

Hymenoptera: Diversity of the second most species-rich animal order in the Galápagos Islands



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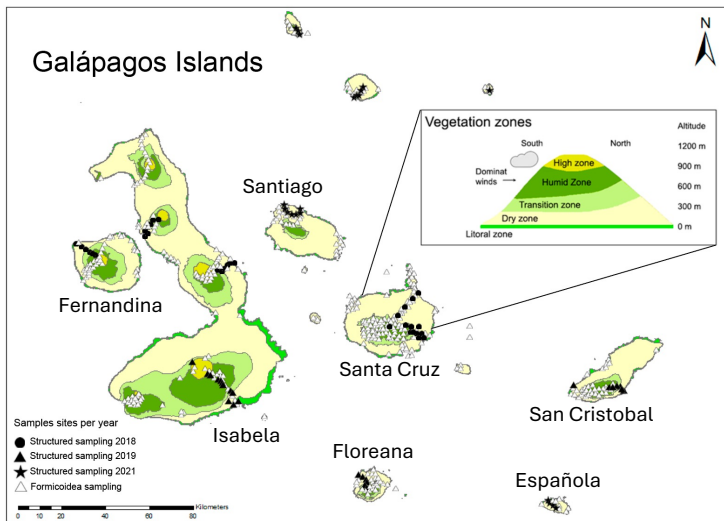
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INTRODUCTION

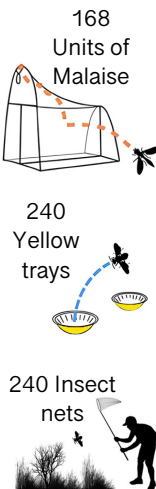
The Galápagos archipelago, crucial for evolutionary studies, is still underexplored regarding its invertebrate fauna, especially within the Hymenoptera order, which includes wasps, ants, and bees. Before this study, only 84 species of Hymenoptera were documented, leaving significant gaps in our understanding of this group's diversity. Given the high levels of endemism and the threat of invasive species in the Galápagos, it's vital to document species diversity to better understand evolutionary processes and inform conservation efforts. Our research significantly expands the known Hymenoptera diversity, offering essential data to support conservation strategies and deepen our understanding of ecological interactions in this iconic region.

METHODOLOGY

We surveyed Hymenoptera on the ten largest Galápagos islands, sampling across all vegetation zones using various traps. We also conducted extensive ant sampling with pitfall traps, aspirators, and manual methods.



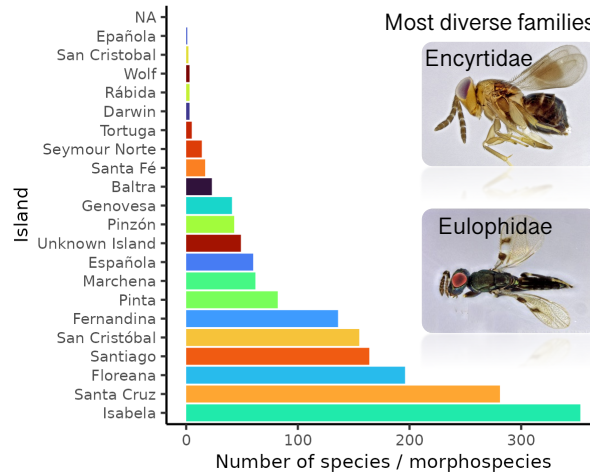
Map 1. Galápagos archipelago sampling.



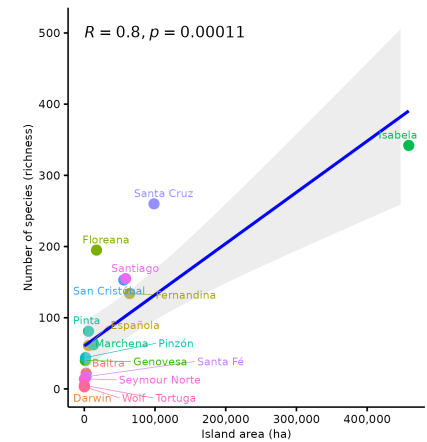
RESULTS

Our study significantly expands the known diversity of Hymenoptera in the Galápagos Islands. We identified a total of **451** species and morphospecies, which include both previously documented and newly recorded taxa.

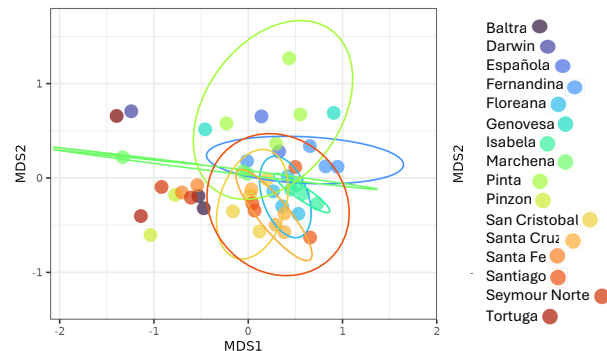
Number of species varies across islands



Species richness is higher in larger islands



Islands vary in species composition



CONCLUSIONS

Our study expanded the known Hymenoptera diversity in the Galápagos, identifying 424 species compared to 84 previously reported. We found that larger islands like Isabela and Santa Cruz host the most diverse communities, and species distribution varies across islands and vegetation zones. These results offer crucial data to support conservation efforts in protecting the Galápagos unique biodiversity.