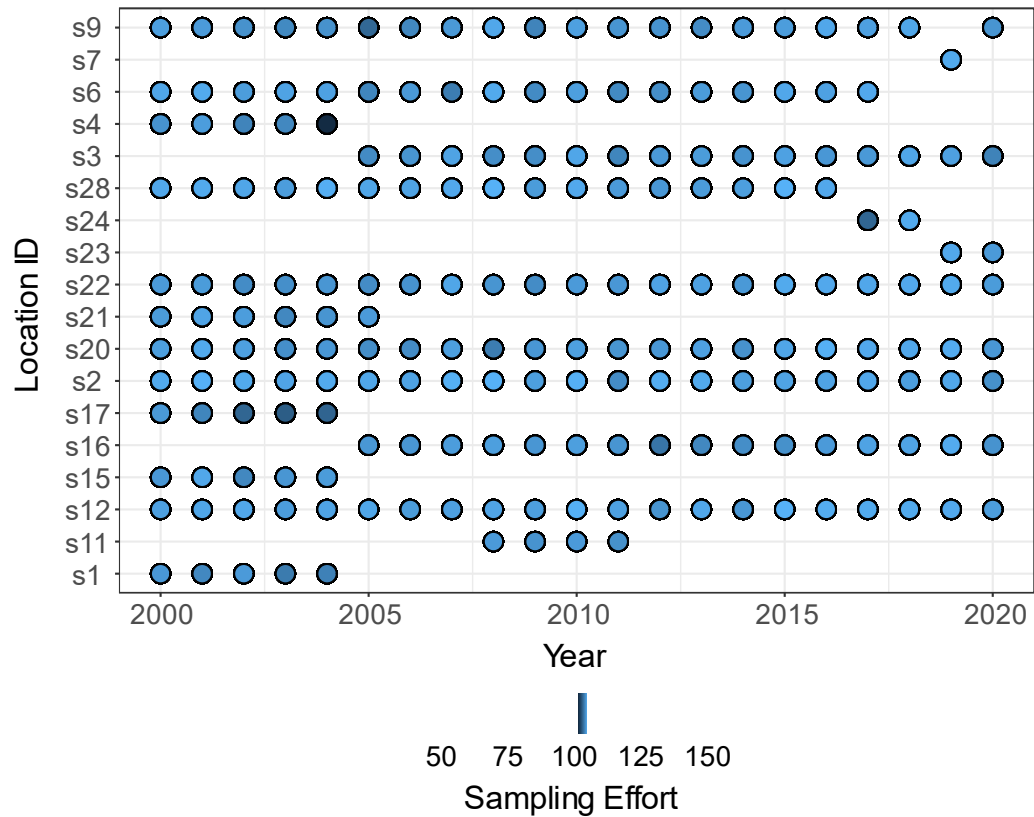


Supplementary Table 1. Onset, peak, and termination model results. Values include mean estimates followed by standard error values in parentheses. Values in bold indicate statistically significant variables determined with an alpha < 0.05.

Predictors	Onset	Termination	Peak
Intercept	166.665 (6.371)	241.201 (4.985)	202.135 (4.364)
Overwinter Eggs	7.881 (8.093)		
Overwinter Adult			
Early Season			
Later Season	35.434 (9.176)	23.455 (9.273)	42.042 (7.4508)
Low Developed Landscape			
Medium Developed Landscape	5.076 (2.495)		4.285 (3.611)
Average Spring Temperature	-1.823 (1.537)		0.938 (2.570)
Average Fall Temperature		6.539 (1.697)	
Average Winter Temperature			
Average Spring Mean Vapor Pressure Deficit Index	5.120 (1.941)		8.191 (3.433)
Average Fall Mean Vapor Pressure Deficit Index		-1.649 (1.955)	
Average Winter Mean Vapor Pressure Deficit Index			
Average Spring Cumulative Precipitation	4.301 (2.355)		8.460 (3.121)
Average Fall Cumulative Precipitation		4.418 (1.181)	
Average Winter Cumulative Precipitation			
Later Season : Average Spring Cumulative Precipitation	3.761 (2.707)		
Later Season : Average Fall Temperature		-5.910 (2.560)	
Late Season : Medium Developed Land Cover Class	9.715 (4.792)		
Average Spring Cumulative Precipitation : Medium Developed Land Cover Class	-4.475 (2.141)		-9.430 (3.625)
Average Spring Cumulative Precipitation : Average Spring Temperature			8.524 (1.7913)
Average Spring Mean Vapor Pressure Index : Average Spring Temperature	-2.292 (0.643)		
Average Fall Mean Vapor Pressure Index : Average Fall Temperature		-2.027 (1.035)	
Overwinter Eggs : Average Spring Cumulative Precipitation	-3.525 (2.533)		
Conditional pseudo R ²	0.59	0.499	0.391



Supplementary Figure 1. Sampling distribution at trap locations between 2000 and 2020. Dark blue circles represent lower sampling effort in a given year and lighter blue circles represent greater sampling effort in a given year. Individual trap locations were classified as either less developed or medium developed land cover in each year and then phenometrics were then derived across trap locations corresponding to each land cover classification.