Arctictis binturong	Male	Bangka	Borneo	115.50	1	129.47	6	11330	19000	11
Arctictis binturong	Female	Palawan	Borneo	115.04	1	132.76	10	12189	21900	12
Arctictis binturong	Male	Palawan	Borneo	118.17	1	129.47	6	12189	19000	11
Arctogalidia trivirgata	Female	Banggi	Borneo	93.26	1	102.08	22	441	2346	9
Arctogalidia trivirgata	Female	Bangka	Borneo	95.17	1	102.08	22	11330	2346	9
Arctogalidia trivirgata	Female	Batam	Malay Peninsula	97.18	2	103.33	4	470	2346	9
Arctogalidia trivirgata	Male	Batam	Malay Peninsula	104.21	1	108.56	9	470	2350	2
Arctogalidia trivirgata	Female	Bunguran	Borneo	90.13	2	102.08	22	1485	2346	9
Arctogalidia trivirgata	Male	Bunguran	Borneo	100.09	3	108.05	24	1485	2350	2
Arctogalidia trivirgata	Male	Lingga	Sumatra	93.94	1	106.77	1	889	2350	2
Arctogalidia trivirgata	Male	Pulo kundur	Sumatra	97.77	2	106.77	1	315	2350	2
Arctogalidia trivirgata	Female	Singapore	Malay Peninsula	101.28	1	103.33	4	536	2346	9
Arctogalidia trivirgata	Male	Singapore	Malay Peninsula	104.60	1	108.56	9	536	2350	2
Arctogalidia trivirgata	Female	Singkep	Sumatra	97.51	1	102.95	8	757	2346	9

Species	Sex	Island	Mainland	Insular CBL (mm)	Insular n	Mainland CBL (mm)	Mainland n	Island area (km2)	Body mass (g)	Mass source
Arctogalidia trivirgata	Female	Terutau	Malay Peninsula	91.37	1	103.33	4	151	2346	9
Arctogalidia trivirgata	Male	Terutau	Malay Peninsula	100.63	1	108.56	9	151	2350	2
Atilax paludinosus	Male	Pemba	E. Africa 3-7S, E. of 37E	95.61	1	102.87	4	890	4005	12
Bassariscus astutus	Female	Espiritu Santo	Baja California Sur	73.79	8	72.25	12	100	939	12
Bassariscus astutus	Male	Espiritu Santo	Baja California Sur	76.10	6	75.52	8	100	1320	12
Bassariscus astutus	Female	San Jose	Baja California Sur	73.28	6	72.25	12	194	939	12
Bassariscus astutus	Male	San Jose	Baja California Sur	75.18	6	75.52	8	194	1320	12
Bdeogale crassicauda	Male	Zanzibar	E. Africa 4-8S, E. of 37E	83.58	1	86.74	1	1575	1960	12
Canis latrans	Female	Magdalena	Baja California Sur	166.82	1	162.23	11	290	10200	9
Canis latrans	Male	Magdalena	Baja California Sur	177.47	2	170.74	7	290	11350	9
Canis latrans	Male	Tiburon	Sonora	171.88	2	174.15	2	1208	11350	9
Canis lupus	Female	Axel Heidberg	Ellesmere	224.04	1	223.24	6	43178	35412	9
Canis lupus	Male	Axel Heidberg	Ellesmere	235.64	1	237.93	7	43178	47216	9
Canis lupus	Male	Gambier	NW America W. of the Rockies, 47-55N	236.96	1	242.22	4	70	47216	9
Canis lupus	Male	Heceta	Prince of Wales	249.25	1	235.56	11	189	47216	9
Canis lupus	Female	Kosciusko	Prince of Wales	223.17	1	227.30	15	482	35412	9
Canis lupus	Female	Kuiu	NW America W. of the Rockies, 55-60N	232.15	5	234.81	3	1933	35412	9
Canis lupus	Male	Kuiu	NW America W. of the Rockies, 55-60N	237.14	2	243.67	3	1933	47216	9
Canis lupus	Female	Kupreanof	NW America W. of the Rockies, 55-60N	229.69	4	234.81	3	2822	35412	9
Canis lupus	Male	Kupreanof	NW America W. of the Rockies, 55-60N	240.61	2	243.67	3	2822	47216	9
Canis lupus	Female	Prince of Wales	NW America W. of the Rockies, 55-60N	227.30	15	234.81	3	6675	35412	9
Canis lupus	Male	Prince of Wales	NW America W. of the Rockies, 55-60N	235.56	11	243.67	3	6675	47216	9
Canis lupus	Female	Quadra	NW America W. of the Rockies, 47-54N	232.86	1	230.27	3	270	35412	9

Species	Sex	Island	Mainland	Insular CBL (mm)	Insular n	Mainland CBL (mm)	Mainland n	Island area (km2)	Body mass (g)	Mass source
Canis lupus	Female	Read	NW America W. of the Rockies, 47-54N	224.06	1	230.27	3	408	35412	9
Canis lupus	Male	Read	NW America W. of the Rockies, 47-54N	225.20	1	242.22	4	408	47216	9
Canis lupus	Female	Revillagigedo	NW America W. of the Rockies, 55-60N	230.38	3	234.81	3	3024	35412	9
Canis lupus	Male	Revillagigedo	NW America W. of the Rockies, 55-60N	240.07	3	243.67	3	3024	47216	9
Canis lupus	Female	Vancouver Island	NW America W. of the Rockies, 47-54N	227.29	27	230.27	3	33800	35412	9
Canis lupus	Male	Vancouver Island	NW America W. of the Rockies, 47-55N	237.73	35	242.22	4	33800	47216	9
Canis lupus	Female	Wrangell	NW America W. of the Rockies, 55-60N	230.37	4	234.81	3	569	35412	9
Canis lupus	Male	Wrangell	NW America W. of the Rockies, 55-60N	243.42	6	243.67	3	569	47216	9
Eira barbara	Female	Trinidad	S. America N. of 6N, 58-66W	101.47	1	105.01	5	5009	4550	9
Eira barbara	Male	Trinidad	S. America N. of 6N, 58-66W	104.61	3	113.94	3	5009	6115	9
Felis bengalensis	Female	Bali	Java	75.63	1	75.94	24	5620	2450	4
Felis bengalensis	Male	Bali	Java	76.61	5	80.68	18	5620	3050	4
Felis bengalensis	Female	Hainan	Asia, 15-25N, E. of 105E	80.77	4	84.60	2	33940	2450	4
Felis bengalensis	Male	Hainan	Asia, 15-25N, E. of 105E	83.57	1	86.99	8	33940	3050	4
Felis bengalensis	Female	Palawan	Borneo	72.04	1	77.26	6	12189	2450	4
Felis bengalensis	Male	Palawan	Borneo	78.20	3	78.92	12	12189	3050	4
Felis bengalensis	Female	Pinang	Malay Peninsula	71.16	1	82.53	6	295	2450	4
Felis bengalensis	Female	Singapore	Malay Peninsula	78.24	2	82.53	6	536	2450	4
Felis bengalensis	Male	Taiwan	China S. of 30N, E. of 110E	84.16	1	89.52	8	34507	3050	4
Felis concolor	Male	Nootka	Vancouver Island	197.20	1	190.52	10	510	59500	13
Felis concolor	Female	Vancouver Island	NW America W. of the Rockies, 47-55N	177.29	13	175.30	1	33800	39850	13
Felis concolor	Male	Vancouver island	NW America W. of the Rockies, 47-55N	190.52	10	184.55	2	33800	59500	13

