

Table.S3 Description of predictor variables used in the regression analyses.

Category	Predictor abbreviation	Variable definition
Abiotic	$T_{\max}$	the daily maximum temperature on capture day
	$T_{\min}$	the daily minimum temperature on capture day
	T_{ave}	The daily mean temperature on capture day $([T_{\max}+T_{\min}]/2)$
	T_{ran}	The daily temperature range on capture day $(T_{\max}-T_{\min})$
	$H_{\max}$	the daily maximum humidity on capture day
	$H_{\min}$	the daily minimum humidity on capture day
	H_{ave}	The daily mean humidity on capture day $([H_{\max}+H_{\min}]/2)$
	Snowfall	Presence or absence of snowfall on capture day
	$MT_{\max\ 3/7}$	Average of 3/7 daily maximum temperature occurring on the 3/7 days before capture days
	$MT_{\min\ 3/7}$	Average of 3/7 daily minimum temperature occurring on the 3/7 days before capture day
	$MT_{\text{ave}\ 3/7}$	Average of 3/7 daily mean temperature occurring on the 3/7 days before capture day
	$MT_{\text{ran}\ 3/7}$	Average of 3/7 daily temperature range occurring on the 3/7 days before capture day
	$MH_{\max\ 3/7}$	Average of 3/7 daily maximum humidity occurring on the 3/7 days before capture day
	$MH_{\min\ 3/7}$	Average of 3/7 daily minimum humidity occurring on the 3/7 days before capture day
Biotic	$MH_{\text{ave}\ 3/7}$	Average of 3/7 daily mean humidity occurring on the 3/7 days before capture day
	Snowfall event 3/7	The accumulation of snowfall event happened on the 3/7 days before capture day
	Ground arthropod biomass	The ground arthropod biomass on capture day
	Ground arthropod biomass 3/7	The mean ground arthropod biomass on the 3/7 days before capture day
	Sex	Sex of sexed olive-brown individuals, coded as 0 for females and 1 for males.
	Capture status	Ordinal capture-history status, coded as 0 for first capture, 1 for first recapture, 2 for second recapture, and so forth.