

ANNOUNCEMENTS

2006 Biotropica Award for Excellence in Tropical Biology and Conservation

The Association for Tropical Biology and Conservation and the Editorial Board of *Biotropica* proudly announce the winner of the 2006 Biotropica Award for Excellence in Tropical Biology and Conservation, presented to the author of a paper published in *Biotropica* during 2005. We recognize an outstanding contribution based on original research conducted in tropical regions. Criteria include clarity of presentation, strong basis in natural history, well-planned experimental and/or sampling design, and novel insights gained into critical processes that influence the structure and functioning of tropical biological systems.

The 2006 Award is presented to Carlos García-Robledo, Gustavo Kattan, Carolina Murcia, and Paulina Quintero-Marín for their paper entitled “Equal and Opposite Effects of Floral Offer and Spatial Distribution on Fruit Production and Predispersal Seed Predation in *Xanthosoma daguense* (Araceae)” published in *Biotropica* 37 (3): 373–380.

We all now know that distance and local density among many flowering plants affect the pattern of pollinator foraging, which in turn determines plant fitness. This is one aspect of Carlos García-Robledo *et al.*'s study, which on its own would have made a useful contribution to the growing literature on this theme, not least because the results they obtained are contrary to what most studies have shown. Of course, this is not the reason for granting them the award. Rather, it is because they also ask the same question of antagonistic seed predators—shouldn't they too respond to plants in similar ways to pollinators, and might this not be reflected in plant reproductive output? We see in this paper that antagonistic and mutualistic effects cancel each other out so that plant fitness is, overall, independent of floral reward or density. I personally doubt that this will be a general rule, but that is not the point. Rather, as many pollination biologists are ultimately interested in plant fitness, we should be considering how floral density and distribution affects antagonistic as well as mutualistic interactions that contribute to plant seed set. Reading García-Robledo *et al.*'s paper makes me realize that my own studies on pollination have less significance from the perspective of plant conservation if seed predation is not also considered. Indeed, why stop at seed predation?

García-Robledo *et al.*'s paper has considerable value in its own right as a well-executed study considering issues of plant regeneration from multiple perspectives. But to me, it is the wider implications of this study that justifies the award, implications that I expect will shape our future approach to plant reproductive

research. I would like to offer my own congratulations to the four authors.

Jaboury Ghazoul

During my undergraduate fieldwork in tropical montane forest of the central Andes, I noticed that *Xanthosoma daguense*, an abundant terrestrial aroid, opened its white inflorescences at dusk, filling the forest with a sweet scent while attracting its pollinators, dynastine beetles. I first became interested in this system after reading Helen Young's papers on a similar beetle-pollinated aroid, *Dieffenbachia longispatha*. These papers gave me the first insight that *X. daguense* could be a good system to understand how daily changes in flower density and spatial distribution may affect pollinator movements and plant reproductive success.

After finishing my undergraduate degree, I joined the research training program in research at the Center of Excellence in Conservation-Wildlife Conservation Society-Colombia, starting this project under the advice of Drs. Gustavo Kattan and Carolina Murcia. Since 1997, this program has been training young Colombian biologists, serving as a springboard for many biologists who decided to pursue a graduate degree outside of Colombia. Paulina Quintero joined our team as an undergraduate assistant, contributing great ideas and hard work in the field and lab.

We discovered that the *Xanthosoma* system was even more interesting than previously thought, because the inflorescences were simultaneously attracting pollinators and seed predators. This allowed us to explore how plant spatial dynamics may affect both positive and negative plant-animal interactions and plant fitness. The data analyses of the direct and indirect effects of plant spatial dynamics on pollination and seed predation were mainly inspired by the classic paper by Douglas Schemske and my current doctoral advisor, Carol C. Horvitz, “Plant-animal interactions and fruit production in a Neotropical herb: A path analysis” (1988, *Ecology* 69: 1128–1137).

We were surprised to find that the positive effect of pollinator visits on fruit production was cancelled by the negative effect of seed predation. We now wonder how often equal and opposite effects of positive and negative plant-animal interactions occur in other pollination systems.

Carlos García-Robledo



Carlos García-Robledo



Carolina Murcia



Gustavo Kattan



Paulina Quintero-Marín