Figure S1: SMC related model fit improvement (ΔAIC) by Ts bin. The effect of including SMC was quantified as the difference in AIC between the Ts only model and the Ts plus SMC model (ΔAIC). Negative ΔAIC values indicate improved model fit when SMC is included. The gray solid line indicates 2022, the gray dashed line indicates 2023, and the black solid line indicates the mean across both years.

Table S1: Model comparison using AIC to determine the optimal number of temperature breakpoints in the relationship between Rs and Ts and to evaluate goodness of fit across candidate models.

Year	Model	Breakpoint	k	AIC
2022	Exponential	0	2	3469.96
	segmented regression(1 breakpoints)	1	4	3449.61
	segmented regression(2 breakpoints)	2	6	3457.95
2023	Exponential	0	2	3562.32
	segmented regression(1 breakpoints)	1	4	3449.92
	segmented regression(2 breakpoints)	2	6	3512.06