SUPPLEMENTARY METHODS

Assessing possible methodological problems

1. The dataset compiled included inconsistent sampling methodologies [one study (Nakanishi & Izawa 2016) examined stomach contents, while all the others were based upon faecal analysis], sample sizes (number of analysed faeces or stomachs, *n*), and sampling durations (months). To check if these artefacts caused bias in interpreting leopard cat diet bias (Putman 1984: cf. Lozano et al. 2006; Zhou et al. 2011), we performed a permutational multivariate analysis of variance (PERMANOVA) using the R package vegan (Oksanen et al. 2015). We defined sampling as sample size per month (*n*/month) for each study to avoid multicollinearity (Dormann et al. 2013) between the sample size and duration ($r = 0.77$). Across studies, there was no significant influence arising from sampling effort variation (PERMANOVA: $F = 0.88$, $R^2 = 0.08$, $P = 0.450$) and methodology ($F = 1.64$, $R^2 = 0.16$, $P = 0.244$) on RFO per food category. Alternatively, we excluded the study employed stomach contents analysis (Nakanishi & Izawa 2016) and repeated the PERMANOVA and subsequent post-hoc tests to assess differences in diet composition between Iriomote and the mainland (see the main analysis described in Materials and Methods in the main text). This approach produced similar results: PERMANOVA ($F = 10.72$, $R^2 = 0.57$, $P = 0.055$), Chi-squared tests ($P < 0.001$ for small mammals, $P < 0.001$ for reptiles, $P = 0.002$ for amphibians). Consequently, all the 11 studies were used for subsequent analyses (Table S2; Fig. 1).
2. In one study from India, the leopard cat consumed a considerable amount of carrion (16.7% RFO vs 0-5% elsewhere). To investigate whether our results were influenced or biased by dietary intake resulting from consumption of carrion against hunted prey, we also repeated

the main PERMANOVA analysis (see Materials and Methods in the main text) to compare leopard cat food composition between Iriomote and the mainland by removing the food items being considered as carrion (i.e., ungulates). This approach yielded consistently similar results (PERMANOVA: $F = 26.51$, $R^2 = 0.75$, $P = 0.016$), and thereby we discuss the results based on the main results including both hunted prey and carrion.

3. To compare RFO of each food category specifically between mainland sites vs Iriomote, in addition to the Chi-squared test, we also employed likelihood ratio test [*G* test, a more conservative approach, which can reduce the potential for type I error (Malo et al. 2004; Lozano et al. 2006)] and a rank-based method (Mann-Whitney *U* test) to confirm the robustness of the analysis. Alternative approaches also showed that this lack of small mammals on Iriomote (*G* test: $P < 0.001$, Mann-Whitney *U* test: $P = 0.016$) was compensated by consuming more reptiles (*G* test: $P = 0.001$, Mann-Whitney *U* test: $P = 0.028$), and amphibians (*G* test: $P < 0.001$, Mann-Whitney *U* test: $P = 0.021$); with mixed support for a greater consumption of birds (Mann-Witney *U* test: $P = 0.024$; versus *G* test: $P = 0.070$).

Table S1.

A list of 24 dietary studies reviewed on the leopard cat.

Source	Geographical location
Studies that met the screening criteria and were included in the analysis	
Bashir et al. (2014)	Sikkim, Northern India
Chua et al. (2016)	Pulau Tekong, Singapore
Khan (2004)	Ganges Delta, Eastern India/Southern Bangladesh
Lorica and Heaney (2013)	Hacienda Dos Marias, Phillippines
Lee et al. (2014)	Gangwon, Gyeongsangbuk, South Korea
Nakanishi and Izawa (2016)	Iriomote Island, Southern Japan
Rajaratnam et al. (2007)	Sabah, Northern Borneo, Malaysia
Sakaguchi and Ono (1994)	Iriomote Island, Southern Japan
Watanabe (2012)	Iriomote Island, Southern Japan
Tatara and Doi (1994)	Tsushima Island, Western Japan
Watanabe et al. (2003)	Iriomote Island, Southern Japan
Studies that did not meet the screening criteria	
Bao et al. (2005)	Beijing, Northern China
Inoue (1972)	Tsushima Island, Western Japan
Fernandez and De Guia (2011)	La Carlota, Central Philippines
Grassman (2000)	Kaeng Krachan, Central Thailand
Grassman et al. (2005)	Phu Khieo, Northern Thailand
Lee et al. (2013)	Samcheok, Goheung, Gwangju, South Korea
Rabinowitz (1990)	Huai Kha Khaeng, Central Thailand
Díaz-Sacco and Izawa (2013)	Iriomote Island, Southern Japan
Sakaguchi (1994)	Tsushima Island, Western Japan
Japan Wildlife Research Center (1998)	Tsushima Island, Western Japan
Watanabe and Izawa (2005)	Iriomote Island, Southern Japan
Izawa et al. (2000)	NA
Watanabe (2015)	Iriomote Island, Southern Japan

See Materials and Methods in the main text for the inclusion criteria.

Table S2.

Results from the principal components analysis (PCA) of using the seven food categories.

Variables	Factor 1	Factor 2	Factor 3	Factor 4
Small mammals	– 0.50	0.13	0.14	0.15
Other mammals	0.10	0.60	– 0.39	– 0.67
Birds	0.44	0.09	0.47	– 0.05
Reptiles	0.28	– 0.39	– 0.69	0.15
Amphibians	0.48	0.13	– 0.12	0.35
Fishes	0.41	0.38	0.20	0.23
Invertebrates	0.25	– 0.55	0.28	– 0.57

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