



Communities of flower-visiting insects in livestock farming landscapes with silvopastoral systems in the Amazon region of Colombia

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1 Introduction

Livestock farming is a major driver of deforestation in Amazonia.

Implementing silvopastoral systems in areas where livestock is already established may help with biodiversity conservation.

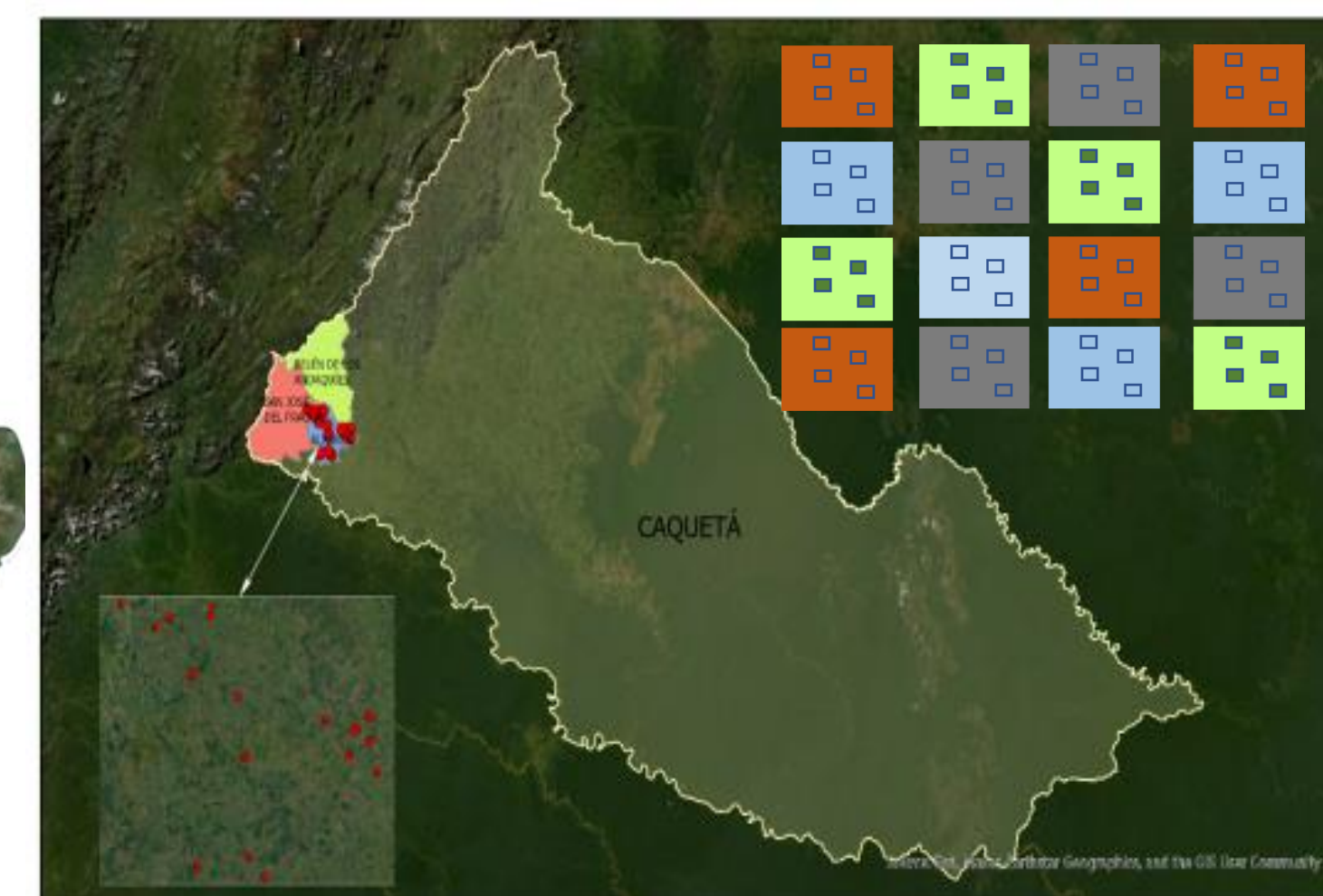
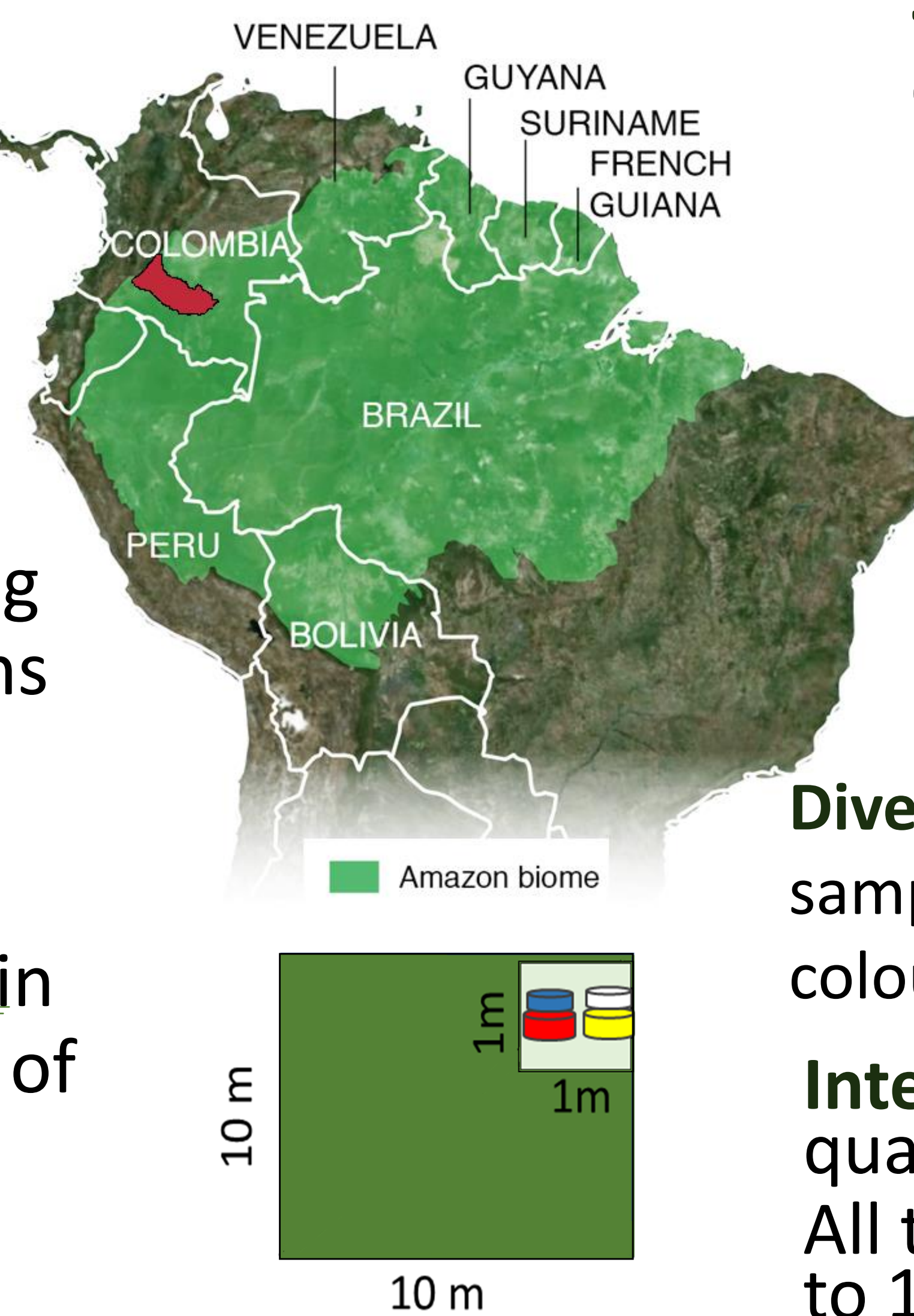
We evaluated the diversity of flower-visiting insects in two different Silvopastoral Systems (Tree Alleys and Scattered Trees in Pasture), conventional livestock systems and forests.