Species	Sex	Island	Mainland	Insular CBL (mm)	Insular n	Mainland CBL (mm)	Mainland n	Island area (km2)	Body mass (g)	Mass source
Galerella sanguinea	Female	Zanzibar	E. Africa 4-8S, E. of 37E	56.40	1	63.08	1	1575	421	12
Gulo gulo	Female	Mitkof	NW America W. of the Rockies, 55-60N	133.10	1	136.75	2	547	6600	9
Gulo gulo	Male	Mitkof	NW America W. of the Rockies, 55-60N	140.10	1	145.90	2	547	11753	9
Gulo gulo	Female	Vancouver Island	NW America W. of the Rockies, 47-55N	131.49	2	138.45	1	33800	6600	9
Gulo gulo	Male	Vancouver Island	NW America W. of the Rockies, 47-55N	144.46	2	135.03	3	33800	11753	9
Hemigalus derbyanus	Female	South Pagai	Sumatra	90.71	2	101.32	5	987	1909	9
Hemigalus derbyanus	Male	South Pagai	Sumatra	92.63	3	100.37	11	987	2375	10
Herpestes javanicus	Female	Hainan	Asia, 15-25N, E. of 105E	64.29	7	67.58	4	33940	2125	9
Herpestes javanicus	Male	Hainan	Asia, 15-25N, E. of 105E	70.15	3	74.03	20	33940	2450	9
Herpestes javanicus	Male	Madura	Java	80.68	1	80.55	28	4560	2450	9
Herpestes urva	Female	Hainan	Asia, 15-25N, E. of 105E	93.53	1	95.00	3	33940	2250	14
Herpestes urva	Male	Hainan	Asia, 15-25N, E. of 105E	95.66	1	97.47	1	33940	1312	9
Herpestes urva	Female	Taiwan	China S. of 30N, E. of 110E	87.54	10	94.82	5	34507	2250	14
Herpestes urva	Male	Taiwan	China S. of 30N, E. of 110E	89.91	5	94.56	5	34507	1312	9
Lontra canadensis	Male	Admiralty	NW America W. of the Rockies, 55-60N	122.24	2	120.61	4	4310	11577	9
Lontra canadensis	Female	Baranof	NW America W. of the Rockies, 55-60N	116.91	8	121.19	2	4163	6700	12
Lontra canadensis	Male	Baranof	NW America W. of the Rockies, 55-60N	122.28	8	120.61	4	4163	11577	9
Lontra canadensis	Female	Cape Breton	Canada S. of 52N, E. of 65W	111.26	2	110.90	20	10280	6700	12
Lontra canadensis	Male	Cape Breton	Canada S. of 52N, E. of 65W	116.00	1	114.02	26	10280	11577	9
Lontra canadensis	Female	Chichagof	NW America W. of the Rockies, 55-60N	119.61	8	121.19	2	5449	6700	12
Lontra canadensis	Male	Chichagof	NW America W. of the Rockies, 55-60N	121.66	6	120.61	4	5449	11577	9
Lontra canadensis	Female	Graham	NW America W. of the Rockies, 53-58N	113.22	1	121.19	2	6361	6700	12

Species	Sex	Island	Mainland	Insular CBL (mm)	Insular n	Mainland CBL (mm)	Mainland n	Island area (km2)	Body mass (g)	Mass source
Lontra canadensis	Male	Graham	NW America W. of the Rockies, 53-58N	116.82	1	119.19	2	6361	11577	9
Lontra canadensis	Male	Halleck	Baranof	126.34	1	122.28	8	33	11577	9
Lontra canadensis	Male	Krestof	NW America W. of the Rockies, 55-60N	123.29	1	120.61	4	28	11577	9
Lontra canadensis	Female	Kruzof	Baranof	115.69	1	116.91	8	447	6700	12
Lontra canadensis	Male	Kruzof	Baranof	121.26	1	122.28	8	447	11577	9
Lontra canadensis	Male	Kuiu	NW America W. of the Rockies, 55-60N	121.24	1	120.61	4	1933	11577	9
Lontra canadensis	Female	Marble	Prince of Wales	116.97	1	116.01	4	23	6700	12
Lontra canadensis	Female	Montague	NW America S. of 62N, 143-152W	113.54	1	112.03	4	850	6700	12
Lontra canadensis	Female	Moresby	NW America W. of the Rockies, 53-58N	115.90	1	121.19	2	2636	6700	12
Lontra canadensis	Male	Moresby	NW America W. of the Rockies, 53-58N	119.78	1	119.19	2	2636	11577	9
Lontra canadensis	Female	Prince of Wales	NW America W. of the Rockies, 55-60N	116.01	4	121.19	2	6675	6700	12
Lontra canadensis	Male	Prince of Wales	NW America W. of the Rockies, 55-60N	124.09	6	120.61	4	6675	11577	9
Lontra canadensis	Female	Vancouver Island	NW America W. of the Rockies, 47-55N	114.75	9	104.91	2	33800	6700	12
Lontra canadensis	Male	Vancouver Island	NW America W. of the Rockies, 47-55N	119.36	3	114.48	10	33800	11577	9
Lontra canadensis	Female	Wrangell	NW America W. of the Rockies, 55-60N	120.26	2	121.19	2	569	6700	12
Lontra provocax	Female	Chiloe	Chile, 40-44S	104.73	1	111.29	1	8394	7500	7
Lutra lutra	Female	South Uist	Britain	114.36	1	107.85	9	434	6339	9
Lutra lutra	Male	South Uist	Britain	117.84	1	115.91	12	434	10292	9
Lutra perspicillata	Female	Langkawi	Malay Peninsula	118.54	1	119.55	3	363	7300	6
Lutra perspicillata	Male	Singapore	Malay Peninsula	127.40	1	121.95	1	536	10000	12
Lutra sumatrana	Female	Laut	Borneo	104.93	1	99.82	2	2057	5500	12

