Ambio

Electronic Supplementary Material

This supplementary material has not been peer reviewed

Title: **Commensal in conflict: livestock depredation patterns by free-ranging domestic dogs in the Upper Spiti Landscape, Himachal Pradesh, India**

Table S1 Naïve estimates of dog populations in 13 villages. Mark-recapture analysis could not be carried out for 11 villages.

Village	No. of dogs	Sampling method
Lossar	6	Three day sampling
Chichong	1	Three day sampling
Pangmo	2	Three day sampling
Hansa	4	Three day sampling
Hikkim	2	Three day sampling
Langza	3	Three day sampling
Demul	2	Three day sampling
Lara	2	Three day sampling
Rama	1	Three day sampling
Lalung	2	Three day sampling
Lingti	3	Three day sampling
Gete	1	Time constrained search
Tashigang	0	Time constrained search

Table S2

The closure assumption was violated for two villages (Kaza and Shego), indicating that dogs may have moved out before the successive resampling occasions, whereas for two villages (Hull and Kyoto) sample sizes were inadequate to run closure analysis. Although CAPTURE identified the null model (M_o) as the most parsimonious measure of population estimates for seven villages, we preferred to use heterogeneity models (M_h), which had the second highest model selection criterion. Heterogeneity models assume that capture probabilities vary across individual animals, which we believe to be more appropriate for free ranging dogs. In the remaining five villages, heterogeneity (M_h), behavioral (M_b) or combinations of both (M_{hb}) were selected as best models of population estimate.

Estimated abundance and capture probabilities of free-ranging dogs from mark-recapture analysis of 12 villages in the Upper Spiti Landscape

Village	Model	$\hat{p}$	$\hat{N}$	CI	CV	(M+1)	*p-value*[a]
Chicham	Mh	0.58	8	8-14	18.9	7	0.80
Hull	Mb	0.91	10	10-10	0.9	10	-
Kaza	Mh	0.40	317	293-349	4.5	224	0.01*
Kee	Mh	0.45	11	10-18	16.8	9	0.16
Khurik	Mh	0.67	26	24-37	10.5	23	0.74
Kiamo	Mh	0.62	7	7-12	15.1	6	0.29
Kibber	Mh	0.74	18	18-24	8.4	17	0.16
Kyoto	Mh	0.92	4	4-4	0.75	4	-
Lidang	Mbh	0.54	15	15-28	15.1	14	0.65
Rangrik	Mh	0.5	104	94-123	7.2	81	0.16
Shego	Mb	0.91	10	10-10	0.9	10	0.004*
Sumling	Mh	0.7	11	11-17	13.7	10	0.79

$\hat{p}$ = Capture probability, $\hat{N}$ = Population estimate, CI = Confidence Intervals for the population estimate, CV: Coefficient of Variation (%), (M+1) = Number of unique captures

a = *p* values for Close Test

*$p < 0.05$