We assessed the insect-flower interactions in the livestock systems of the Amazon region of Colombia.

2 Methods

Study zone

Caquetá Department, Colombia.



16 grids of 600 m x 600m, with 4 plots of 10x10m in each grid.

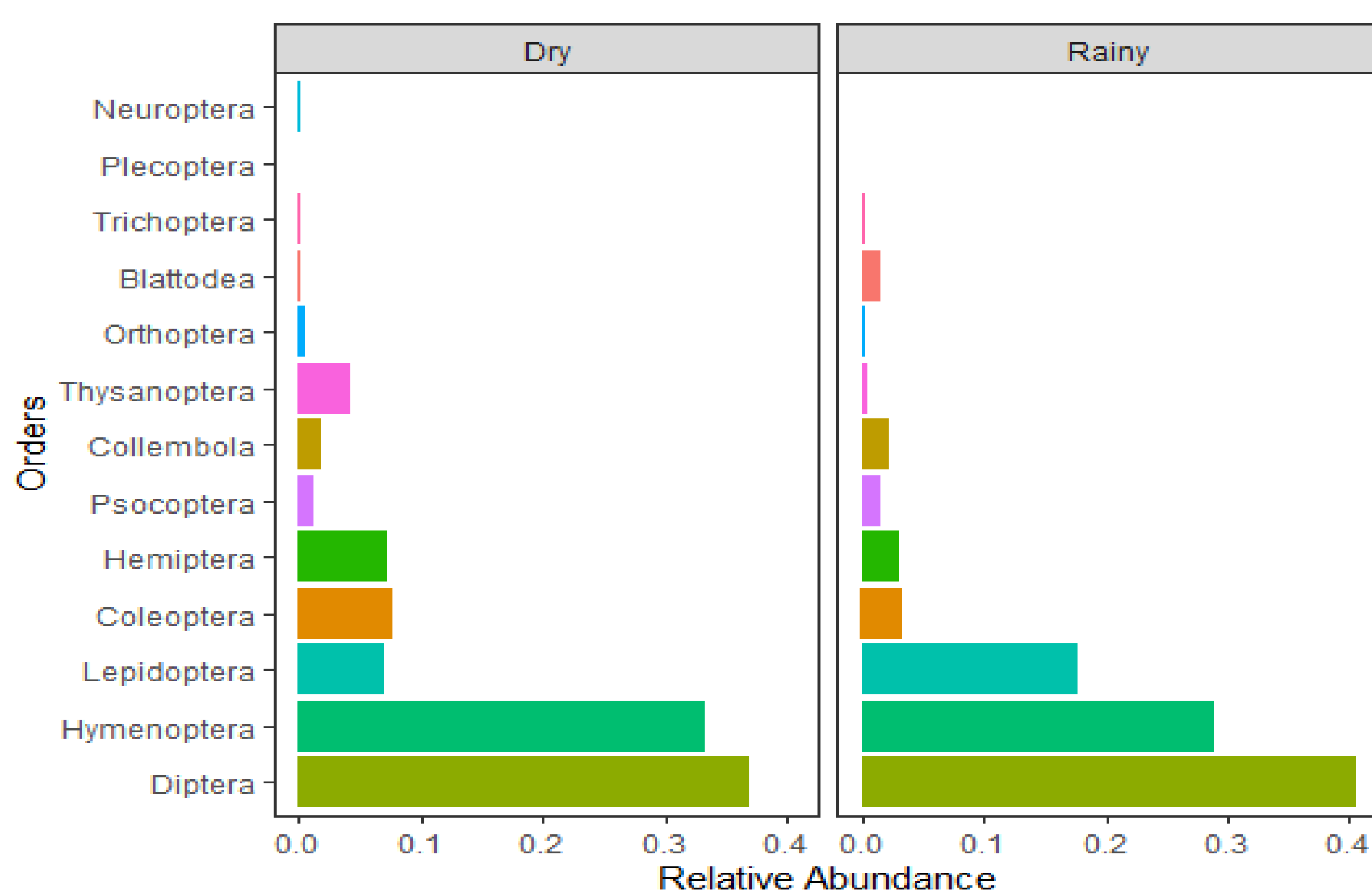
Diversity of flower-visiting insects: Net sampling and pan traps in different heights and colours in two seasons (dry and rainy)

Interactions: 20 minutes in each 10 x 10 quadrant.

