

DIGITAL APPENDIX 1



Fig. 1. Sampled transect where we counted snakes near the Agujas River, Drake Bay, Costa Rica (lower image: detail of area in upper image)- Aerial photographs from Google Earth; see Methods for coordinates).

TABLE 1

Snake species found on the surveyed years and their main prey items according to the literature (Savage, 2002; Solórzano, 2004)).

Species	Prey item					
	Invertebrates	Fish	Amphibians	Reptiles	Birds	Mammals
<i>Boa imperator</i>	-	-	-	X	X	X
<i>Bothriechis schlegelii</i>	-	-	X	X	X	X
<i>Bothrops asper</i>	-	-	X	X	X	X
<i>Chironius flavopictus</i>	-	-	X	-	-	-
<i>Clelia clelia</i>	-	-	-	X	X	X
<i>Coniophanes fissidens</i>	-	-	X	X	-	-
<i>Corallus ruschenbergerii</i>	-	-	-	X	X	X
<i>Dendrophidion percarinatum</i>	-	-	X	-	-	-
<i>Enuliophis sclateri</i>	-	-	-	X	-	-
<i>Hydrophis platurus</i>	-	X	-	-	-	-
<i>Imantodes cenchoa</i>	-	-	X	X	-	-
<i>Leptodeira septentrionalis</i>	-	-	X	X	-	-
<i>Leptophis ahaetulla</i>	-	-	X	X	X	-
<i>Leptophis nebulosus</i>	-	-	X	-	-	-
<i>Mastigodryas melanolomus</i>	-	-	X	X	X	X
<i>Micrurus alleni</i>	-	-	X	X	-	-
<i>Ninia maculata</i>	X	-	-	-	-	-
<i>Oxyrhopus petolarius</i>	-	-	X	X	-	X
<i>Phrynonax poecilonotus</i>	-	-	-	-	X	X
<i>Rhadinella godmani</i>	-	-	X	X	-	-
<i>Sibon nebulatus</i>	X	-	-	-	-	-
<i>Siphlophis compressus</i>	-	-	-	X	-	-
<i>Spilotes pullatus</i>	-	-	-	X	X	X
<i>Stenorrhina degenhardtii</i>	X	-	-	-	-	-
<i>Tantilla supracincta</i>	X	-	-	-	-	-

TABLE 2

ANOVA results for *Rainfall* versus *Counts per hour* of the most common snake species, Drake Bay, Costa Rica.

<i>Leptodeira septentrionalis.</i>					
Variance analysis					
Variable	N		R ²	R ² Aj	CV
Rate	216		0,03	0,02	131,61
Variance analysis table (SC type III)					
F.V.	SC	gl	CM	F	p-value
Model	0,25	2	0,13	3,08	0,0482
Weather	0,25	2	0,13	3,08	0,0482
Error	8,75	213	0,04		
Total	9,00	215			
Adjusted median, standard error and number of observations					
Error: 0,0411 df: 213					
Weather	Median		n		E.E.
Rainy	0,12		72		0,02
Light Rain	0,14		72		0,02
Dry	0,20		72		0,02
<i>Imantodes cenchoa.</i>					
Variance analysis					
Variable	N		R ²	R ² Aj	CV
Rate	216		0,02	0,01	165,09
Variance analysis table (SC type III)					
F.V.	SC	gl	CM	F	p-value
Model	0,04	2	0,02	2,11	0,1233
Weather	0,04	2	0,02	2,11	0,1233
Error	1,81	213	0,01		
Total	1,85	215			
Test: Tukey Alfa=0,05 DMS=0,03606					
Error: 0,0085 df: 213					
Weather	Median		n		E.E.
Rainy	0,05		72		0,01 A
Light Rain	0,05		72		0,01 A
Dry	0,07		72		0,01 A
<i>Enuliophis sclateri.</i>					
Variance analysis					
Variable	N		R ²	R ² Aj	CV
Rate	216		0,07	0,06	246,90
Variance analysis table (SC type III)					
F.V.	SC	gl	CM	F	p-value
Model	0,04	2	0,02	8,30	0,0003
Weather	0,04	2	0,02	8,30	0,0003

Error 0,48 213 2, 3E-03

Total 0,52 215

Test: Tukey Alfa=0,05 DMS=0,01866

Error: 0,0023 df: 213

Weather	Median	N	E.E.
Rainy	0,01	72	0,01 A
Light Rain	0,02	72	0,01 A
Dry	0,04	72	0,01 B

Other species (all data from less common species pooled).