Species	Sex	Island	Mainland	Insular CBL (mm)	Insular n	Mainland CBL (mm)	Mainland n	Island area (km2)	Body mass (g)	Mass source
Martes americana	Female	Admiralty	NW America W. of the Rockies, 55-60N	75.13	2	74.71	11	4310	763	9
Martes americana	Male	Admiralty	NW America W. of the Rockies, 55-60N	83.14	4	81.19	10	4310	1287	9
Martes americana	Male	Baranof	NW America W. of the Rockies, 55-60N	83.30	1	81.19	10	4163	1287	9
Martes americana	Female	Chichagof	NW America W. of the Rockies, 55-60N	75.59	34	74.71	11	5449	763	9
Martes americana	Male	Chichagof	NW America W. of the Rockies, 55-60N	82.62	53	81.19	10	5449	1287	9
Martes americana	Male	Gilford	NW America W. of the Rockies, 47-55N	76.97	4	77.96	45	382	1287	9
Martes americana	Female	Graham	NW America W. of the Rockies, 53-58N	75.50	1	74.12	18	6361	763	9
Martes americana	Male	Graham	NW America W. of the Rockies, 53-58N	79.57	1	80.18	21	6361	1287	9
Martes americana	Male	Kruzof	Baranof	79.97	2	105.88	2	447	1287	9
Martes americana	Male	Kupreanof	NW America W. of the Rockies, 55-60N	81.30	2	81.19	10	2822	1287	9
Martes americana	Female	Louise	Moresby	74.69	9	74.63	16	275	763	9
Martes americana	Male	Louise	Moresby	82.03	7	82.31	34	275	1287	9
Martes americana	Female	Mitkof	NW America W. of the Rockies, 55-60N	73.99	16	74.71	11	547	763	9
Martes americana	Male	Mitkof	NW America W. of the Rockies, 55-60N	80.25	26	81.19	10	547	1287	9
Martes americana	Female	Moresby	NW America W. of the Rockies, 53-58N	74.63	16	74.12	18	2636	763	9
Martes americana	Male	Moresby	NW America W. of the Rockies, 53-58N	82.31	34	80.18	21	2636	1287	9
Martes americana	Female	Prince of Wales	NW America W. of the Rockies, 55-60N	73.96	8	74.71	11	6675	763	9
Martes americana	Male	Prince of Wales	NW America W. of the Rockies, 55-60N	82.72	12	81.19	10	6675	1287	9

Species	Sex	Island	Mainland	Insular CBL (mm)	Insular n	Mainland CBL (mm)	Mainland n	Island area (km2)	Body mass (g)	Mass source
Martes americana	Female	Revillagigedo	NW America W. of the Rockies, 55-60N	73.56	5	81.19	10	3024	763	9
Martes americana	Male	Revillagigedo	NW America W. of the Rockies, 55-60N	82.60	8	81.19	10	3024	1287	9
Martes americana	Female	Vancouver Island	NW America W. of the Rockies, 47-55N	72.64	83	72.06	24	33800	763	9
Martes americana	Male	Vancouver Island	NW America W. of the Rockies, 47-55N	80.01	119	77.96	45	33800	1287	9
Martes flavigula	Female	Taiwan	China S. of 30N, E. of 110E	86.91	2	90.54	2	34507	1471	9
Martes flavigula	Male	Taiwan	China S. of 30N, E. of 110E	92.65	1	101.25	2	34507	2187	9
Martes foina	Male	Crete	Peloponesus	76.26	2	83.13	1	8336	1468	9
Martes foina	Female	Fyn	Jutland	79.05	12	78.05	3	2985	1053	9
Martes foina	Male	Fyn	Jutland	82.36	16	82.90	5	2985	1468	9
Martes foina	Female	Ibiza	Spain S. of 41N, W. of 2W	77.29	1	76.69	1	541	1053	9
Martes foina	Female	Lolland	Jutland	77.19	1	78.05	3	1243	1053	9
Martes foina	Male	Lolland	Jutland	84.63	2	82.90	5	1243	1468	9
Martes foina	Female	Sjaelland	Jutland	77.26	11	78.05	3	7180	1053	9
Martes foina	Male	Sjaelland	Jutland	80.93	10	82.90	5	7180	1468	9
Martes martes	Female	Sardinia	Italy S. of 43N	82.78	1	78.54	1	23833	982	12
Martes martes	Male	Sardinia	Italy S. of 43N	78.44	2	80.80	6	23833	1310	12
Martes martes	Female	Sjaelland	Jutland	79.76	6	81.10	2	7180	982	12
Martes martes	Male	Sjaelland	Jutland	87.78	8	87.05	7	7180	1310	12
Martes melampus	Female	Kyushu	Honshu	75.15	2	78.18	37	36719	900	9
Martes melampus	Male	Kyushu	Honshu	81.34	1	85.10	78	36719	1200	9
Martes melampus	Male	Sado	Honshu	88.32	2	85.10	78	857	1200	9
Martes melampus	Female	Tsushima	Kyushu	76.77	1	75.15	2	689	900	9
Martes melampus	Male	Tsushima	Kyushu	82.66	7	81.34	1	689	1200	9
Meles meles	Male	Crete	Turkey W. of 32E	113.70	1	124.40	1	8336	9925	9
Meles meles	Female	Fyn	Jutland	131.06	2	131.15	53	2985	9135	9
Meles meles	Male	Fyn	Jutland	138.81	1	133.85	55	2985	9925	9

