

Supplementary Material for

Biases in the detection of intentionally poisoned animals: public health and conservation implications from a field experiment

José M. Gil-Sánchez, Natividad Aguilera-Alcalá, Marcos Moleón, Esther Sebastián-González, Antoni Margalida, Zebensui Morales-Reyes, Carlos J. Durá Alemañ, Pilar Oliva-Vidal, Juan M. Pérez-García and José A. Sánchez-Zapata

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Table S1. Species traits considered in the GLMM. We included species weight (mean adult weight in Spain, in kg), color (conspicuous – with presence of black and white or bright black patches – / cryptic – otherwise –), mobility (aerial – birds – / terrestrial – mammals and reptiles –), sociality (social – foraging in large groups or familiar groups – / solitary – foraging alone or in pairs –), and conservation status (endangered / non-endangered).

Group	Species	Weight (kg)	Log weight	Color	Mobility	Sociality	Conservation status
Wild carnivores	<i>Canis lupus</i>	30	1.48	cryptic	terrestrial	social	endangered
	<i>Felis silvestris silvestris</i>	4	0.60	cryptic	terrestrial	solitary	endangered
	<i>Genetta genetta</i>	1.9	0.28	conspicuous	terrestrial	solitary	non-endangered
	<i>Martes foina</i>	1.75	0.24	cryptic	terrestrial	solitary	non-endangered
	<i>Martes martes</i>	1.75	0.24	cryptic	terrestrial	solitary	non-endangered
	<i>Meles meles</i>	7.5	0.88	conspicuous	terrestrial	social	non-endangered
	<i>Vulpes vulpes</i>	6	0.78	cryptic	terrestrial	solitary	non-endangered
Domestic carnivores	<i>Canis lupus familiaris</i>	15	1.18	cryptic	terrestrial	solitary	non-endangered
	<i>Felis silvestris catus</i>	4	0.60	cryptic	terrestrial	solitary	non-endangered
Suids	<i>Sus scrofa</i>	52.98	1.72	cryptic	terrestrial	social	non-endangered
Small mammals	<i>Apodemus sylvaticus</i>	0.025	-1.60	cryptic	terrestrial	solitary	non-endangered
	<i>Crocidura russula</i>	0.008	-2.10	cryptic	terrestrial	solitary	non-endangered
	<i>Eliomys quercinus</i>	0.09	-1.05	conspicuous	terrestrial	solitary	non-endangered
	<i>Erinaceus europaeus</i>	0.8	-0.10	cryptic	terrestrial	solitary	non-endangered
	<i>Rattus spp.</i>	0.3	-0.52	cryptic	terrestrial	solitary	non-endangered
Corvids	<i>Corvus corax</i>	2	0.30	conspicuous	aerial	social	non-endangered
	<i>Corvus corone</i>	0.6	-0.22	conspicuous	aerial	social	non-endangered
	<i>Cyanopica cooki</i>	0.07	-1.15	conspicuous	aerial	social	non-endangered
	<i>Garrulus glandarius</i>	0.19	-0.72	conspicuous	aerial	solitary	non-endangered
	<i>Pica pica</i>	0.24	-0.62	conspicuous	aerial	social	non-endangered
Vultures	<i>Aegypius monachus</i>	9.8	0.99	conspicuous	aerial	social	endangered
	<i>Gypaetus barbatus</i>	6	0.78	conspicuous	aerial	solitary	endangered

Other raptors	<i>Gyps fulvus</i>	8.5	0.93	cryptic	aerial	social	non-endangered
	<i>Neophron percnopterus</i>	2	0.30	conspicuous	aerial	solitary	endangered
	<i>Accipiter gentilis</i>	1	0.00	cryptic	aerial	solitary	non-endangered
	<i>Aquila chrysaetos</i>	4	0.60	cryptic	aerial	solitary	endangered
	<i>Aquila fasciata</i>	2.2	0.34	cryptic	aerial	solitary	endangered
	<i>Bubo bubo</i>	1.75	0.24	cryptic	aerial	solitary	non-endangered
	<i>Buteo buteo</i>	0.73	-0.14	cryptic	aerial	solitary	non-endangered
	<i>Falco tinnunculus</i>	0.225	-0.65	cryptic	aerial	solitary	non-endangered
	<i>Hieraetus pennatus</i>	0.8	-0.10	cryptic	aerial	solitary	non-endangered
	<i>Milvus migrans</i>	0.75	-0.12	cryptic	aerial	social	non-endangered
Other birds	<i>Milvus milvus</i>	1	0.00	cryptic	aerial	social	endangered
	<i>Ciconia ciconia</i>	3.5	0.54	conspicuous	aerial	social	non-endangered
	<i>Erithacus rubecula</i>	0.019	-1.72	cryptic	aerial	solitary	non-endangered
	<i>Parus major</i>	0.018	-1.74	conspicuous	aerial	solitary	non-endangered
	<i>Phoenicurus ochruros</i>	0.016	-1.80	cryptic	aerial	solitary	non-endangered
	<i>Turdus viscivorus</i>	0.13	-0.89	cryptic	aerial	solitary	non-endangered
Reptiles	<i>Timon lepidus</i>	0.25	-0.60	cryptic	terrestrial	solitary	non-endangered
	<i>Lacerta schreiberi</i>	0.026	-1.59	cryptic	terrestrial	solitary	endangered