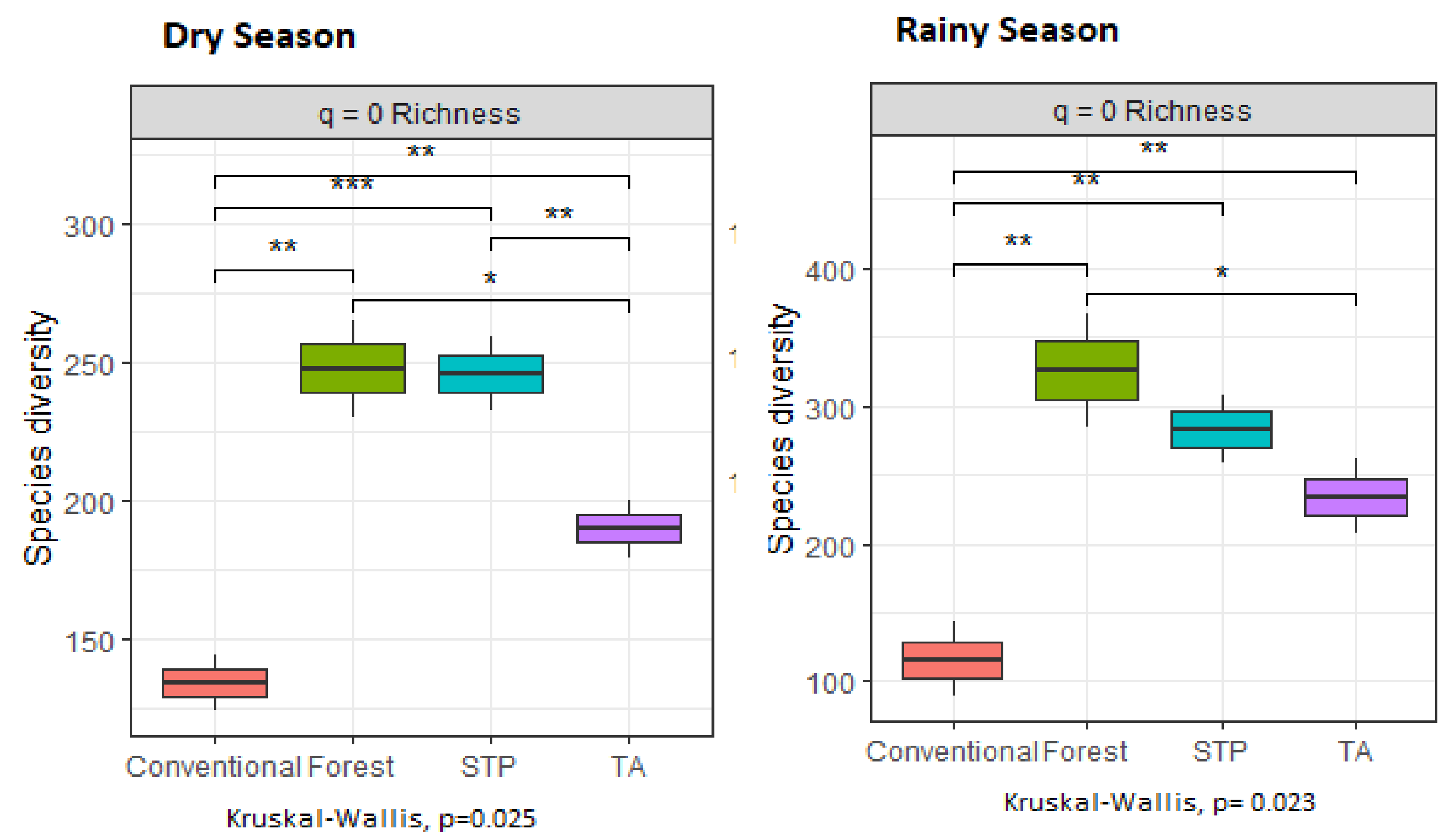
All the visits observed were recorded. 8:00 to 17:00

3 Results

- We caught 5,683 individuals of flower-visiting insects, including 737 morphospecies, 196 families and 13 orders in two field seasons.
- Diptera and Hymenoptera were the most abundant insect communities recorded.



- We found that forest was significantly richer than the Tree Alleys and Conventional Systems in the dry and the rainy season. We use the Hill numbers as a measure of diversity.



Scattered Trees in Pasture presented more complex plant/pollinator networks (links per species, diversity of interactions) in comparison with Tree Alleys and Conventional livestock systems.



4 Conclusions

- Remaining forests are important for conserving biodiversity, and silvopastoral systems are contributing to holding insect communities in similar abundance, richness and species composition as forests.
- Scattered Trees in Pasture had the most complex plant-pollinator interactions of the livestock systems evaluated.

5 Acknowledgments