Species	Sex	Island	Mainland	Insular CBL (mm)	Insular n	Mainland CBL (mm)	Mainland n	Island area (km2)	Body mass (g)	Mass source
Meles meles	Male	Kyushu	Honshu	104.34	1	107.29	4	36719	9925	9
Meles meles	Female	Lolland	Jutland	129.39	2	131.15	53	1243	9135	9
Meles meles	Male	Lolland	Jutland	133.88	4	133.85	55	1243	9925	9
Meles meles	Male	Shikoku	Honshu	107.11	2	107.29	4	18765	9925	9
Meles meles	Female	Sjaelland	Jutland	131.24	14	131.15	53	7180	9135	9
Meles meles	Male	Sjaelland	Jutland	136.15	17	133.85	55	7180	9925	9
Melogale moschata	Female	Hainan	Asia, 15-25N, E. of 105E	69.81	8	71.30	6	33940	810	9
Melogale moschata	Male	Hainan	Asia, 15-25N, E. of 105E	72.96	4	75.88	2	33940	796	9
Melogale moschata	Female	Taiwan	China S. of 30N, E. of 110E	71.66	28	71.68	7	34507	810	9
Melogale moschata	Male	Taiwan	China S. of 30N, E. of 110E	73.09	22	76.30	5	34507	796	9
Mustela erminea	Female	Admiralty	NW America W. of the Rockies, 55-60N	36.56	8	36.52	15	4310	70	9
Mustela erminea	Male	Admiralty	NW America W. of the Rockies, 55-60N	42.15	18	42.83	31	4310	193	9
Mustela erminea	Male	Afognak	kodiak	42.97	1	44.20	14	1809	193	9
Mustela erminea	Male	Baranof	NW America W. of the Rockies, 55-60N	41.31	4	42.83	31	4163	193	9
Mustela erminea	Male	Barter	Alaska N. of 69N, 142-146W	45.35	1	45.32	6	38	193	9
Mustela erminea	Female	Cape Breton	Canada S. of 52N, E. of 65W	36.05	4	35.85	3	10280	70	9
Mustela erminea	Male	Cape Breton	Canada S. of 52N, E. of 65W	42.40	9	43.60	4	10280	193	9
Mustela erminea	Male	Charlton Island	Quebe, S. of 54N, W of 79W	46.16	1	44.07	1	93	193	9
Mustela erminea	Male	Chichagof	NW America W. of the Rockies, 55-60N	41.18	5	42.83	31	5449	193	9
Mustela erminea	Female	Douglas	NW America W. of the Rockies, 55-60N	36.67	1	36.52	15	203	70	9
Mustela erminea	Male	Etolin	NW America W. of the Rockies, 55-60N	39.82	1	42.83	31	889	193	9
Mustela erminea	Female	Falster	Sjaelland	42.65	1	43.41	20	514	198	9
Mustela erminea	Male	Falster	Sjaelland	46.62	1	48.02	19	514	282	9
Mustela erminea	Female	Fyn	Jutland	42.78	3	43.51	6	2985	198	9
Mustela erminea	Male	Fyn	Jutland	47.22	7	47.16	8	2985	282	9

Species	Sex	Island	Mainland	Insular CBL (mm)	Insular n	Mainland CBL (mm)	Mainland n	Island area (km2)	Body mass (g)	Mass source
Mustela erminea	Male	Graham	NW America W. of the Rockies, 53-58N	40.98	4	42.91	21	6361	193	9
Mustela erminea	Female	Heceta	Prince of Wales	37.29	1	36.31	1	189	70	9
Mustela erminea	Female	Islay	Britain	46.40	3	45.51	65	622	198	9
Mustela erminea	Male	Islay	Britain	48.27	6	49.33	82	622	282	9
Mustela erminea	Female	Jersey	France N. of 46N W. of Greenwich	43.22	1	45.43	1	117	198	9
Mustela erminea	Male	Jersey	France N. of 46N W. of Greenwich	45.30	3	49.49	1	117	282	9
Mustela erminea	Female	Kodiak	Alaska S. of 61N, 150-160W	37.93	4	41.57	9	9293	70	9
Mustela erminea	Male	Kodiak	Alaska S. of 61N, 150-160W	44.20	14	44.91	13	9293	193	9
Mustela erminea	Male	Lolland	Jutland	45.66	1	47.16	8	1243	282	9
Mustela erminea	Female	Mitkof	NW America W. of the Rockies, 55-60N	37.37	9	36.52	15	547	70	9
Mustela erminea	Male	Mitkof	NW America W. of the Rockies, 55-60N	42.74	18	42.83	31	547	193	9
Mustela erminea	Female	Moresby	NW America W. of the Rockies, 53-58N	36.52	1	36.58	11	2636	70	9
Mustela erminea	Male	Moresby	NW America W. of the Rockies, 53-58N	41.15	1	42.91	21	2636	193	9
Mustela erminea	Female	Prince of Wales	NW America W. of the Rockies, 55-60N	36.31	1	36.52	15	6675	70	9
Mustela erminea	Male	Prince of Wales	NW America W. of the Rockies, 55-60N	42.55	24	42.83	31	6675	193	9
Mustela erminea	Male	Revillagigedo	NW America W. of the Rockies, 55-60N	39.69	1	42.83	31	3024	193	9
Mustela erminea	Male	Saltspring	Vancouver Island	36.32	2	37.28	17	181	193	9
Mustela erminea	Female	Sjaelland	Jutland	43.41	20	43.51	6	7180	198	9
Mustela erminea	Male	Sjaelland	Jutland	48.02	19	47.16	8	7180	282	9
Mustela erminea	Female	Southampton	Nunavut N. of 62N, E. of 98W	37.72	6	36.02	2	41214	70	9
Mustela erminea	Male	Southampton	Nunavut N. of 62N, E. of 98W	41.54	13	44.44	4	41214	193	9
Mustela erminea	Male	Suemez	Prince of Wales	41.23	2	42.55	24	153	193	9

