

魏瑶, 马志远, 周佳颖, 张振华 (2022). 模拟增温改变青藏高原植物繁殖物候及植株高度. 植物生态学报, 46, 995-1004. DOI: 10.17521/cjpe.2021.0450

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附录III 增温(W)、年份(Y)及其交互作用对不同高寒植物开花时间的影响

Supplement III Effects of warming (W), year (Y) and their interaction on flower time of different alpine plants

| 物种 Species | | | W | | Y | | W × Y | |
|-----------------|-------|-------|--------|------------------|---------|------------------|--------|--------------|
| | numDF | denDF | F | p | F | p | F | p |
| 矮生嵩草 <i>Kh</i> | 1 | 13 | 8.863 | 0.011 | 11.386 | 0.005 | 0.082 | 0.780 |
| 高山豆 <i>Th</i> | 1 | 14 | 19.230 | <0.001 | 70.430 | <0.001 | 0.690 | 0.422 |
| 花苜蓿 <i>Mr</i> | 1 | 15 | 23.348 | <0.001 | 114.352 | <0.001 | 0.157 | 0.697 |
| 甘肃棘豆 <i>Ok</i> | 1 | 15 | 11.151 | 0.005 | 26.604 | <0.001 | 0.130 | 0.723 |
| 金露梅 <i>Pf</i> | 1 | 12 | 0.343 | 0.569 | 28.678 | <0.001 | 0.008 | 0.929 |
| 麻花苻 <i>Gs</i> | – | – | – | – | – | – | – | – |
| 美丽风毛菊 <i>Sp</i> | 1 | 8 | 13.912 | 0.006 | 12.745 | 0.007 | 0.216 | 0.654 |
| 垂穗披碱草 <i>En</i> | 1 | 15 | 7.931 | 0.013 | 3.494 | 0.081 | 0.016 | 0.903 |
| 红棕囊草 <i>Cp</i> | 1 | 1 | 37.660 | 0.103 | 1.404 | 0.446 | 23.613 | 0.129 |
| 线叶龙胆 <i>Gf</i> | – | – | – | – | – | – | – | – |
| 线叶嵩草 <i>Kc</i> | 1 | 9 | 2.765 | 0.131 | 10.728 | 0.010 | 5.381 | 0.046 |
| 异针茅 <i>Sa</i> | 1 | 10 | 1.507 | 0.248 | 2.289 | 0.161 | 0.281 | 0.608 |
| 草地早熟禾 <i>Pp</i> | 1 | 15 | 9.370 | 0.008 | 34.200 | <0.001 | 0.019 | 0.893 |
| 珠芽蓼 <i>Pv</i> | 1 | 12 | 1.897 | 0.194 | 14.099 | 0.003 | 1.451 | 0.252 |
| 藏异燕麦 <i>Ht</i> | – | – | – | – | – | – | – | – |

denDF, 分母自由度; numDF, 分子自由度。Cp, 红棕囊草; En, 垂穗披碱草; Gf, 线叶龙胆; Gs, 麻花苻; Ht, 藏异燕麦; Kc, 线叶嵩草; Kh, 矮生嵩草; Mr, 花苜蓿; Ok, 甘肃棘豆; Pp, 草地早熟禾; Pf, 金露梅; Pv, 珠芽蓼; Sa, 异针茅; Sp, 美丽风毛菊; Th, 高山豆。加粗数字表示效应显著。

denDF, denominator degree of freedom; numDF, numerator degree of freedom. Cp, *Carex przewalskii*; En, *Elymus nutans*; Gf, *Gentiana lawrencei* var. *farreri*; Gs, *Gentiana straminea*; Ht, *Helictotrichon tibeticum*; Kc, *Kobresia capillifolia*; Kh, *Kobresia humilis*; Mr, *Medicago ruthenica*; Ok, *Oxytropis kansuensis*; Pp, *Poa pratensis*; Pf, *Potentilla fruticosa*; Pv, *Polygonum viviparum*; Sa, *Stipa aliena*; Sp, *Saussurea pulchra*; Th, *Tibetia himalaica*. Bold numbers indicate effect significantly.