

**S3 Table. Posterior parameter estimates of the mixed effects model including habitat variables.** For each included variable, the corresponding coefficient posterior mean, standard deviation and 95% credible intervals are given. P-values are calculated empirically based on posterior distributions of coefficients.

| Variable                       | mean   | sd    | 2.50%  | 97.50% | P      |     |
|--------------------------------|--------|-------|--------|--------|--------|-----|
| Intercept                      | 2.385  | 0.188 | 1.999  | 2.768  | <0.001 | *** |
| Year                           | -0.059 | 0.003 | -0.065 | -0.054 | <0.001 | *** |
| Day number                     | -0.107 | 0.030 | -0.167 | -0.048 | <0.001 | *** |
| Day number <sup>2</sup>        | -0.633 | 0.025 | -0.681 | -0.583 | <0.001 | *** |
| Herb species                   | -0.087 | 0.049 | -0.181 | 0.009  | 0.036  | *   |
| Tree species                   | 0.105  | 0.033 | 0.043  | 0.170  | 0.001  | *** |
| Nitrogen                       | 0.234  | 0.071 | 0.101  | 0.375  | <0.001 | *** |
| pH                             | -0.051 | 0.061 | -0.173 | 0.066  | 0.203  |     |
| Moisture                       | 0.039  | 0.051 | -0.061 | 0.139  | 0.220  |     |
| Light                          | 0.185  | 0.041 | 0.106  | 0.267  | <0.001 | *** |
| Ell. Temperature               | -0.071 | 0.029 | -0.128 | -0.013 | 0.007  | **  |
| Habitat Cluster 2              | 0.350  | 0.159 | 0.036  | 0.654  | 0.014  | *   |
| Habitat Cluster 3              | 0.291  | 0.248 | -0.203 | 0.781  | 0.120  |     |
| Year × Day number              | 0.001  | 0.002 | -0.002 | 0.004  | 0.325  |     |
| Year × Day number <sup>2</sup> | 0.012  | 0.001 | 0.009  | 0.014  | <0.001 | *** |
| $\sigma_{site}$                | 0.315  | 0.036 | 0.251  | 0.395  |        |     |
| $v$                            | 0.909  | 0.009 | 0.891  | 0.927  |        |     |