

Electronic Supplemental Material (ESM)

Table 1. Geographic information for islets sampled

Island name	GPS Location		Area (km^2)	Maximum Island Elevation (m)	Distance from closest landmass (m)	Maximum Water Depth (m)	Duration of isolation (yr)
	North	West					
Ovriokastro	37 °9.1 ′	25 °17.7 ′	0.22	23	732	7.2	5,600
Aspronissi	37 °2.8 ′	25 °21.1 ′	0.01	6	333	11	6,100
Parthenos	37 °1.7 ′	25 °21.6 ′	0.004	9	116	8	5,650
Mando	37 °5.3 ′	25 °21.7 ′	0.025	11	20	0.4	5

*Please note the name of Mando appear as Prokopios in the raw dataset

Table 2. Information on physical aspects of the study sites on Naxos.

Site	Abbreviation	Elevation ($masl.$)	GPS Location		Slope Aspect	Wall Direction
			North	West		
<i>Low Cat Density Sites</i>						
1. South Slope	SO	642	37 °6.5 ′	25 °32.0 ′	South	East to West
2. North Slope	NS	636	37 °6.3 ′	25 °31.6 ′	Northeast	NE to SW
3. Moni Olive	MO	304	37 °4.3 ′	25 °29.3 ′	0	East to West
4. Marina	MR	370	37 °2.2 ′	27 °27.1 ′	Northwest	NE to SW
5. Small Slope	SS	214	37 °2.1 ′	25 °26.9 ′	West	North to South
6. Gas Station	GS	251	37 °2.9 ′	25 °27.4 ′	West	North to South
7. Kanakali	KN	87	37 °3.1 ′	25 °25.7 ′	North	North to South
8. Halkio Olive	HA	224	37 °2.6 ′	25 °28.7 ′	0	North to South
9. Well	WE	170	37 °2.0 ′	25 °25.3 ′	North	East to West

<i>High Cat Density Sites</i>						
10. Glinado	GL	77	37 °4.4	25 °24.1	North	East to West
11. Filoti	FL	361	37 °3.1	25 °29.8	0	NE to SW
12. Vivlos	VI	130	37 °3.7	25 °24.5	West	North to South
13. Plantation	PL	190	37 °2.6	25 °26.2	0	East to West
14. Angidia	AG	11	37 °5.7	25 °26.0	0	North to South
15. Kinidaros	KN	433	37 °6.2	25 °28.7	West	North to South
16. Naxos	NA	95	37 °6.4	25 °22.8	0	North to South
17. Ag. Thaleleos	AT	98	37 °5.8	25 °25.2	South	East to West
18. Vivlos 2	VI2	135	37 °3.7	25 °24.6	South	North to South

Table 3. Comparison of environmental factors in high cat density sites versus low cat density sites on Naxos (Mann-Whitney U test).

	Low cat density sites	High cat density sites	<i>p</i> value
Canopy coverage (%)	0.17±0.09	0.30±0.10	0.436
Understory coverage (%)	0.66±0.03	0.66±0.03	0.863
Understory biomass (g/m ²)	227.94±6.69	243.75±6.25	0.486
Arthropod biomass (g/pitfall)	4.71±1.12	4.95±0.97	0.545

Both vegetation structure and arthropod biomass did not differ between High Cat Density and Low Cat Density sites. We also did not find significant differences in canopy cover (Mann-Whitney U test, $Z=-0.222$, $p=0.436$, $n=27$), understory coverage (Mann-Whitney U test, $Z=-0.808$, $p=0.863$, $n=27$), understory biomass (Mann-Whitney U test $Z=-0.697$, $p=0.486$, $n=27$), and mean arthropod biomass (Mann-Whitney U test, $Z=-0.605$, $p=0.545$, $n=27$) between these two kinds of sites (Table 3). Lastly, there were no differences in the structure of the refugia present, with dry stone wall heights not differing significantly

between high and low density cat sites (High Cat Density vs. Low Cat Density sites:
102.1 \pm 9.35cm vs. 91.1 \pm 4.66cm; Mann-Whitney U test, Z=-.751, p=0.489, n=27).

Table 4. Site characteristics given as means \pm S.E.