Variance analysis

Variable	N	R ²	R ² Aj	CV
Rate	216	0,03	0,02	281,14

Variance analysis table (SC type III)

F.V.	SC	gl	CM	F	p-value
Model	0,23	2	0,11	3,20	0,0429
Weather	0,23	2	0,11	3,20	0,0429
Error	7,63	213	0,04		
Total	7,86	215			

Test: Tukey Alfa=0,05 DMS=0,07404

Error: 0,0358 df: 213

Weather	Median	N	E.E.
Rainy	0,03	72	0,02 A
Light Rain	0,07	72	0,02 A B
Dry	0,11	72	0,02 B

TABLE 3

ANOVA results for *Moonlight* versus *Counts per hour* of snakes, Drake Bay, Costa Rica.

<i>Leptodeira septentrionalis.</i>					
Variance analysis					
Variable	N		R ²	R ² Aj	CV
Rate	216		0,04	0,03	116,75
Variance analysis table (SC type III)					
F.V.	SC	gl	CM	F	p-value
Model	0,33	2	0,17	4,70	0,0100
Moonlight	0,33	2	0,17	4,70	0,0100
Error	7,57	213	0,04		
Total	7,91	215			
Test: Tukey Alfa=0,05 DMS=0,07376					
Error: 0,0356 gl: 213					
Moonlight	Median		n		E.E.
Bright	0,12		72		0,02 A
Semi-bright	0,15		72		0,02 A B
Dark	0,21		72		0,02 B
<i>Imantodes cenchoa.</i>					
Variance analysis					
Variable	N		R ²	R ² Aj	CV
Rate	216		3,4 E-04	0,00	164,81
Variance analysis table (SC type III)					
F.V.	SC	gl	CM	F	p-value
Model	9,7 E-04	2	4,8E-04	0,04	0,9642
Moonlight	9,7 E-04	2	4,8E-04	0,04	0,9642
Error	2,82	213	0,01		
Total	2,82	215			
Test: Tukey Alfa=0,05 DMS=0,04503					
Error: 0,0132 gl: 213					
Moonlight	Median		n		E.E.
Bright	0,07		72		0,01 A
Dark	0,07		72		0,01 A
Semi-bright	0,07		72		0,01 A
<i>Enuliophis sclateri.</i>					
Variance analysis					
Variable	N		R ²	R ² Aj	CV
Rate	216		0,03	0,02	243,36
Variance analysis table (SC type III)					
F.V.	SC	gl	CM	F	p-value
Model	0,02	2	0,01	3,01	0,0512
Moonlight	0,02	2	0,01	3,01	0,0512
Error	0,74	213	3,5 E-03		
Total	0,76	215			

Test: Tukey Alfa=0,05 DMS=0,02302

Error: 0,0035 gl: 213

Moonlight	Median	N	E.E.
Semi-bright	0,01	72	0,01 A
Bright	0,03	72	0,01 A
Dark	0,03	72	0,01 A

Other species (all data from less common species pooled).

Variance analysis

Variable	N	R ²	R ² Aj	CV
Rate	216	4,0 E-03	0,00	259,35

Variance analysis table (SC type III)

F.V.	SC	gl	CM	F	p-value
Model	0,02	2	0,01	0,43	0,6499
Moonlight	0,02	2	0,01	0,43	0,6499
Error	5,65	213	0,03		
Total	5,68	215			

Test: Tukey Alfa=0,05 DMS=0,06373

Error: 0,0265 gl: 213

Moonlight	Median	N	E.E.
Semi-bright	0,05	72	0,02 A
Dark	0,06	72	0,02 A
Bright	0,08	72	0,02 A

