

Study of helminthfauna of hedgehogs (*Erinaceus europaeus*) from a wildlife recovery center

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Introduction

The **European hedgehog** (*Erinaceus europaeus* Linnaeus, 1758) is a specie of mammal erinaceomorf family Erinaceidae, previously included in the old order Insectivora.

The project is a pilot **study of prevalence and loads** of helminth parasites observed in hedgehogs from the Centre de Recuperació de Fauna Salvatge de Torreferrussa.

Objetives

- I. Deepen the knowledge of helminths parasites that can be found on the European hedgehog.
- II. Do an analysis between the samples studied, with regard to the prevalence of different parasites and their parasite load.
- III. Increase the little current information about parasites of these native animals.
- IV. Perfect parasite detection techniques applicable to hedgehogs.

Methods

Samples:

There have been used **29 samples** of European hedgehog to conduct the study.

Procedure followed by digestive parasites:

- Empty the content of the digestive tract.
- Analyze the content on the binocular loupe.
- Do the detection, identification and recount of the helminths.

Procedure followed by respiratory parasites:

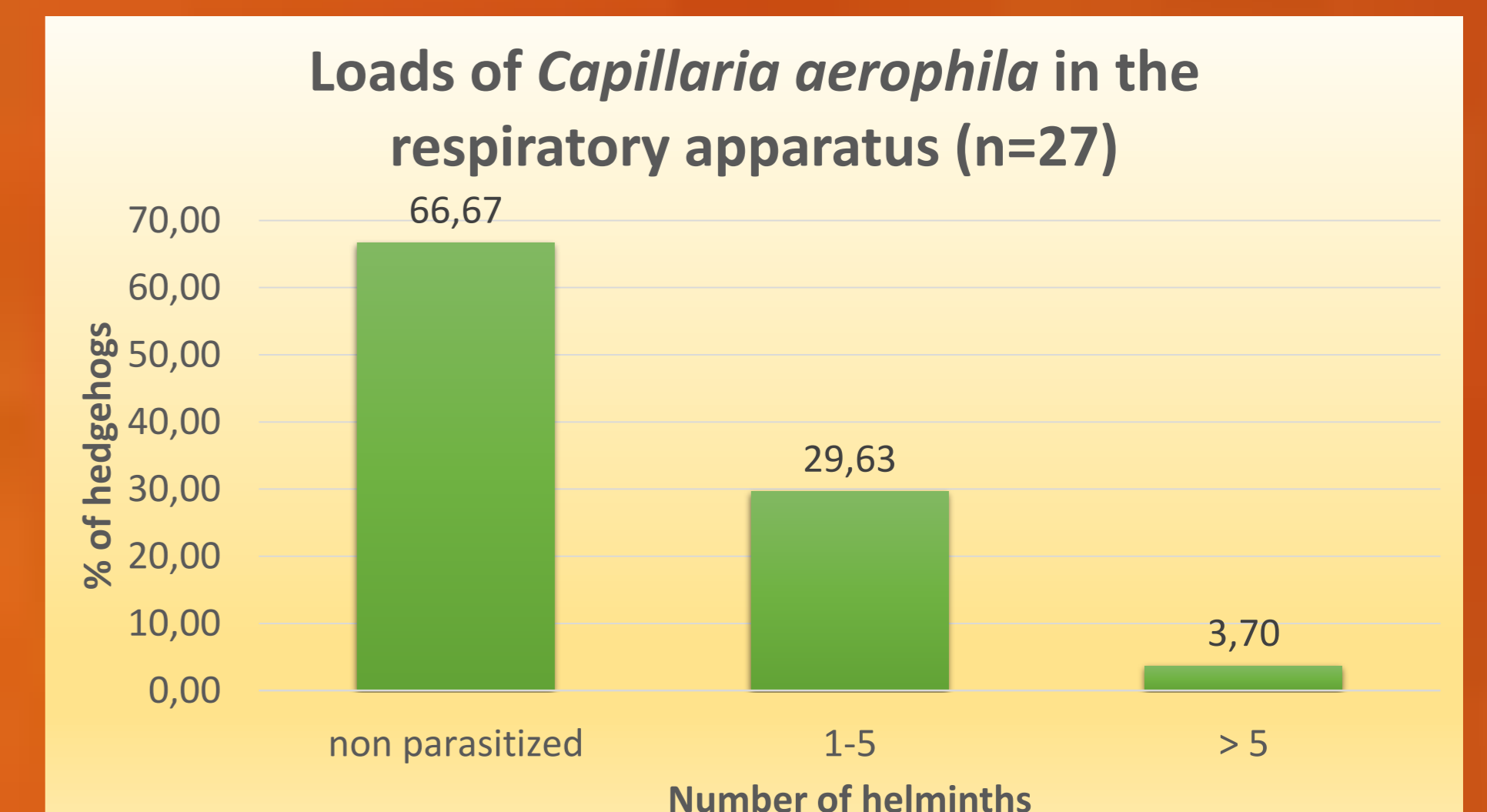
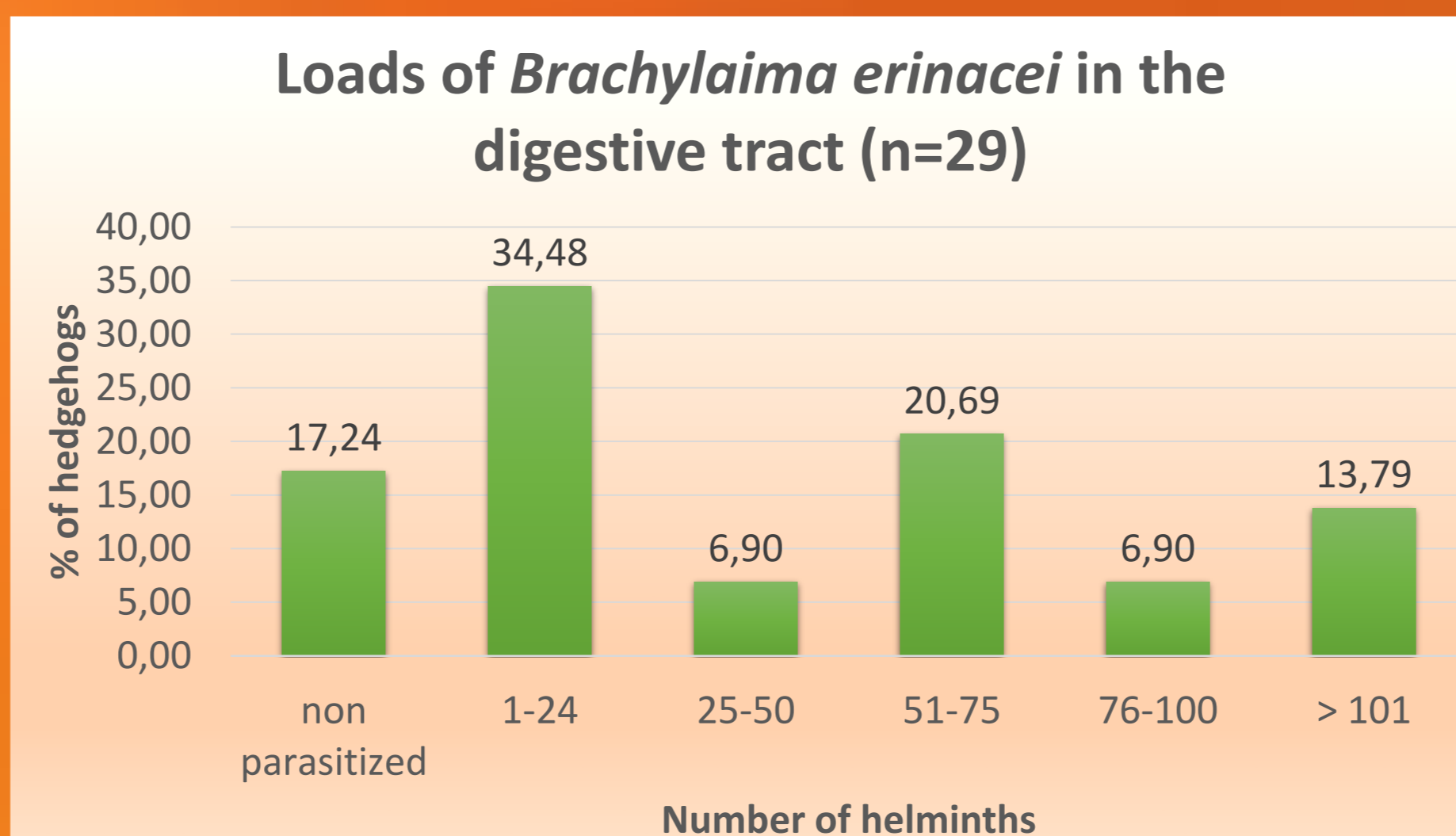
