

Artemis Kafkaletou Diez¹, Mafalda Restelli², Panagiotis Georgiakakis³, Kostas Poirazidis⁴

¹Chania, Greece, ²Universidade do Porto, Portugal, ³Natural History Museum of Crete, University of Crete, Greece, ⁴Ionian University, Department of Environment, Greece

Introduction

Our study was conducted within the framework of the project "PANAS". The aim of the project was the recording and ecological evaluation of the biodiversity, as well as the study of the structure of five selected monumental forests on the islands of Kerkyra (Korission and Arkoudila forests), Lefkada (Skaros forest) and Zakynthos (Loggos Agiou-Skopos and Yperagathos forests). With regard to bats, our goal was to record their diversity and activity but also to have a preliminary evaluation of the importance of monumental forests of Ionian Islands for bat conservation.



Methods

- Field work was conducted in August and September 2021.
- Transect recordings on predefined routes were made in each forest.
- 3 to 5 five-minute point recordings were included in each route.
- Roosts surveys were conducted in buildings existing within the studied area.
- Species or groups of species were identified by analysis of recordings and their number was used as a measure of bat diversity, while the magnitude of their flight activity, measured as numbers of bat passes, was used to estimate their relative abundance.



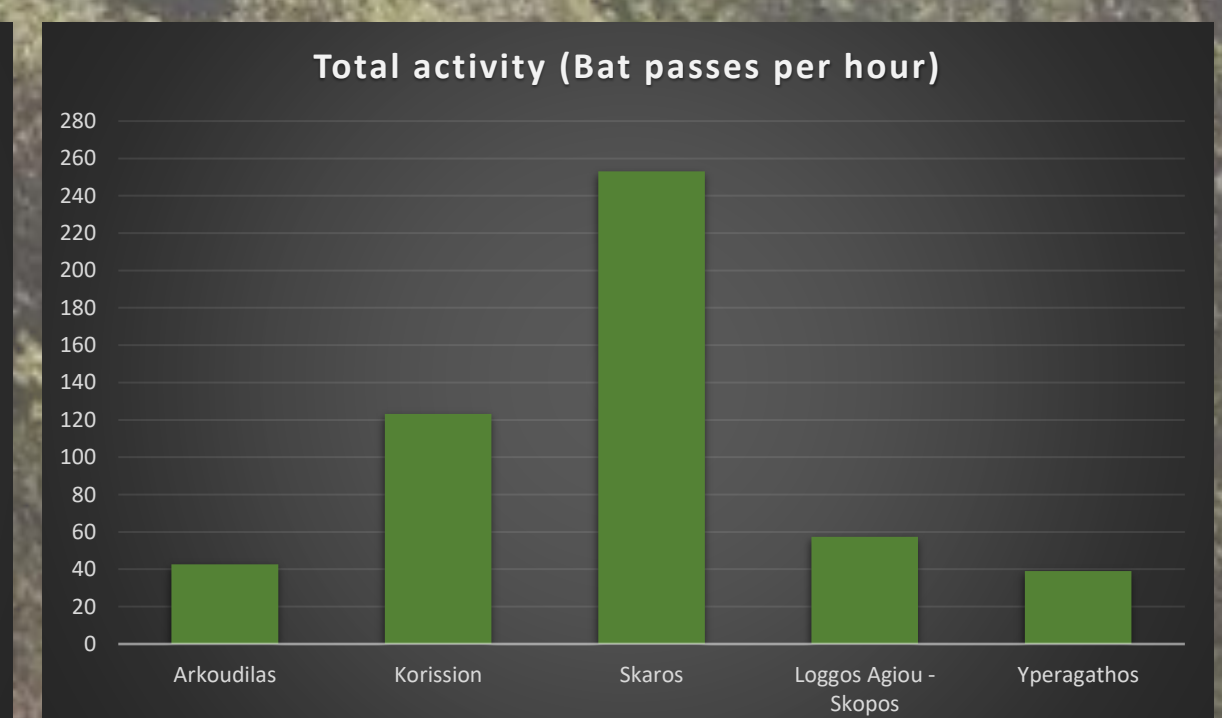
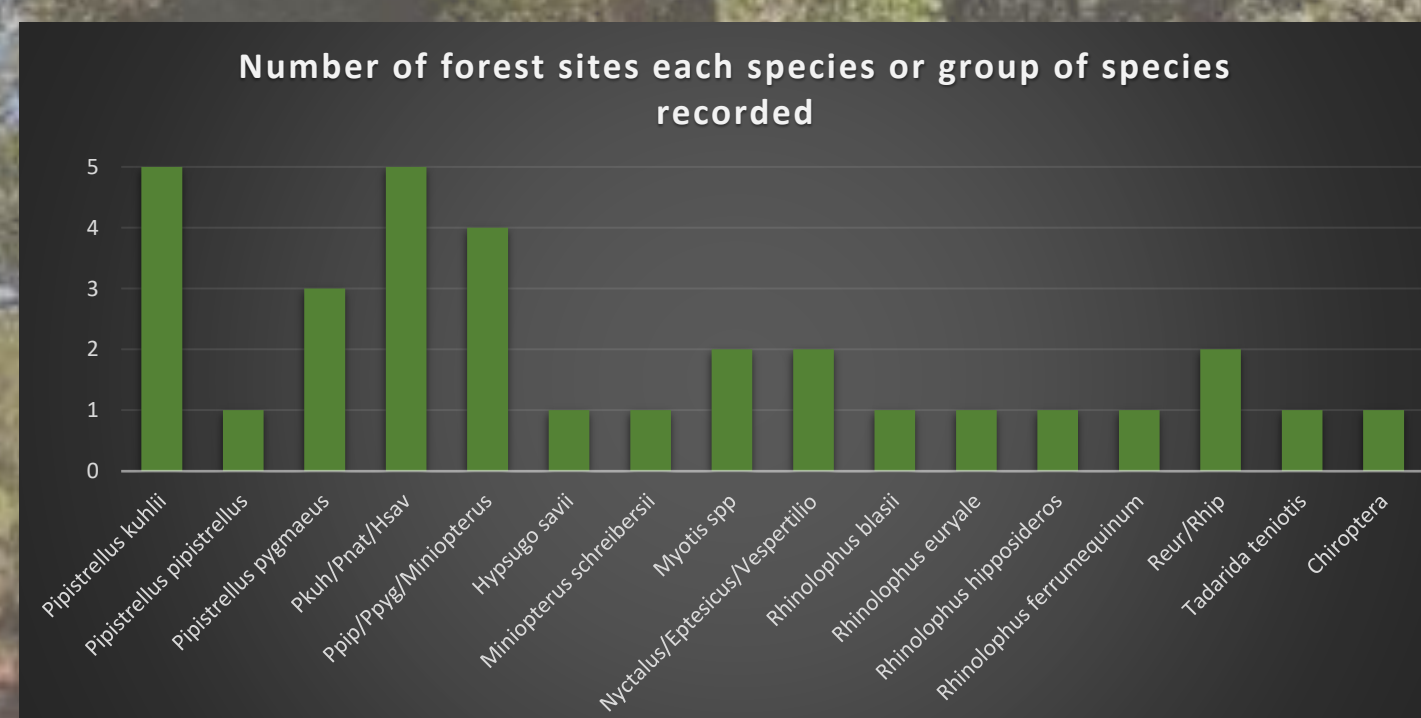
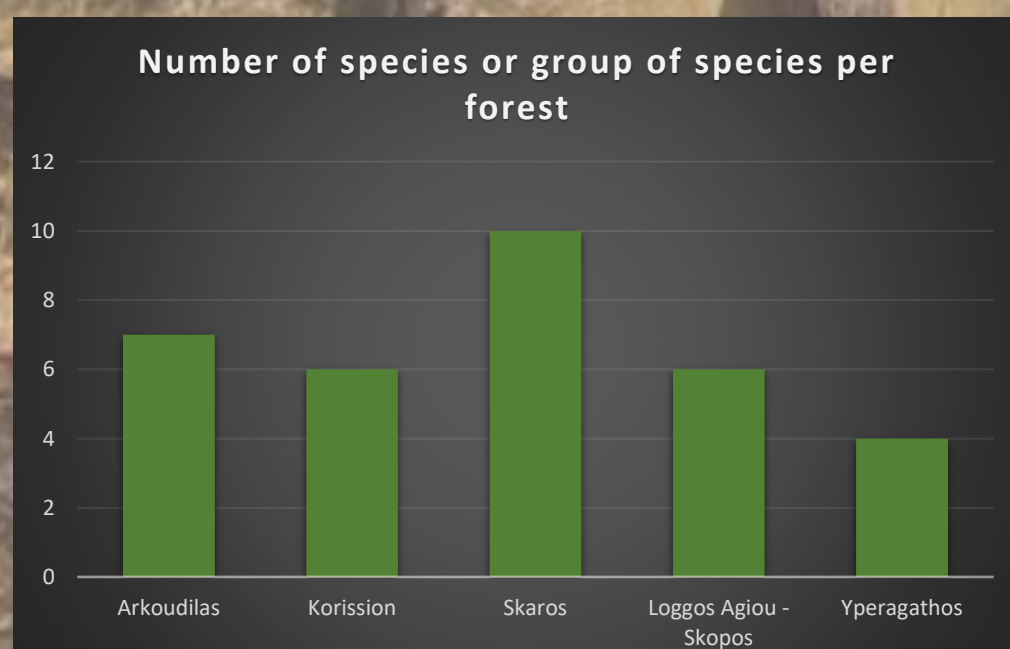
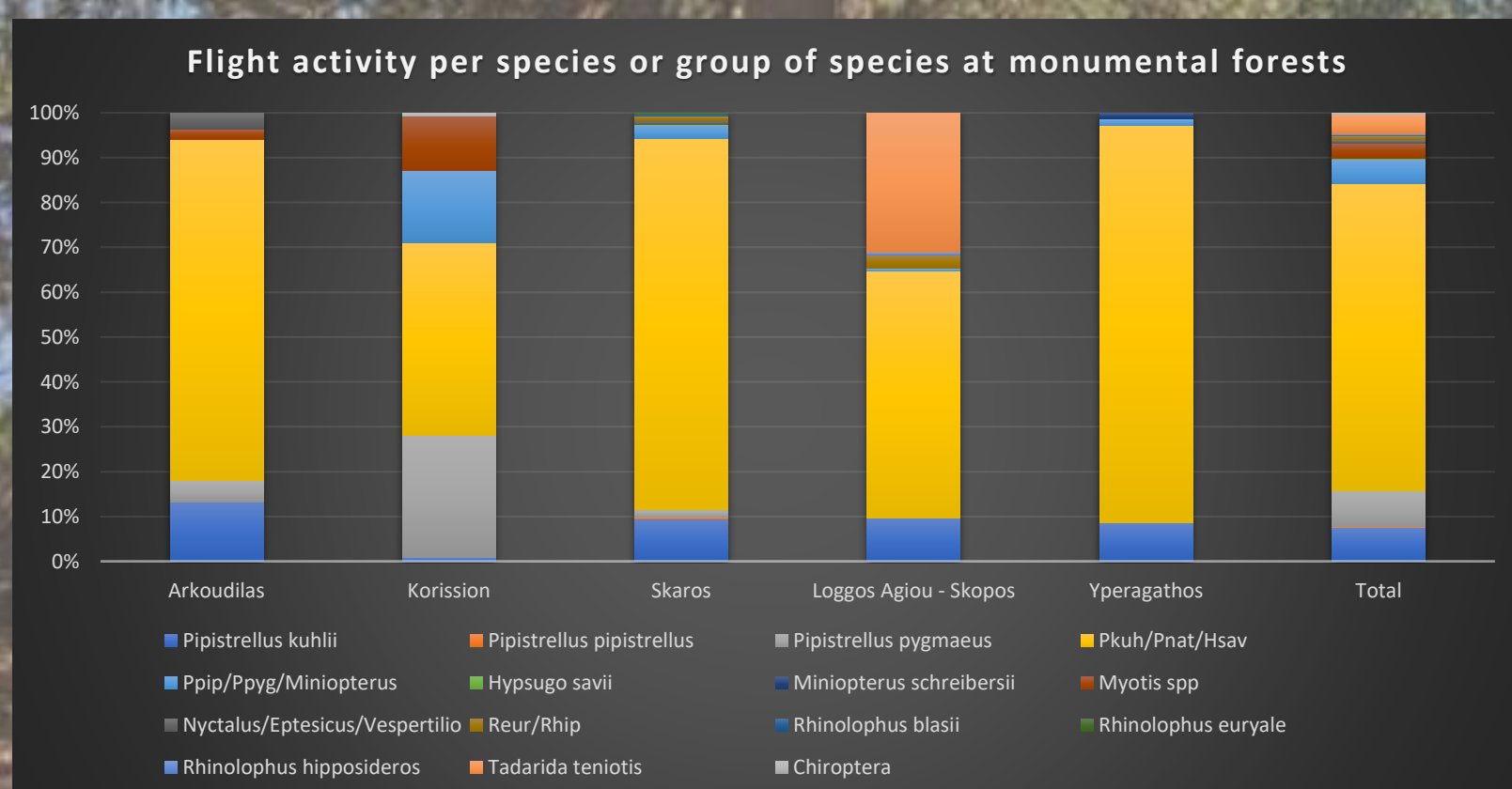
Transect route and point recordings in Yperagathos forest