Species	Sex	Island	Mainland	Insular CBL (mm)	Insular n	Mainland CBL (mm)	Mainland n	Island area (km2)	Body mass (g)	Mass source
Mustela erminea	Male	Unimak	Alaska Peninsula	46.37	1	45.02	5	4119	193	9
Mustela erminea	Female	Vancouver Island	NW America W. of the Rockies, 47-55N	35.28	7	33.56	14	33800	70	9
Mustela erminea	Male	Vancouver Island	NW America W. of the Rockies, 47-55N	37.28	17	38.93	61	33800	193	9
Mustela erminea	Male	Whidby	NW America W. of the Rockies, 47-55N	38.60	1	38.93	61	445	193	9
Mustela erminea	Male	Wrangell	NW America W. of the Rockies, 55-60N	40.78	1	42.83	31	569	193	9
Mustela erminea	Male	Ymer	Greenland	45.24	2	45.28	12	2437	193	9
Mustela nivalis	Female	Crete	Turkey W. of 30E	39.36	2	39.55	1	8336	80	9
Mustela nivalis	Male	Crete	Turkey W. of 30E	45.71	2	41.51	2	8336	134	9
Mustela nivalis	Female	Falster	Sjaelland	32.93	1	33.35	5	514	80	9
Mustela nivalis	Male	Mallorca	Spain S. of 41N, W. of 1W	39.75	2	39.61	6	3640	134	9
Mustela nivalis	Female	Sjaelland	Jutland	33.35	5	32.02	1	7180	80	9
Mustela nivalis	Male	Sjaelland	Jutland	37.63	9	36.01	3	7180	134	9
Mustela putorius	Male	Aero	Jutland	75.72	1	69.07	17	96	1255	12
Mustela putorius	Male	Fyn	Jutland	67.27	2	69.07	17	2985	1255	12
Mustela putorius	Female	Sjaelland	Jutland	60.76	8	61.26	8	7180	723	12
Mustela putorius	Male	Sjaelland	Jutland	69.23	14	69.07	17	7180	1255	12
Mustela sibirica	Female	Cheju Do	South Korea	49.86	2	53.52	4	1860	272	9
Mustela sibirica	Male	Cheju Do	South Korea	58.38	1	68.54	1	1860	775	9
Mustela sibirica	Male	Iki	Kyushu	58.16	3	59.08	5	135	775	9
Mustela sibirica	Male	Iriomoto	Taiwan	53.79	1	60.98	10	284	775	9
Mustela sibirica	Female	Kyushu	Honshu	49.83	4	46.72	13	36719	272	9
Mustela sibirica	Male	Kyushu	Honshu	59.08	5	57.06	91	36719	775	9
Mustela sibirica	Male	Sado	Honshu	55.84	9	57.06	91	857	775	9
Mustela sibirica	Female	Shikoku	Honshu	45.22	1	46.72	13	18765	272	9
Mustela sibirica	Male	Shikoku	Honshu	54.30	5	57.06	91	18765	775	9
Mustela sibirica	Female	Taiwan	China S. of 30N, E. of 110E	54.23	2	53.96	3	34507	272	9

Species	Sex	Island	Mainland	Insular CBL (mm)	Insular n	Mainland CBL (mm)	Mainland n	Island area (km2)	Body mass (g)	Mass source
Mustela sibirica	Male	Taiwan	China S. of 30N, E. of 110E	60.98	10	63.40	5	34507	775	9
Mustela sibirica	Female	Tsushima	Kyushu	53.23	1	49.83	4	689	272	9
Mustela sibirica	Male	Tsushima	Kyushu	60.68	20	59.08	5	689	775	9
Mustela sibirica	Male	Yakushima	Kyushu	51.15	1	59.08	5	539	775	9
Mustela vison	Female	Admiralty	NW America W. of the Rockies, 55-60N	61.91	3	63.60	9	4310	768	9
Mustela vison	Male	Admiralty	NW America W. of the Rockies, 55-60N	69.20	6	70.51	12	4310	1213	9
Mustela vison	Female	Baranof	NW America W. of the Rockies, 55-60N	63.62	13	63.60	9	4163	768	9
Mustela vison	Male	Baranof	NW America W. of the Rockies, 55-60N	69.90	31	70.51	12	4163	1213	9
Mustela vison	Female	Broughton	NW America W. of the Rockies, 47-55N	61.92	1	60.14	6	128	768	9
Mustela vison	Male	Calvert	NW America W. of the Rockies, 49-55N	66.51	1	66.87	7	329	1213	9
Mustela vison	Male	Cape Breton	Canada S. of 52N, E. of 65W	60.90	1	61.36	1	10280	1213	9
Mustela vison	Female	Chichagof	NW America W. of the Rockies, 55-60N	62.78	7	63.60	9	5449	768	9
Mustela vison	Male	Chichagof	NW America W. of the Rockies, 55-60N	69.44	8	70.51	12	5449	1213	9
Mustela vison	Female	Coronation	Kuiu	63.52	1	64.62	2	91	768	9
Mustela vison	Male	Coronation	Kuiu	68.11	1	72.29	2	91	1213	9
Mustela vison	Female	Esther	Chichagof	63.23	1	62.78	7	133	768	9
Mustela vison	Female	Etolin	NW America W. of the Rockies, 55-60N	63.95	2	63.60	9	889	768	9
Mustela vison	Male	Etolin	NW America W. of the Rockies, 55-60N	68.86	1	70.51	12	889	1213	9
Mustela vison	Female	Hinchinbrook	Alaska S. of 62N, 145-151W	63.28	2	63.19	4	442	768	9
Mustela vison	Male	Hinchinbrook	Alaska S. of 62N, 145-151W	67.27	3	67.66	3	442	1213	9
Mustela vison	Male	King Island (BC)	NW America W. of the Rockies, 47-55N	67.64	1	67.02	10	808	1213	9

Species	Sex	Island	Mainland	Insular CBL (mm)	Insular n	Mainland CBL (mm)	Mainland n	Island area (km2)	Body mass (g)	Mass source
Mustela vison	Female	Kodiak	Alaska S. of 61N, 150-160W	60.88	1	60.06	8	9293	768	9
Mustela vison	Female	Kuiu	NW America W. of the Rockies, 55-60N	64.62	2	63.60	9	1933	768	9
Mustela vison	Male	Kuiu	NW America W. of the Rockies, 55-60N	72.29	2	70.51	12	1933	1213	9
Mustela vison	Female	Kupreanof	NW America W. of the Rockies, 55-60N	62.92	3	63.60	9	2822	768	9
Mustela vison	Male	Kupreanof	NW America W. of the Rockies, 55-60N	69.71	3	70.51	12	2822	1213	9
Mustela vison	Female	Mitkof	NW America W. of the Rockies, 55-60N	65.03	3	63.60	9	547	768	9
Mustela vison	Male	Mitkof	NW America W. of the Rockies, 55-60N	70.60	3	70.51	12	547	1213	9
Mustela vison	Female	Mount Desert Island	Maine	56.74	3	57.31	10	275	768	9
Mustela vison	Male	Mount Desert Island	Maine	62.86	1	61.14	16	275	1213	9
Mustela vison	Female	Nunivak	Alaska 58-62N, W. of 162W	64.35	10	65.48	6	4209	768	9
Mustela vison	Male	Nunivak	Alaska 58-62N, W. of 162W	69.66	11	73.48	21	4209	1213	9
Mustela vison	Female	Price Island	NW America W. of the Rockies, 47-55N	66.19	1	60.14	6	166	768	9
Mustela vison	Female	Prince of Wales	NW America W. of the Rockies, 55-60N	62.69	1	63.60	9	6675	768	9
Mustela vison	Male	Prince of Wales	NW America W. of the Rockies, 55-60N	68.53	2	70.51	12	6675	1213	9
Mustela vison	Female	Revillagigedo	NW America W. of the Rockies, 55-60N	64.06	6	63.60	9	3024	768	9
Mustela vison	Male	Revillagigedo	NW America W. of the Rockies, 55-60N	70.15	3	70.51	12	3024	1213	9
Mustela vison	Female	Sidney	Vancouver Island	60.52	2	61.80	19	9	768	9
Mustela vison	Male	Sidney	Vancouver Island	65.39	1	69.30	25	9	1213	9
Mustela vison	Male	Suemez	Prince of Wales	70.81	1	68.53	2	153	1213	9
Mustela vison	Female	Vancouver Island	NW America W. of the Rockies, 47-55N	61.80	19	60.14	6	33800	768	9