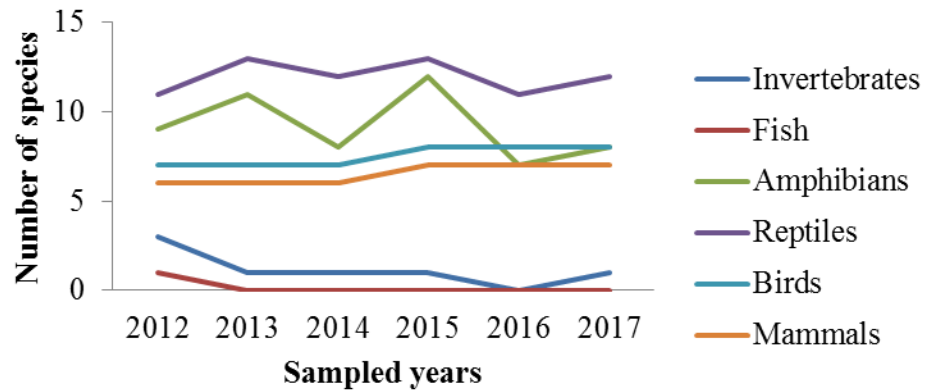


Fig. 2. Number of species with each diet type (diets from Savage, 2002; and Solórzano, 2004) seen per year. Species can be included on more than one category.

