Arthropod species of *Heliconia* bracts

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Introduction

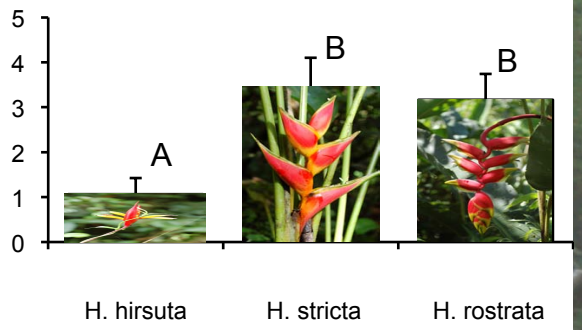
Heliconias

- Herbaceous plant genus
- Native to tropical South America
- Global economic importance (horticulture)
- Medicinal uses for indigenous people
- Flowers inconspicuous
- Large, colourful and long-lasting floral bracts
- Unique microcosm for insects

Question

- How are arthropod communities structured in *Heliconia* bracts?

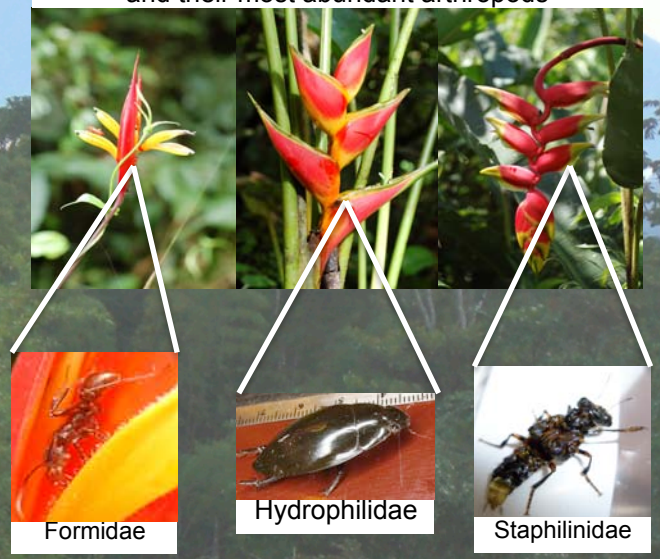
Figure 2. Mean arthropod richness of *Heliconia* bracts



Acknowledgements

- Payamino community, San-Jose de Payamino, Ecuador
- Benjamin Jipa
- Nathan Truelove

Figure 1. The three *Heliconia* species examined and their most abundant arthropods



Results

Arthropod species richness (Figures 2 and 3)

- Higher for larger bracted plants (*H. stricta, H. rostrata*),
- Independent of inflorescence orientation

Arthropod community composition

- Different for all three *Heliconia*
- *H. stricata* - *H. rostrata* 49% similar
- *H. hirsuta* - *H. rostrata* 38% similar
- *H. hirsuta* - *H. stricta* 34% similar

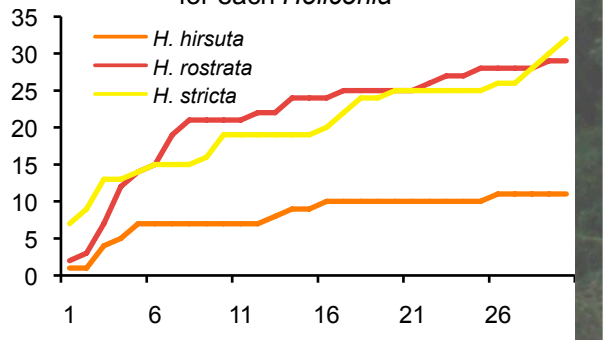
Most abundant arthropod (Figure 1)

- *H. stricta* - a water scavenging beetle (Hydrophilidae)
- *H. rostrata* - a rove beetle (Staphilinidae)
- *H. hirsuta* - an ant (Formidae)

Methods

- Inflorescences from three *Heliconia* species (Figure 1)
- Different bract sizes (large or small)
- Different inflorescence orientation (pendent or erect)
- 30 inflorescences per species
- Arthropod diversity in bracts determined (morpho-species within family).

Figure 3. Cumulative arthropod species richness for each *Heliconia*



Conclusions

Arthropod diversity

- Low in individual plants
- High in plant populations
- Dependant on *Heliconia* species

Future work

- Influence of geographic and population genetic structure within the *Heliconia* on patterns of arthropod associations.