Species	Sex	Island	Mainland	Insular CBL (mm)	Insular n	Mainland CBL (mm)	Mainland n	Island area (km2)	Body mass (g)	Mass source
Mustela vison	Male	Vancouver Island	NW America W. of the Rockies, 47-55N	69.30	25	67.02	10	33800	1213	9
Mustela vison	Female	Wrangell	NW America W. of the Rockies, 55-60N	65.29	2	63.60	9	569	768	9
Mustela vison	Male	Wrangell	NW America W. of the Rockies, 55-60N	72.11	4	70.51	12	569	1213	9
Mydaus javanensis	Female	Bunguran	Borneo	80.37	1	83.76	1	1485	1275	2
Mydaus marchei	Male	Busuanga	Palawan	70.66	1	77.41	3	938	894	9
Nyctereutes procyonoides	Female	Amakusa	Kyushu	107.06	1	104.78	2	610	4900	9
Nyctereutes procyonoides	Female	Kyushu	Honshu	104.78	2	108.73	36	36719	4900	9
Nyctereutes procyonoides	Male	Kyushu	Honshu	109.23	5	110.24	41	36719	4900	9
Nyctereutes procyonoides	Female	Okushiri	Hokkaido	109.58	1	111.91	3	145	4900	9
Nyctereutes procyonoides	Male	Okushiri	Hokkaido	109.77	4	110.83	2	145	4900	9
Nyctereutes procyonoides	Female	Sado	Honshu	103.10	1	108.73	36	857	4900	9
Nyctereutes procyonoides	Male	Sado	Honshu	106.46	1	110.24	41	857	4900	9
Paguma larvata	Male	Singapore	Malay Peninsula	131.90	1	128.75	7	536	2593	9
Paguma larvata	Female	Taiwan	China S. of 30N, E. of 110E	104.16	4	110.81	5	34507	2950	9
Paguma larvata	Male	Taiwan	China S. of 30N, E. of 110E	101.30	3	115.39	2	34507	2593	9
Panthera tigris	Female	Bali	Java	237.06	1	247.57	1	5620	116000	10
Panthera tigris	Male	Bali	Java	266.57	2	289.71	6	5620	198000	10
Paradoxurus hermaphroditus	Female	Balabac	Palawan	94.37	2	95.90	4	306	2841	9
Paradoxurus hermaphroditus	Female	Bali	Java	98.11	4	111.03	31	5620	2841	9
Paradoxurus hermaphroditus	Male	Bali	Java	104.38	6	113.16	16	5620	1725	2
Paradoxurus hermaphroditus	Male	Banggi	Borneo	93.83	1	98.92	23	441	1725	2
Paradoxurus hermaphroditus	Female	Bangka	Borneo	99.83	1	96.50	12	11330	2841	9
Paradoxurus hermaphroditus	Male	Bawean	Java	113.18	1	113.16	16	200	1725	2
Paradoxurus hermaphroditus	Female	Billiton	Sumatra	93.49	1	102.25	16	4833	2841	9
Paradoxurus hermaphroditus	Male	Busuanga	Palawan	95.99	1	96.77	5	938	1725	2
Paradoxurus hermaphroditus	Male	Con Son	Vietnam S. of 12N	96.76	2	107.52	4	51	1725	2
Paradoxurus hermaphroditus	Female	Hainan	Asia, 15-25N, E. of 105E	101.20	1	93.60	7	33940	2841	9

Species	Sex	Island	Mainland	Insular CBL (mm)	Insular n	Mainland CBL (mm)	Mainland n	Island area (km2)	Body mass (g)	Mass source
Paradoxurus hermaphroditus	Male	Hainan	Asia, 15-25N, E. of 105E	112.94	1	98.91	11	33940	1725	2
Paradoxurus hermaphroditus	Female	Kangean	Java	94.45	2	111.03	31	430	2841	9
Paradoxurus hermaphroditus	Male	Kangean	Java	97.32	1	113.16	16	430	1725	2
Paradoxurus hermaphroditus	Male	Langkawi	Malay Peninsula	98.54	1	104.58	30	363	1725	2
Paradoxurus hermaphroditus	Male	Negros	Mindanao	95.35	3	95.49	2	13670	1725	2
Paradoxurus hermaphroditus	Female	North Pagai	Sumatra	94.33	2	102.25	16	530	2841	9
Paradoxurus hermaphroditus	Female	Palawan	Borneo	95.90	4	96.50	12	12189	2841	9
Paradoxurus hermaphroditus	Male	Palawan	Borneo	96.77	5	98.92	23	12189	1725	2
Paradoxurus hermaphroditus	Female	Pinang	Malay Peninsula	100.57	2	101.70	19	295	2841	9
Paradoxurus hermaphroditus	Male	Pinang	Malay Peninsula	109.10	2	104.58	30	295	1725	2
Paradoxurus hermaphroditus	Female	Pulo kundur	Sumatra	103.75	2	102.25	16	315	2841	9
Paradoxurus hermaphroditus	Male	Saint Matthew (Zedetkyi Kyun)	Malay Peninsula	101.17	1	104.58	30	176	1725	2
Paradoxurus hermaphroditus	Female	Simeulue	Sumatra	94.58	3	102.25	16	1754	2841	9
Paradoxurus hermaphroditus	Male	Singapore	Malay Peninsula	106.11	1	104.58	30	536	1725	2
Paradoxurus hermaphroditus	Female	Sipura	Sumatra	99.25	1	102.25	16	601	2841	9
Paradoxurus hermaphroditus	Male	Sipura	Sumatra	100.30	1	107.52	18	601	1725	2
Paradoxurus hermaphroditus	Female	South Pagai	Sumatra	101.19	1	102.25	16	987	2841	9
Paradoxurus hermaphroditus	Female	Telebon	Malay Peninsula	93.77	1	101.70	19	33	2841	9
Paradoxurus hermaphroditus	Female	Terutau	Malay Peninsula	100.16	1	101.70	19	151	2841	9
Paradoxurus hermaphroditus	Male	Terutau	Malay Peninsula	104.21	7	104.58	30	151	1725	2
Paradoxurus hermaphroditus	Female	Tioman	Malay Peninsula	100.58	1	101.70	19	228	2841	9
Paradoxurus hermaphroditus	Male	Tioman	Malay Peninsula	101.75	1	104.58	30	228	1725	2
Potos flavus	Male	Isla Parida	Panama	84.60	1	87.41	8	15	2500	16
Potos flavus	Female	Isla Popa	Panama	83.16	2	84.64	10	53	2050	16
Potos flavus	Male	Isla Popa	Panama	85.15	2	87.41	8	53	2500	16
Potos flavus	Female	Isla San Cristobal	Panama	83.40	1	84.64	10	37	2050	16
Potos flavus	Male	Isla San Cristobal	Panama	87.92	2	87.41	8	37	2500	16
Prionodon linsang	Female	Bangka	Borneo	63.08	1	68.10	2	11330	608	9
Prionodon linsang	Female	Billiton	Sumatra	62.36	1	69.00	1	4833	608	9