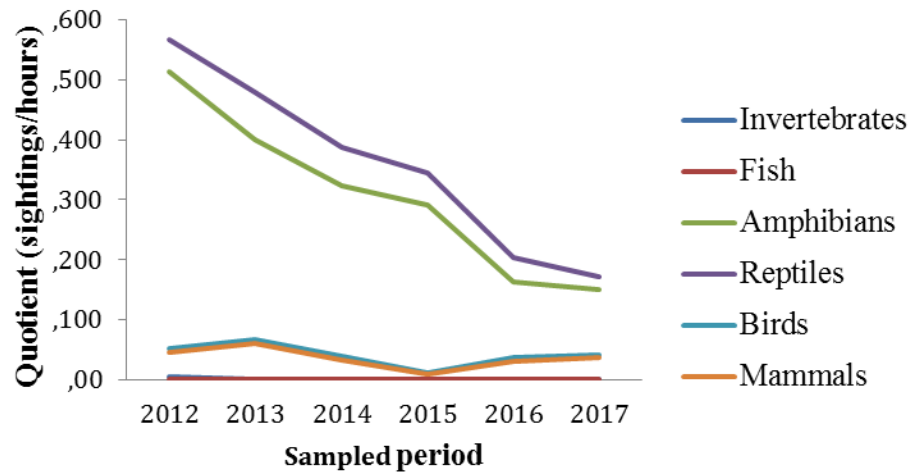


Fig. 3. Species counts (sightings per/hour) for each diet and sampling year

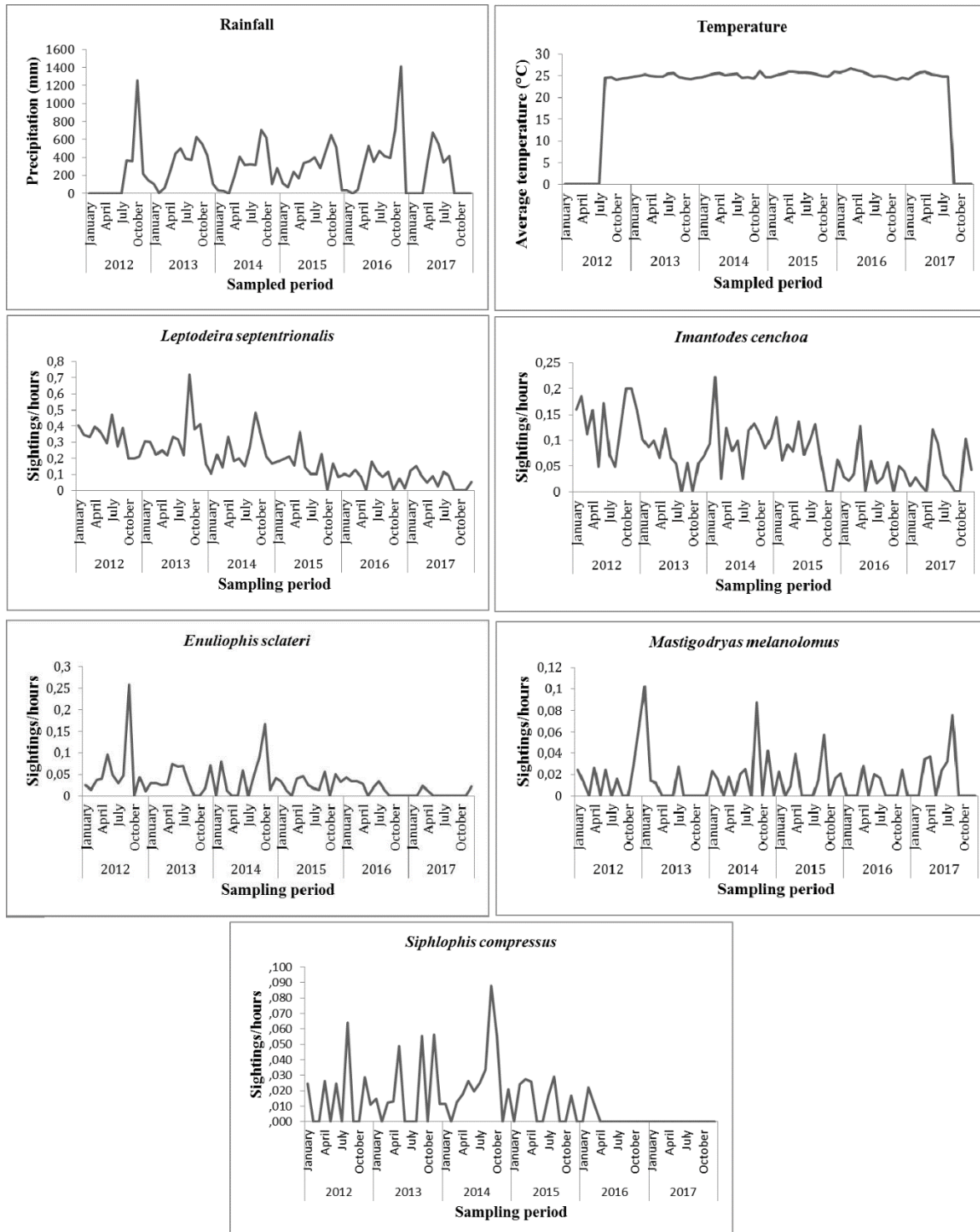


Fig. 4. Counts per hour of the five most frequent snakes species during the six-year study period in Drake, Costa Rica (2012-2017).

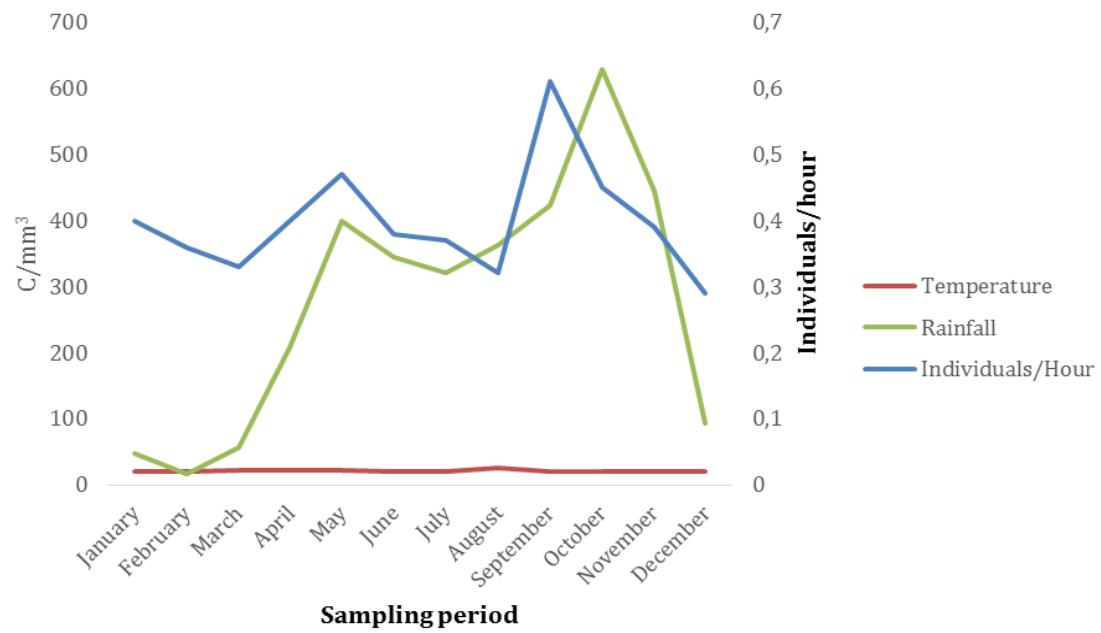


Fig. 5. Mean temperature, mean rainfall and individuals seen per hour for Drake snakes (Costa Rica).

