

Can spatial organization affect plant reproductive success?

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Over ninety percent of flowering plant species depend on pollinators for their reproductive success. However, although numerous studies have focused on pollinator activity and on the links between the two trophic levels, our understanding of the processes driving plant-pollination dynamics at the community level is still limited. One of the more neglected aspects is the role of spatial formations in this dynamics. Overall, it is well accepted that the interactions among neighbouring plants are more intense than among distant individuals. In the case of plant-pollinator systems, the spatial proximity among specific flowers may affect the learning of the pollinators. In particular, it may change the formation of floral signal – reward association which is at the heart of their foraging behaviour. This may have an effect on the relative success of the participating plants and therefore change the reproductive chances of plant species according to their spatial organisation in the community.