

Cloning capacity helps tropical seeds counter animal predation

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Abstract

Seed predators have the potential to act as agents of natural selection that influence seed traits. Accordingly, plants deploy a variety of mechanisms (e.g. resistance and tolerance strategy) to lessen the impact of predation on seed crop or on an individual seed. In this study, we found a novel mechanism (i.e. cloning strategy) in a tropical plant species in countering animal predation. We found both rodent damaged and human artificially damaged seed fragments of a large-seeded tree *Garcinia xanthochymus* in the Xishuangbanna tropical forest of China could develop into seedlings in both field and laboratory conditions. *G. xanthochymus* seed has no endosperm in seeds, and its seed tissue own strong capacity of differentiation and cloning. Seed damage would negatively affect seedling growth and germination, but the seed germination rate was remarkably high. Our study suggests that, as a novel strategy countering animal predation, seed cloning would play a significant role in stabilizing the mutualism between plant and animals.

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