

## 独叶草的不育雄蕊、花被片和可育雄蕊对传粉昆虫和传粉的影响

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**摘要** 为确定独叶草(*Kingdonia uniflora*) 不育雄蕊、花被片和可育雄蕊对传粉昆虫和传粉的影响, 分别进行去除不育雄蕊(A组), 去除花被片(B组), 去除可育雄蕊(C组) 和对照组(D组) 处理。结果表明: 昆虫访花频率分别为A组0.4次/h、B组0次/h、C组0.9次/h、D组2.2次/h; 被授粉花朵百分比分别为A组29.09%、B组40.38%、C组70.91%、D组91.67%; 被授粉心皮百分比分别为A组17.77%、B组20.94%、C组为40.58%、D组为75.27%。与对照组相比, 处理后被授粉花朵百分比、被授粉心皮百分比下降幅度均为A组>B组>C组。结合昆虫访花频率与不育雄蕊蜜汁的分泌量呈正比, 可确定不育雄蕊产生的蜜汁是吸引昆虫访花的最主要因素。花被片为昆虫取食提供停歇的平台, 可育雄蕊与花被片产生的色差及可育雄蕊提供的花粉, 是吸引昆虫的辅助因素。

**关键词** [独叶草](#) [花被片](#) [不育雄蕊](#) [可育雄蕊](#) [传粉](#) [昆虫](#) [影响](#)

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## Floral Variation in Tepals, Sterile and Fertile Stamens of *Kingdonia uniflora* (Ranunculaceae) with Reference to Pollinators and Pollination

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### Abstract

To understand the influence of different floral organs of *Kingdonia uniflora* to the pollinators and pollination, we divided the flowers into four groups, A, with the sterile stamens removed, B, with the tepals removed, C, with the fertile stamens removed and D, without the remove of any organ. The results showed that the insects visiting frequency were 0.4 time h in group A, 0 time h in group B, 0.9 time h in group C and 2.2 time h in group D. The percentage of pollinated flowers was 29.09% in group A, 40.38% in group B, 70.91% in group C and 91.67% in group D. The percentage of pollinated carpels was 17.77% in group A, 20.94% in group B, 40.58% in group C and 75.27% in group D respectively. The relationships between the insect visiting frequency and the nectarial secretion of the sterile stamens were observed in the field. To compare with group D, the decrease of the rate of pollinated flower and the carpel was group A > group B > group C. To combine the observation of the relationships between the nectarial secretion of the sterile stamens and the insect visiting frequency, we considered that the sterile stamens with nectar as the reward of the visiting insects play the most important rule for the pollinators and pollination. However, the tepals that could afford the platform of staining and moving of the insects on the flowers are also important for the pollinators. The fertile stamens that could form the chromatic to attract some of the pollinators and supply the pollen grains as the food of some pollinators play less important rule.

**Key words** [Kingdonia uniflora](#) [Tepal](#) [Sterile stamen](#) [Fertile stamen](#) [Pollination](#) [Insects](#) [Influence](#)

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