Appendix 1
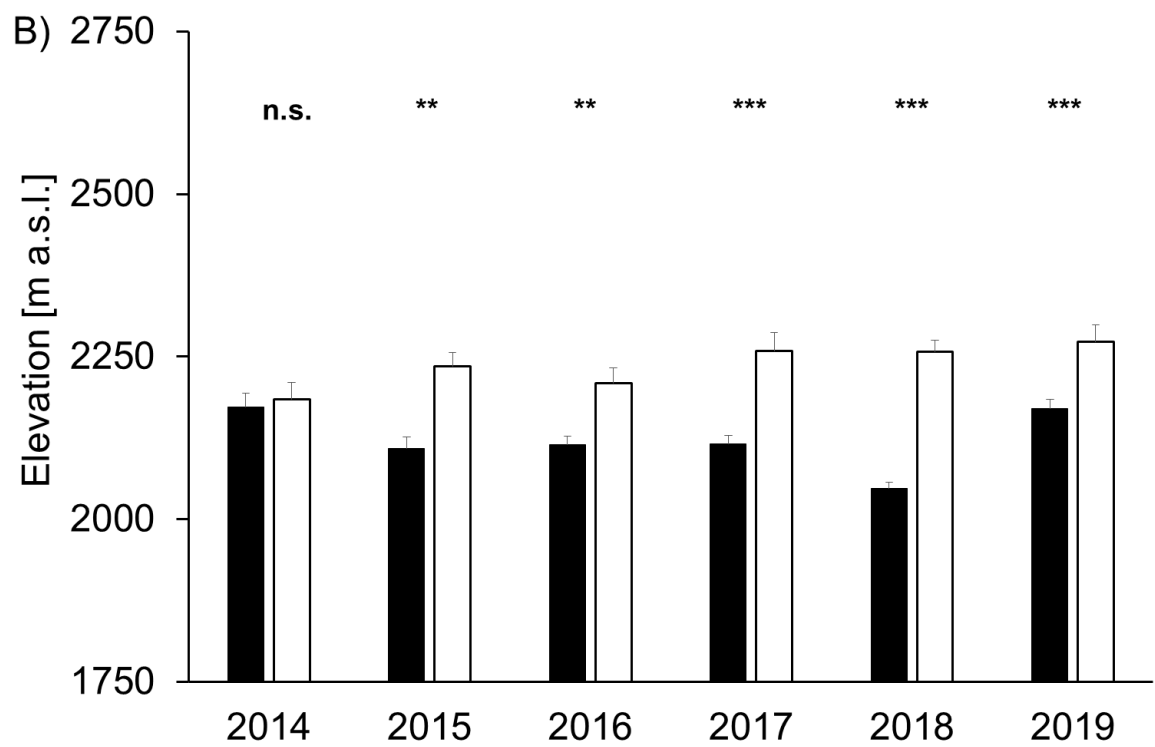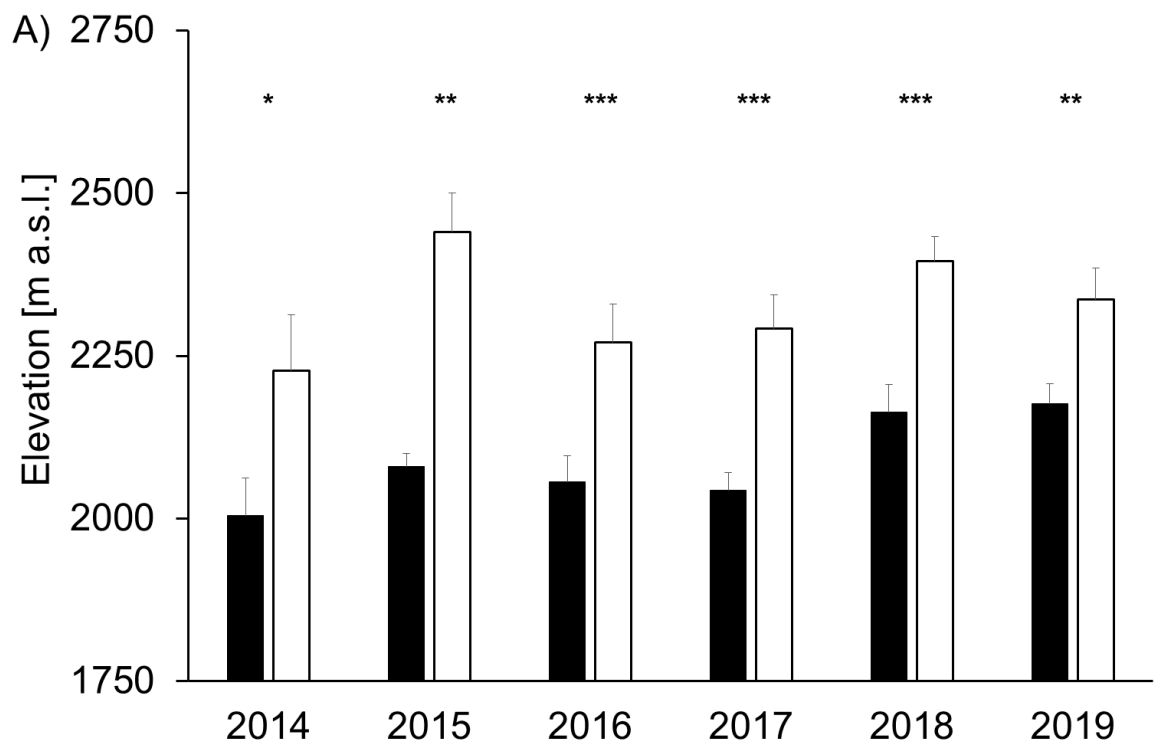
Figure A1. Elevations (mean ± SE) of pellet locations in spring (black) and autumn (white) during A) systematic and B) opportunistic sampling in the Swiss National Park between 2014 and 2019. Analyses were conducted with altitude as the response variable and season as the predictor variables, and individual ID as a random factor to account for individual clustering in samples.

1 Table A1. Results of the used models in analysis of altitudinal shifts for pellet locations and individuals.

Altitudinal shifts	Topic	Model	Unit	Variable	Value	SE	DF	F-value	p-value
Pellet locations	Systematic sampling	lme(pl_altitude ~ season, random=list(~1|IndID,~1|year))	m a.s.l.	(Intercept)	2324.03	24.73	135	11237.6	< 0.001
				season_spring	-162.00	21.82	135	55.1	< 0.001
	Opportunistic sampling	lme(pl_altitude ~ season, random=list(~1|IndID,~1|year))	m a.s.l.	(Intercept)	2302.38	17.69	1055	17401.0	< 0.001
				season_spring	-100.62	7.80	1055	166.3	< 0.001
	Used systematic plots at high plateau	lme(syst2500 ~ season, random=~1|year)	N	(Intercept)	3.33	0.32	5	98.5	< 0.001
				season_spring	-2.17	0.45	5	22.8	< 0.001
	Opportunistic samples found in meadows at high plateau	lme(oppo_meadows2500 ~ season, random=~1|year)	N	(Intercept)	7.83	1.05	5	31.2	0.001
				season_spring	-6.50	1.31	5	24.6	0.004
Individuals	Individuals at high plateau	lme(ind2500 ~ season, random=~1|year)	N	(Intercept)	8.00	1.12	5	62.1	0.001
				season_spring	-3.50	1.59	5	4.9	0.079

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