Site name	Wall Height (cm)	Canopy Cover (%)	Understory Coverage (%)	Understory Biomass (g/0.16m ²)	Arthropods Biomass (g/pitfall)	Cat Density (cats/km)	Lizard density (lizards/100m wall)
<i>Low Cat Density sites</i>							
South Slope	112.3 \pm 4.1	0.43 \pm 0.03	0.83 \pm 0.03	52.61 \pm 8.41	7.166 \pm 3.627	0	16.3 \pm 1.2
North Slope	79.3 \pm 9.4	0.67 \pm 0.13	0.57 \pm 0.12	22.23 \pm 7.54	8.663 \pm 6.542	0	12.3 \pm 0.7
Moni Olive	107.7 \pm 3.3	0.67 \pm 0.13	0.07 \pm 0.07	1.90 \pm 1.01	0.164 \pm 0.060	0	14.3 \pm 1.2
Marina	83.0 \pm 12.5	0.27 \pm 0.03	0.30 \pm 0.06	10.17 \pm 5.54	1.061 \pm 0.690	0	6.0 \pm 1.0
Small Slope	67.3 \pm 11.8	0.00 \pm 0.00	0.73 \pm 0.03	22.30 \pm 6.40	0.607 \pm 0.274	0	7.7 \pm 0.3
Gas Station	88.7 \pm 7.8	0.03 \pm 0.03	0.97 \pm 0.03	46.26 \pm 12.20	11.304 \pm 2.433	0	8.0 \pm 1.0
Kanakali	93.7 \pm 1.2	0.07 \pm 0.07	0.97 \pm 0.03	54.98 \pm 5.05	5.642 \pm 2.008	0	11.0 \pm 2.1
Halkio olive	98.3 \pm 8.5	0.53 \pm 0.09	0.57 \pm 0.12	46.43 \pm 2.74	0.286 \pm 0.097	0	12.3 \pm 0.7
Well	89.3 \pm 8.1	0.00 \pm 0.00	0.90 \pm 0.06	71.39 \pm 7.66	7.526 \pm 2.665	0	5.0 \pm 1.2
<i>High Cat Density sites</i>							
Glinado	116.7 \pm 15.3	0.03 \pm 0.03	0.70 \pm 0.06	40.31 \pm 5.57	1.759 \pm 0.514	1.3 \pm 0.9	6.3 \pm 1.2
Filoti	97.0 \pm 5.7	0.70 \pm 0.06	0.33 \pm 0.03	25.89 \pm 5.59	0.670 \pm 0.699	3.7 \pm 0.9	8.0 \pm 2.9
Vivlos	57.7 \pm 5.0	0.03 \pm 0.03	0.93 \pm 0.03	54.10 \pm 3.35	2.273 \pm 1.220	1.7 \pm 0.3	7.8 \pm 0.3
Plantation	78.0 \pm 3.2	0.03 \pm 0.03	0.90 \pm 0.06	46.17 \pm 13.37	4.467 \pm 2.011	2.3 \pm 0.9	3 \pm 0.6
Angidia	84.7 \pm 9.9	0.07 \pm 0.07	0.53 \pm 0.07	47.92 \pm 14.66	21.796 \pm 13.666	0.7 \pm 0.3	10.3 \pm 1.8
Kinidaros	122.3 \pm 3.7	0.00 \pm 0.00	0.97 \pm 0.03	64.20 \pm 7.47	2.985 \pm 1.006	0.7 \pm 0.3	4.0 \pm 1.5
Naxos	87.7 \pm 3.8	0.00 \pm 0.00	0.73 \pm 0.03	36.80 \pm 2.25	4.776 \pm 1.789	1.7 \pm 0.3	1 \pm 0.6
Ag.Thaleios	131.7 \pm 7.3	0.03 \pm 0.03	0.47 \pm 0.09	30.53 \pm 2.42	3.613 \pm 0.335	2.3 \pm 0.3	2 \pm 0.6
Vivlos 2	143.3 \pm 12.0	0.60 \pm 0.06	0.37 \pm 0.07	5.12 \pm 1.10	0.820 \pm 0.385	0.3 \pm 0.3	1.7 \pm 1.2

Table 5

Behavioral data and antipredator defenses in the field and in the laboratory. Field autotomy rates were quantified as the fraction of individuals with autotomized tails observed in the field, while laboratory autotomy rate was the fraction of individuals that shed their tails during a standardized autotomy test. Refuge use and approach behaviors in the cat experiment were recorded as mean percentage of refuge use or approaches towards the decoy over the course of three trials.

Site name	Field			Laboratory		Cat Experiment	
	Flight Initiation Distance to Refuge (cm)	Distance to Refuge (cm)	Autotomy Rate (fraction)	Autotomy Rate (fraction)	-Flight Initiation Distance (cm)	Refuge Use (%)	Approaching (%)
<i>Low Cat Density sites</i>							
South Slope	137.0±8.7	30.2±3.1	0.268	0.357	28.6±6.1	0.472±0.059	0.271±0.058
North Slope	119.9±5.8	37.8±4.5	0.100	0.300	24.6±5.0	0.400±0.064	0.200±0.052
Moni	131.4±4.1	60.5±7.7	0.360	0.400	40.2±5.5	0.550±0.065	0.333±0.061
<i>High Cat Density sites</i>							
Glinado	171.5±15.3	27.8±5.4	0.300	0.632	51.5±7.6	0.333±0.061	0.250±0.056
Filoti	155.7±7.1	25.8±3.7	0.571	0.667	38.4±6.9	0.467±0.065	0.133±0.044
Vivilos	168.0±62.2	26.1±15.6	0.308	0.600	51.5±7.7	0.367±0.063	0.083±0.036
<i>Islets</i>							
Aspronissi	111.4±7.5	43.4±6.4	0.228	0.256	18.0±4.5	0.267±0.058	0.300±0.060
Ovriokastro	123.6±9.8	46.6±7.7	0.217	0.222	13.2±3.1	0.067±0.032	0.300±0.060
Parthenos	68.7±4.3	47.8±6.0	0.146	0.217	38.1±6.1	0.283±0.059	0.450±0.065
Mando	145.7±10.5	89.6±10.9	0.256	0.250	40.6±5.7	0.519±0.069	0.500±0.069