

# ECOLOGICAL ROLE OF POLYBIA RUFICEPS (HYMENOPTERA: POLISTINAE) IN 'EL IMPENETRABLE' NATIONAL PARK, CHACO, ARGENTINA

ATIENZA ANA EUGENIA & AVALOS GUILLERMO LUIS

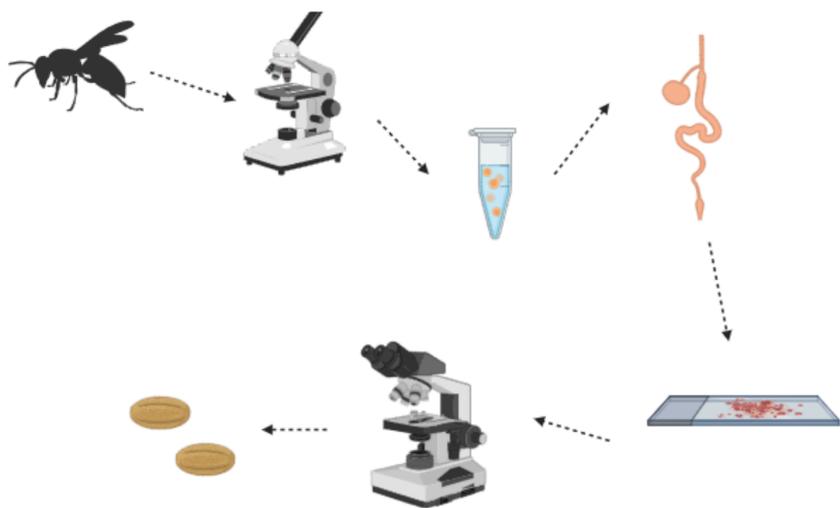
(1),(2)

LABORATORIO DE BIOLOGÍA DE INVERTEBRADOS Y PROTISTAS, UNIVERSIDAD NACIONAL DEL NORDESTE

## INTRODUCTION

*Polybia ruficeps* is a eusocial wasp from South America, commonly known as the Red-Headed Camoatí. These insects are quite docile and are characterized by collecting and storing sugary substances such as nectar, extra-floral nectar, or excretions from aphids for honey production. Also, they play a role as pollinators of native flora

## METHODS



In this study, the digestive tract of these wasps was examined to determine their foraging behavior (end-entomopalynology) in a park of northern Argentina. Specimens were collected from 'El Impenetrable' National Park (Chaco, Argentina) in November 2021. The gut contents were analyzed using safranin staining for observation under an optical microscope. Pollen grains and spores were subsequently identified

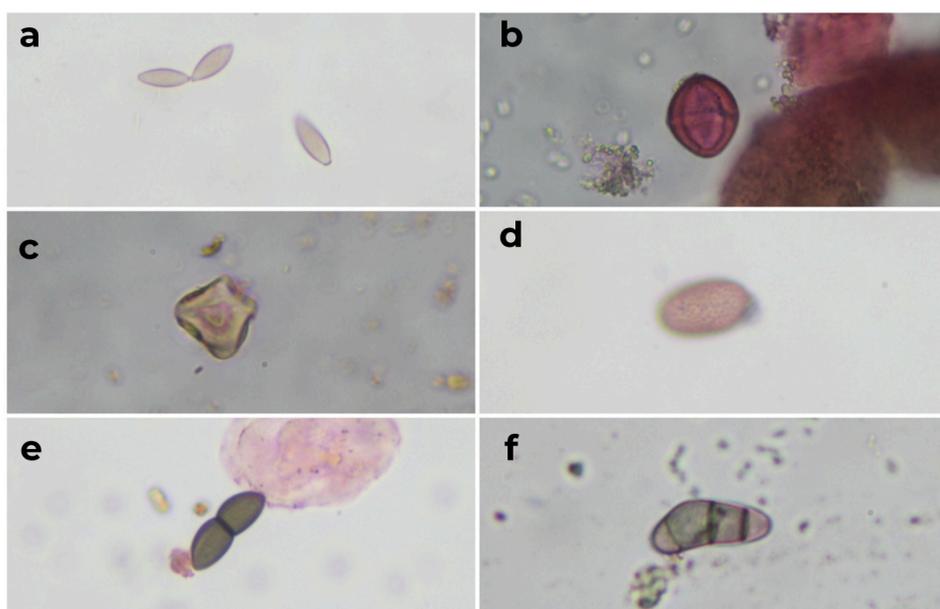


Fig. 1. a) Agaricaceae. b) Anacardiaceae. c) Arecaceae. d) Chaetomiaceae. e) Pleosporaceae (sp1). f) Pleosporaceae (sp2).



## RESULTS

Preliminary results show that in November, these wasps fed on Quebracho trees (*Anacardiaceae*) and Palm trees (*Arecaceae*), which are characteristic plants of the phytogeographic region. A large number of ascospores, didymospores, and phragmospores from fungi belonging to the *Agaricaceae*, *Chaetomiaceae*, and *Pleosporaceae* families were also observed (figure 1).

## CONCLUSIONS

The same pattern was observed in other regions of Latin America concerning this wasp and the typical vegetation of the areas they inhabit. The fact that they feed on both trees and fungi that only inhabit the soil or dead wood suggests a possible preference for foraging these resources. Thus, they can play a role as dispersers of pollen and spores, which is important for the recovery of the forests they inhabit.

## REFERENCES

- Calhim, S., Halme, P., Petersen, JH et al. La diversidad de esporas de hongos refleja los desafíos de deposición específicos del sustrato. *Sci Rep* 8, 5356 (2018). <https://doi.org/10.1038/s41598-018-23292-8>
- Castro M, Santos G, Barbosa B, Melo A, Prezoto F (2015) La comunidad de avispas sociales (Hymenoptera, Vespidae) y nuevo registro de distribución de *Polybia ruficeps* en un área del Bioma Caatinga, noreste de Brasil. *Lista de verificación* 11(1): 1530. <https://doi.org/10.15560/11.1.1530>
- RCPol - Red de Catálogos Polínicos online. Disponible en: <http://chaves.rcpol.org.br/taxon>
- Taylor, Thomas & Krings, Michael & Taylor, Edith. (2015). *Fungal Spores*. 10.1016/B978-0-12-387731-4.00011-6.