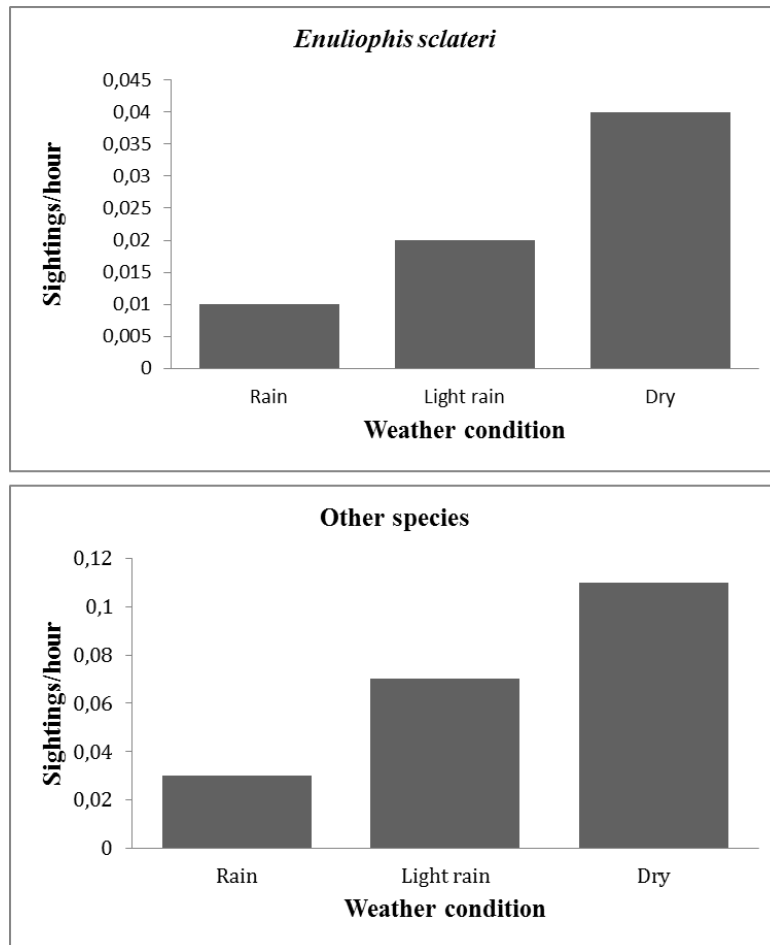


Fig. 6. Sightings per hour of snakes, according to rain level, in Drake, Costa Rica.

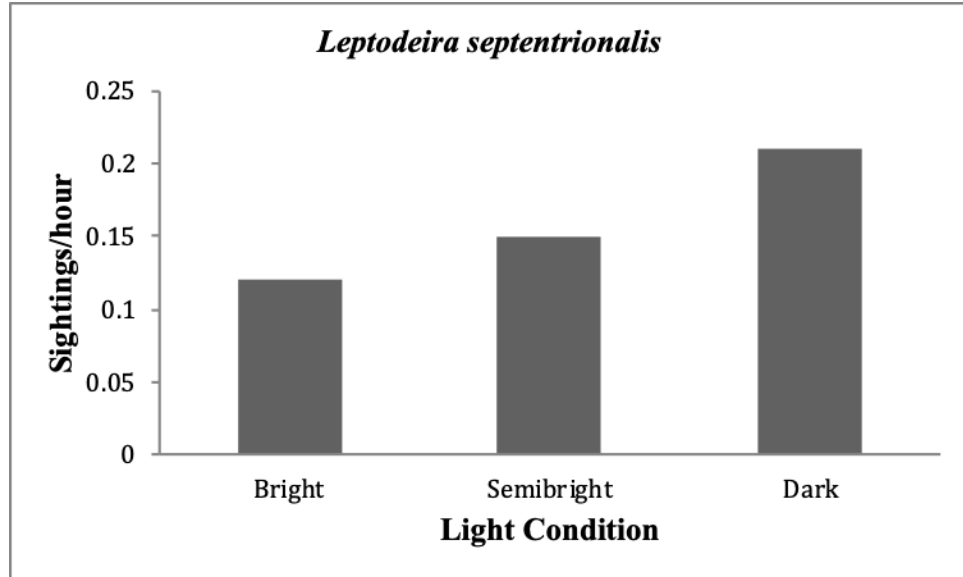


Fig. 7. Sightings per hour of the snake *L. septentrionalis*, according to moon light level, in Drake, Costa Rica.