**Supporting Information:** Alan E. Gelfand and Shinichiro Shirota. 2019. Preferential sampling for presence/absence data and for fusion of presence/absence data with presence-only data. *Ecological Monographs*.

# Appendix S1. Model fitting results for the LGCP model in (ii) of "Preferential sampling: Preferential sampling models for presence/absence data" in the main manuscript

We show the estimation results for the LGCP model for $\mathcal{S}$ in "Preferential sampling: Preferential sampling models for presence/absence data" in the main manuscript. Bayesian fitting and inference is described in Appendix S4. We adopt weak prior specifications: $\boldsymbol{\beta} \sim \mathcal{N}(\mathbf{0}, 100\mathbf{I})$, $\sigma_\eta^2 \sim \mathcal{IG}(2, 0.1)$ and $\phi_\eta \sim \mathcal{U}(0, 200)$. We discard the first 20,000 samples as burn-in and preserve the subsequent 20,000 samples as posterior samples. Table  displays the estimation results for the parameters in the LGCP model. All covariates are significant except for mDR. Figure  displays the posterior mean surface for $\boldsymbol{\eta}$ and $\log \lambda$.

Table S1: Estimation results of LGCP for $\mathcal{S}$

| | Mean | Stdev | 95% Int | | Mean | Stdev | 95% Int |
|---|---|---|---|---|---|---|---|
| const | 7.687 | 0.139 | [7.452, 7.984] | mDR | -0.019 | 0.159 | [-0.283, 0.306] |
| maxTWM | 0.538 | 0.171 | [0.101, 0.816] | minTCM | 1.913 | 0.131 | [1.618, 2.135] |
| meanTDQ | 0.263 | 0.119 | [0.020, 0.472] | PWM | -0.510 | 0.107 | [-0.713, -0.263] |
| PS | 0.589 | 0.134 | [0.375, 0.852] | PWQ | 1.287 | 0.091 | [1.115, 1.493] |
| $\sigma_\eta^2$ | 5.713 | 0.291 | [5.145, 6.289] | $\phi_\eta$ | 0.507 | 0.030 | [0.450, 0.553] |

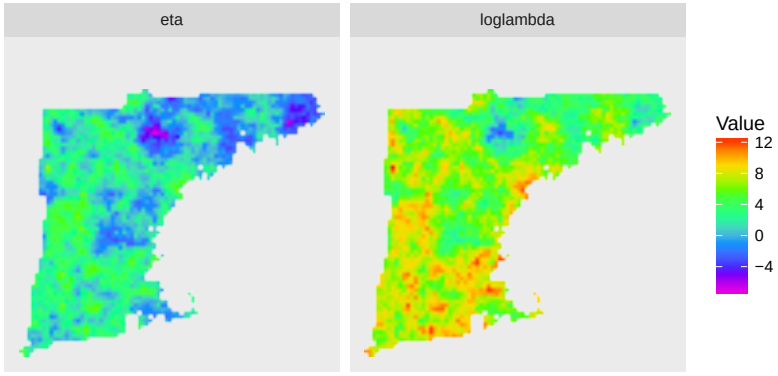


Figure S1: The posterior mean surface for $\boldsymbol{\eta}$ (left) and $\log \boldsymbol{\lambda}$ (right) for $\mathcal{S}$.