Species	Sex	Island	Mainland	Insular CBL (mm)	Insular n	Mainland CBL (mm)	Mainland n	Island area (km2)	Body mass (g)	Mass source
Procyon lotor	Female	Isla Bastimentos	Panama	113.22	1	109.40	9	52	5710	12
Procyon lotor	Male	Isla Bastimentos	Panama	117.62	1	114.23	3	52	8090	12
Procyon lotor	Female	Isla Popa	Panama	114.91	2	109.40	9	53	5710	12
Procyon lotor	Male	Isla Popa	Panama	118.60	4	114.23	3	53	8090	12
Procyon lotor	Female	Isla San Cristobal	Panama	118.06	3	109.40	9	37	5710	12
Procyon lotor	Male	Isla San Cristobal	Panama	126.06	2	114.23	3	37	8090	12
Procyon lotor	Male	Maria Madre	Sinaloa, Jalisco & Nayarit	111.82	2	115.20	5	200	8090	12
Procyon lotor	Female	New Providence	Florida	100.57	4	105.11	23	228	5710	12
Procyon lotor	Male	New Providence	Florida	100.81	3	108.68	20	228	8090	12
Procyon lotor	Male	Sanibel	Florida	112.73	1	108.68	20	44	8090	12
Procyon lotor	Female	Vancouver Island	NW America W. of the Rockies, 47-55N	105.48	18	110.52	3	33800	5710	12
Procyon lotor	Male	Vancouver Island	NW America W. of the Rockies, 47-55N	109.15	17	113.41	4	33800	8090	12
Pseudalopex griseus	Female	Chiloe	Chile, 40-44S	108.85	1	115.81	2	8394	3340	8
Spilogale gracilis	Female	Santa Cruz	California S. of 35N, W. of 117W	51.25	1	50.95	5	294	355	15
Urocyon littoralis	Female	San Clemente	California S. of 35N, W. of 117W	92.57	5	115.87	10	145	2950	8
Urocyon littoralis	Female	San Miguel	California S. of 35N, W. of 117W	98.64	6	115.87	10	37	2950	8
Urocyon littoralis	Male	San Miguel	California S. of 35N, W. of 117W	101.58	3	119.10	15	37	4450	8
Urocyon littoralis	Male	San Nicolas	California S. of 35N, W. of 117W	104.21	1	119.10	15	58	4450	8
Urocyon littoralis	Female	Santa Catalina	California S. of 35N, W. of 117W	100.67	5	115.87	10	194	2950	8
Urocyon littoralis	Female	Santa Catalina	California S. of 35N, W. of 117W	102.02	1	115.87	10	194	2950	8
Urocyon littoralis	Male	Santa Catalina	California S. of 35N, W. of 117W	100.61	6	119.10	15	194	4450	8

Species	Sex	Island	Mainland	Insular CBL (mm)	Insular n	Mainland CBL (mm)	Mainland n	Island area (km2)	Body mass (g)	Mass source
Urocyon littoralis	Female	Santa Cruz	California S. of 35N, W. of 117W	96.46	1	115.87	10	294	2950	8
Urocyon littoralis	Male	Santa Cruz	California S. of 35N, W. of 117W	96.57	5	119.10	15	294	4450	8
Urocyon littoralis	Female	Santa Rosa	California S. of 35N, W. of 117W	97.22	1	115.87	10	217	2950	8
Urocyon littoralis	Male	Santa Rosa	California S. of 35N, W. of 117W	96.83	6	119.10	15	217	4450	8
Ursus americanus	Male	Admiralty	NW America W. of the Rockies, 55-60N	261.78	2	280.94	9	4310	192450	12
Ursus americanus	Female	Anticosti	Canada S. of 52N, E. of 67W	251.71	1	234.47	2	7941	91000	12
Ursus americanus	Male	Chichagof	NW America W. of the Rockies, 55-60N	310.32	1	280.94	9	5449	192450	12
Ursus americanus	Male	Dall	Prince of Wales	290.94	1	302.01	1	658	192450	12
Ursus americanus	Female	Graham	NW America W. of the Rockies, 53-58N	248.31	1	236.37	1	6361	91000	12
Ursus americanus	Male	Graham	NW America W. of the Rockies, 53-58N	296.44	4	279.61	5	6361	192450	12
Ursus americanus	Female	Kuiu	NW America W. of the Rockies, 55-60N	274.77	4	236.37	1	1933	91000	12
Ursus americanus	Male	Kuiu	NW America W. of the Rockies, 55-60N	274.76	7	280.94	9	1933	192450	12
Ursus americanus	Female	Kupreanof	NW America W. of the Rockies, 55-60N	260.46	4	236.37	1	2822	91000	12
Ursus americanus	Male	Kupreanof	NW America W. of the Rockies, 55-60N	279.01	5	280.94	9	2822	192450	12
Ursus americanus	Male	Mitkof	NW America W. of the Rockies, 55-60N	279.96	2	280.94	9	547	192450	12
Ursus americanus	Male	Prince of Wales	NW America W. of the Rockies, 55-60N	302.01	1	280.94	9	6675	192450	12
Ursus americanus	Female	Vancouver Island	NW America W. of the Rockies, 47-55N	248.40	3	253.09	2	33800	91000	12