Table S2. Species and individuals recorded in the “Antídoto Program” database (“Dat.”) and observed feeding upon baits in the field experiment (“Exp.”), by study area. Species considered as endangered according to Spanish national and/or regional laws are indicated by an asterisk.

[illegible]

Other birds	<i>Milvus migrans</i>	0	0	0	1	1	0	0	0	0	0	0	0	1	1
	<i>Milvus milvus*</i>	2	0	10	0	4	1	0	0	0	0	0	0	16	1
	<i>Ciconia ciconia</i>	0	0	6	0	0	0	0	0	0	0	0	0	6	0
	<i>Erithacus rubecula</i>	0	0	0	0	0	0	0	0	0	0	0	2	0	2
	<i>Parus major</i>	0	0	0	0	0	0	0	1	0	0	0	4	0	5
	<i>Phoenicurus ochruros</i>	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Reptiles	<i>Turdus viscivorus</i>	0	1	0	0	0	0	0	0	0	0	0	0	0	1
	<i>Lacerta schreiberi*</i>	0	2	0	0	0	0	0	0	0	0	0	0	0	2
	<i>Timon lepidus</i>	0	0	0	0	0	0	1	1	0	1	5	2	6	4
Total		33	29	116	40	50	53	90	42	95	30	43	48	427	237

Table S3. AIC_c-based model selection to assess the effect of study area (random factor) and weight, color, mobility, sociality, and conservation status of the species on the difference between a) the number of poisoned individuals included in the “Antídoto Program” database and b) the number of individuals recorded consuming the baits in the field experiment. Number of estimated parameters (k), AIC_c values, AIC_c differences (delta-AIC_c) with the highest ranked model (i.e., the one with the lowest AIC_c), and the variability of the response variable that is explained by the fixed factors (R^2) are shown. The selected model is in bold.

Model	k	AIC_c	delta-AIC_c	marginal R^2
weight + color + mobility (+ 1 area)	4	721.6	0	19.69
weight + color + mobility + status (+ 1 area)	5	723.8	2.21	
weight + color + mobility + sociality (+ 1 area)	5	723.9	2.28	
weight + color (+ 1 area)	3	724.5	2.88	
weight (+ 1 area)	2	725.9	4.31	
weight + mobility (+ 1 area)	3	726.0	4.38	
weight + color + sociality (+ 1 area)	4	726.1	4.50	
weight + color + mobility + sociality + status (+ 1 area)	6	726.2	4.55	
weight + color + status (+ 1 area)	4	726.7	5.09	
weight + mobility + sociality (+ 1 area)	4	728.1	6.51	
weight + mobility + status (+ 1 area)	4	728.1	6.51	
weight + sociality (+ 1 area)	3	728.1	6.51	
weight + status (+ 1 area)	3	728.2	6.52	
weight + color + sociality + status (+ 1 area)	5	728.4	6.73	
weight + mobility + sociality + status (+ 1 area)	5	730.2	8.57	
weight + sociality + status (+ 1 area)	4	730.4	8.77	
color + sociality (+ 1 area)	3	731.7	10.04	
color + mobility + sociality (+ 1 area)	4	732.5	10.89	
color + mobility (+ 1 area)	3	733.4	11.81	
color + sociality + status (+ 1 area)	4	733.5	11.88	
color (+ 1 area)	2	733.6	11.95	
color + mobility + sociality + status (+ 1 area)	5	734.7	13.03	
color + status (+ 1 area)	3	735.3	13.71	
color + mobility + status (+ 1 area)	4	735.6	13.94	
(1 area)	1	737.2	15.53	
sociality (+ 1 area)	2	737.7	16.04	
mobility (+ 1 area)	2	739.1	17.50	
status (+ 1 area)	2	739.1	17.50	
sociality + status (+ 1 area)	3	739.7	18.08	
mobility + sociality (+ 1 area)	3	739.8	18.21	
mobility + status (+ 1 area)	3	741.2	19.53	
mobility + sociality + status (+ 1 area)	4	742.0	20.33	