The old growth oak forest of Skaros

Results

- A total of 10 species and 6 groups of species were recorded.
- The highest bat diversity was recorded in the old growth oak forest of Skaros, Lefkada (6 species and 4 group of species), as well as in Arkoudilas forest, Kerkyra (4 and 3 respectively).
- Pipistrellus kuhlii*/*Pipistrellus nathusii*/*Hypsugo savii* was the most frequently recorded bat group (71,1% of the total recordings), followed by *Pipistrellus pygmaeus* (6,6%), *Tadarida teniotis* (4,4%) and *Myotis* spp. (2,6%).
- Few individuals of *Rhinolophus hipposideros* and *Rhinolophus ferrumequinum* were spotted in an abandoned house in Arkoudilas forest.



Conclusions

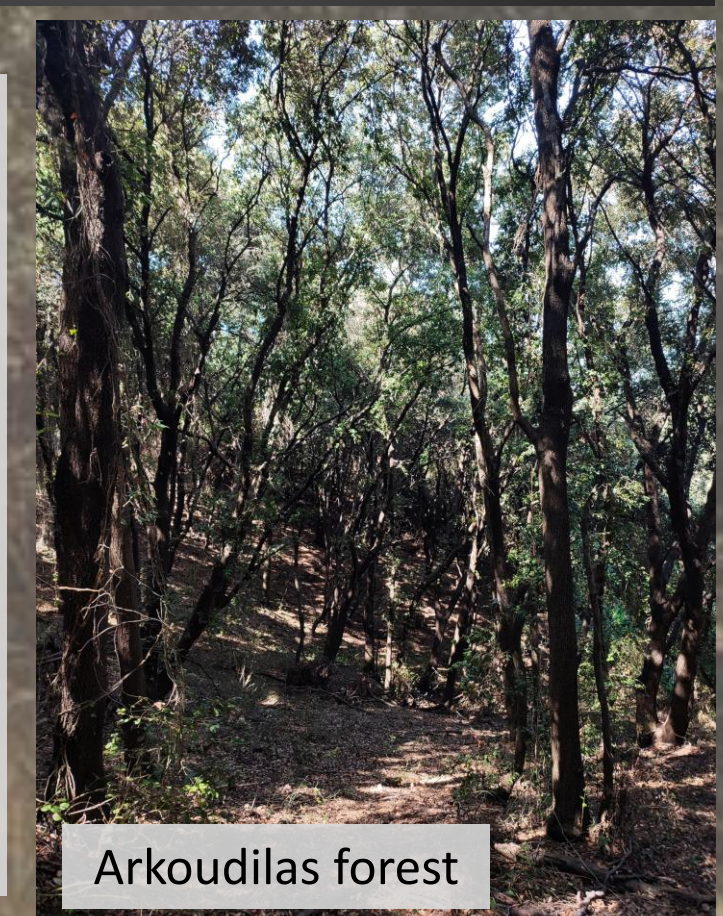
During our study, bats were recorded for the first time in these forests and our results highlight the importance of old growth forests of the Ionian Islands for bat diversity, especially those with tall oak trees, low density and forest clearings, like Skaros forest. According to our results, the monumental forests hosts the majority of the total bat diversity of each island, specially for Lefkada (70%) and Kerkyra (50%). However, more studies are needed in order to have a better evaluation of the importance of old growth forests (e.g. finding roosts in trees) of Ionian islands in terms of conserving bat diversity.

References

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Rhinolophus hipposideros found in an old cistern in Arkoudilas forest.



Arkoudilas forest

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