Species	Sex	Island	Mainland	Insular CBL (mm)	Insular n	Mainland CBL (mm)	Mainland n	Island area (km2)	Body mass (g)	Mass source
Ursus americanus	Male	Vancouver Island	NW America W. of the Rockies, 47-55N	271.96	6	268.88	3	33800	192450	12
Ursus arctos	Female	Admiralty	NW America W. of the Rockies, 55-60N	309.28	20	308.19	6	4310	165500	3
Ursus arctos	Male	Admiralty	NW America W. of the Rockies, 55-60N	348.88	38	353.05	2	4310	207500	12
Ursus arctos	Female	Afognak	kodiak	338.75	2	340.05	13	1809	165500	3
Ursus arctos	Male	Afognak	kodiak	376.51	3	393.42	9	1809	207500	12
Ursus arctos	Female	Baranof	NW America W. of the Rockies, 55-60N	321.66	5	308.19	6	4163	165500	3
Ursus arctos	Male	Baranof	NW America W. of the Rockies, 55-60N	328.72	4	353.05	2	4163	207500	12
Ursus arctos	Female	Chichagof	NW America W. of the Rockies, 55-60N	314.27	10	308.19	6	5449	165500	3
Ursus arctos	Male	Chichagof	NW America W. of the Rockies, 55-60N	354.12	12	353.05	2	5449	207500	12
Ursus arctos	Female	Hinchinbrook	Alaska S. of 62N, 145-151W	348.98	1	322.55	7	442	165500	3
Ursus arctos	Female	Kodiak	Alaska S. of 61N, 150-160W	340.05	13	337.73	21	9293	165500	3
Ursus arctos	Male	Kodiak	Alaska S. of 61N, 150-160W	393.42	9	388.63	19	9293	207500	12
Ursus arctos	Female	Krestof	NW America W. of the Rockies, 55-60N	296.88	1	308.19	6	28	165500	3
Ursus arctos	Male	Kruzof	Baranof	320.35	3	328.72	4	447	207500	12
Ursus arctos	Female	Montague	NW America S. of 62N, 143-152W	307.58	2	321.95	9	850	165500	3
Ursus arctos	Male	Saint Lawrence	Alaska, 62-65N, W. of 158	337.70	1	340.88	1	5135	207500	12
Viverra tangalunga	Male	Bangka	Borneo	106.83	1	113.60	42	11330	3238	2
Viverra tangalunga	Female	Bawal	Borneo	112.24	1	110.50	23	49	3490	1
Viverra tangalunga	Female	Billiton	Sumatra	112.24	1	115.23	4	4833	3490	1
Viverra tangalunga	Male	Billiton	Sumatra	108.91	1	114.27	4	4833	3238	2
Viverra tangalunga	Female	Bunguran	Borneo	113.91	4	110.50	23	1485	3490	1
Viverra tangalunga	Male	Bunguran	Borneo	115.43	5	113.60	42	1485	3238	2
Viverra tangalunga	Female	Laut	Borneo	111.54	1	110.50	23	2057	3490	1

Species	Sex	Island	Mainland	Insular CBL (mm)	Insular n	Mainland CBL (mm)	Mainland n	Island area (km2)	Body mass (g)	Mass source
Viverra tangalunga	Female	Lingga	Sumatra	113.85	1	115.23	4	889	3490	1
Viverra tangalunga	Female	Mindoro	Luzon	111.81	1	110.07	2	9735	3490	1
Viverra tangalunga	Female	Panebangan	Borneo	111.42	1	110.50	23	26	3490	1
Viverra tangalunga	Male	Pinang	Malay Peninsula	125.03	1	118.79	2	295	3238	2
Viverra tangalunga	Female	Rupat	Sumatra	107.34	1	115.23	4	1490	3490	1
Viverra tangalunga	Female	Samar	Luzon	112.96	1	110.07	2	13429	3490	1
Viverra tangalunga	Female	Karimata	Borneo	112.53	1	110.50	23	158	3490	1
Viverra zibetha	Female	Hainan	Asia, 15-25N, E. of 105E	123.40	1	134.80	8	33940	8175	12
Viverricula indica	Female	Bali	Java	94.14	4	92.64	14	5620	2338	9
Viverricula indica	Male	Bali	Java	97.06	2	93.94	14	5620	2075	9
Viverricula indica	Female	Hainan	Asia, 15-25N, E. of 105E	94.33	8	100.80	13	33940	2338	9
Viverricula indica	Male	Hainan	Asia, 15-25N, E. of 105E	95.29	5	100.13	23	33940	2075	9
Viverricula indica	Female	Pinang	Malay Peninsula	96.95	1	94.62	2	295	2338	9
Viverricula indica	Female	Taiwan	China S. of 30N, E. of 110E	92.95	6	100.80	13	34507	2338	9
Viverricula indica	Male	Taiwan	China S. of 30N, E. of 110E	96.29	7	100.95	15	34507	2075	9
Vulpes vulpes	Female	Corsica	Italy 40-44N	124.16	1	134.00	1	8681	4900	9
Vulpes vulpes	Male	Cyprus	Syria	128.27	1	136.21	1	9250	5518	9
Vulpes vulpes	Female	Flaherty	Quebec 55-60N, W. of 76W	135.42	4	135.05	3	1585	4900	9
Vulpes vulpes	Male	Grand Manan	Maine & New Brunswick	134.05	1	135.25	12	137	5518	9
Vulpes vulpes	Female	Kodiak	Alaska S. of 61N, 150-160W	131.94	1	140.64	3	9293	4900	9
Vulpes vulpes	Male	Kodiak	Alaska S. of 61N, 150-160W	148.30	2	143.84	4	9293	5518	9
Vulpes vulpes	Female	Kyushu	Honshu	134.81	1	138.82	5	36719	4900	9
Vulpes vulpes	Male	Kyushu	Honshu	135.29	1	145.66	2	36719	5518	9
Vulpes vulpes	Male	Sardinia	Italy S. of 43N	127.50	3	127.77	2	23833	5518	9
Vulpes vulpes	Female	Tukarak	Quebec 55-60N, W. of 76W	142.11	4	135.05	3	349	4900	9
Vulpes vulpes	Female	Unimak	Alaska Peninsula	139.32	1	140.64	3	4119	4900	9

Body mass data are from: Colon 2002 (1), Davis 1962 (2), Ferguson and McLoughlin 2000 (3), Grassman et al. 2005 (4), Harris 1968 (5), Johnson et al. 2000 (6), Lariviere 1999 (7), Macdonald and Sillero-Zubiri 2004 (8), Meiri, unpublished data (9), Nowak 1999 (10), Rozhnov 1994 (11), Silva and Downing 1995 (12), Sunquist and Sunquist 2002 (13), Van Rompaey 2001 (14), Verts et al. 2001 (15), and Voss et al. 2001 (16).

Data are for males and females separately, unless sex specific mass is unavailable, in which case mass is for unsexed animals.

Island area data are from Meiri et al. (2005a, b).

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