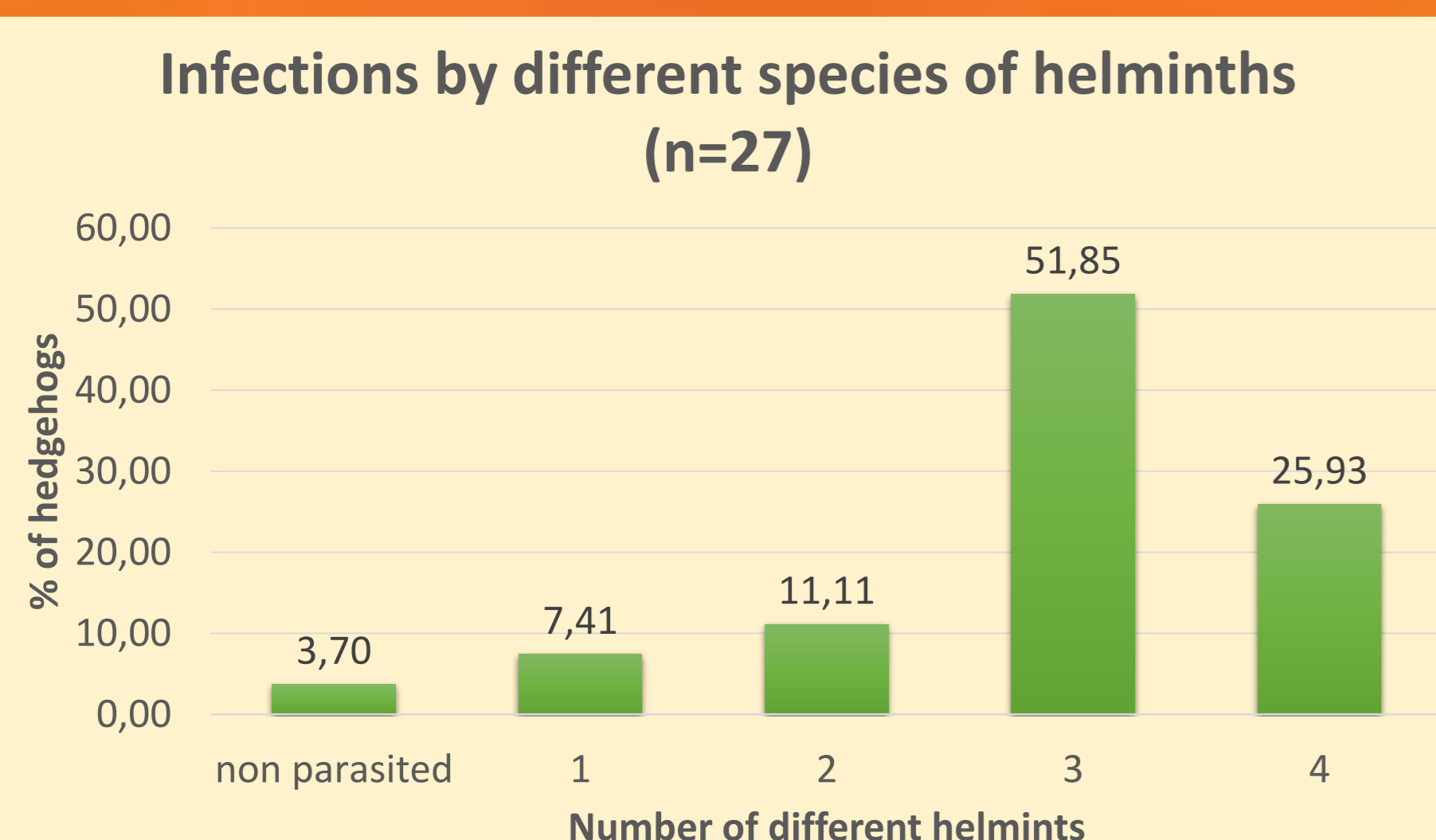
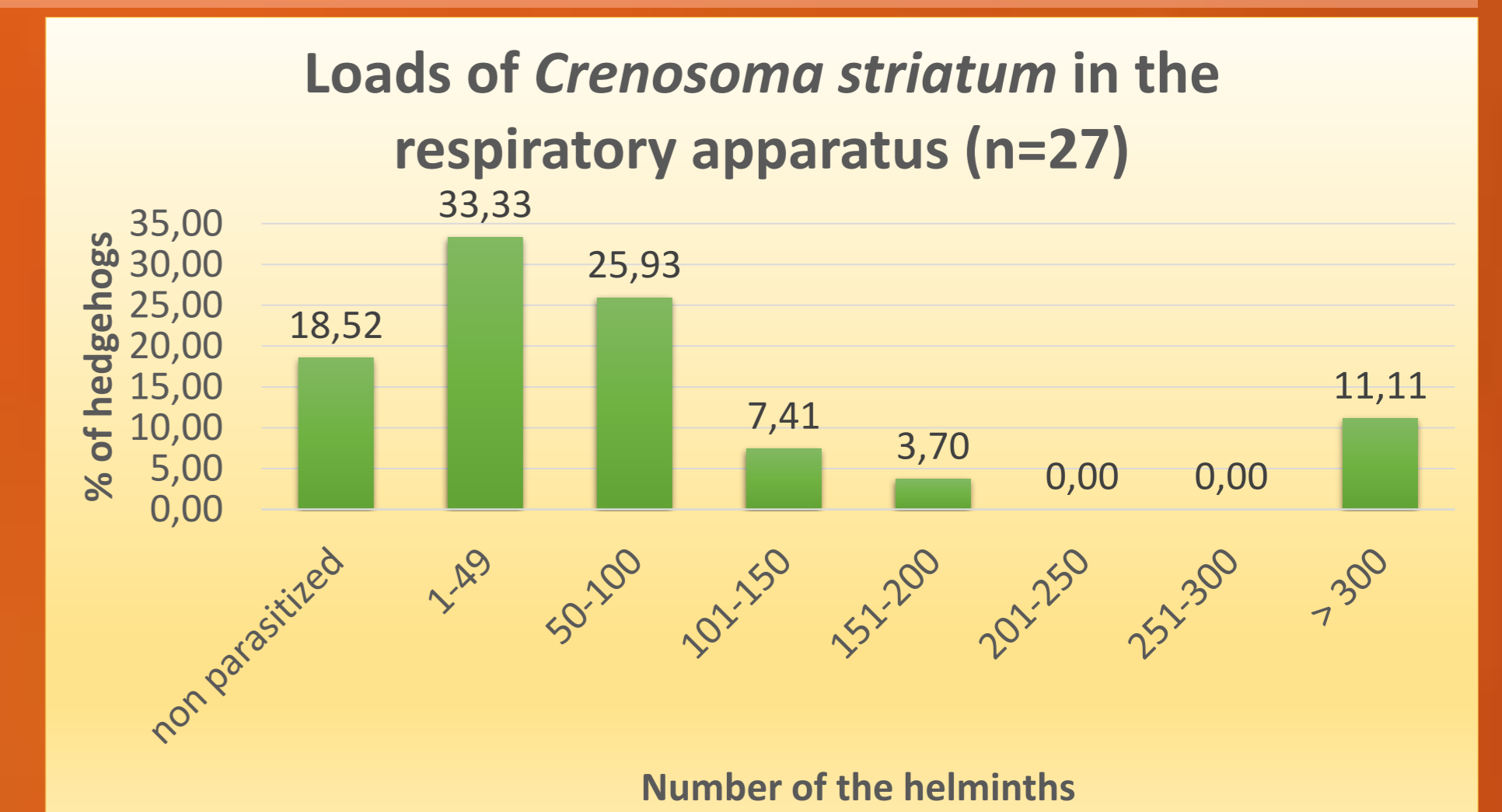
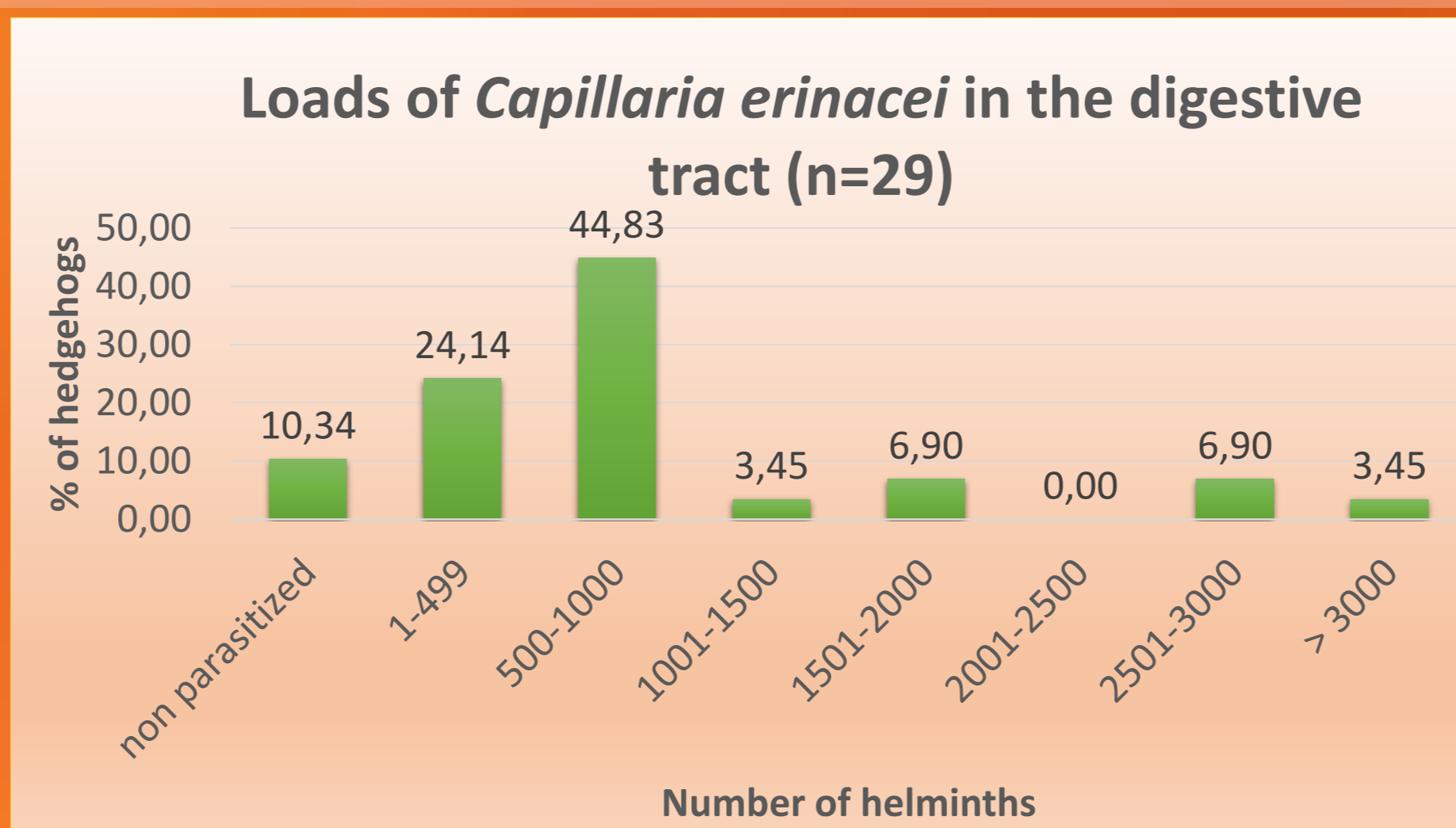
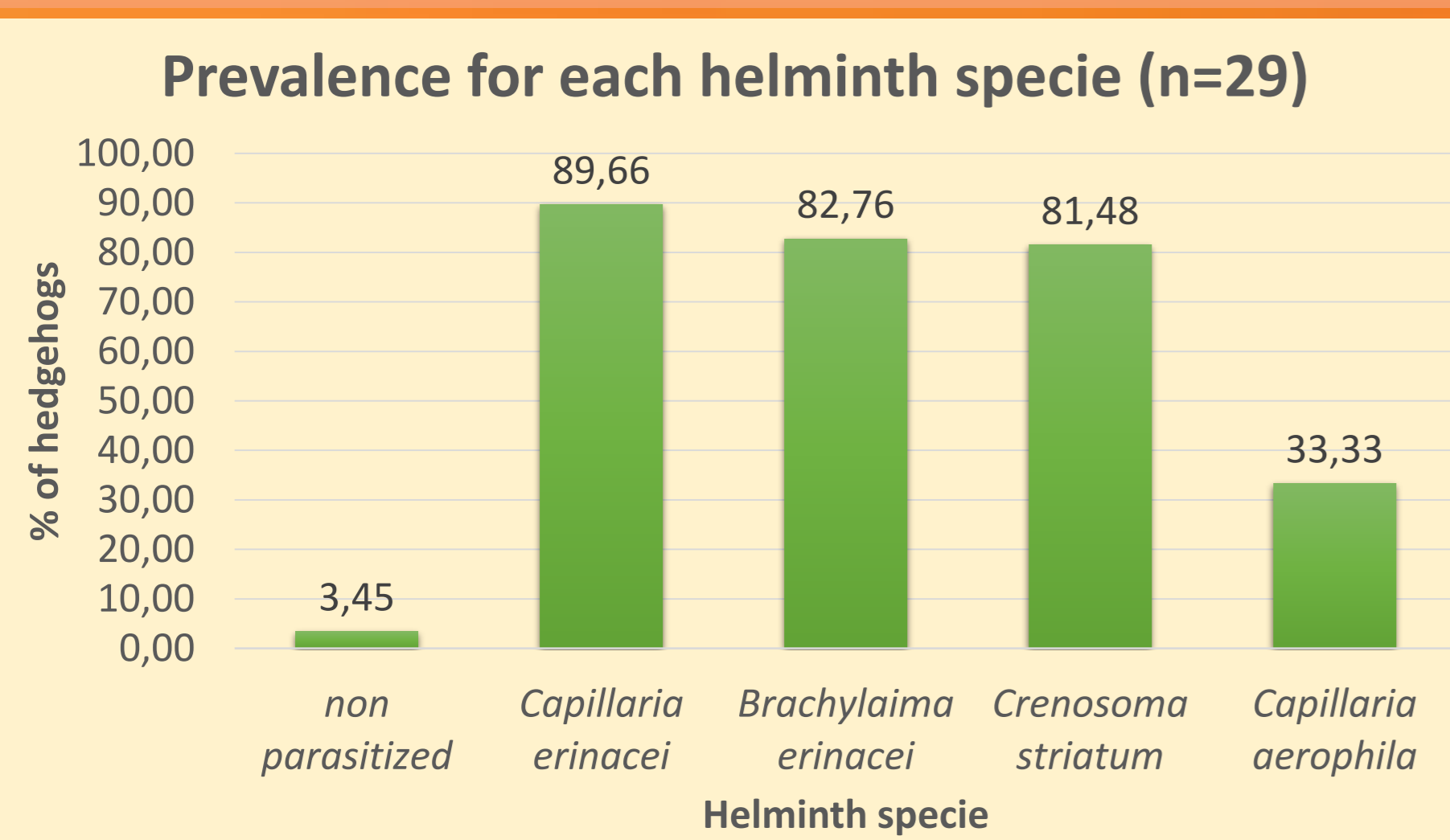
- Cut the respiratory system in small pieces of 3 mm³.
- Immerse the pieces in water and stir.
- Analyze this content on the binocular loupe.
- Do the detection, identification and recount of the helminths.

Procedure followed by hepatic parasites:

- Cut the liver in small pieces of 3 mm³.
- Add a solution of pepsin to do the digestion.
- Homogenize the sample and do the flotation technique to observe the eggs under the microscope.



Results



Conclusions

- Total prevalence of infected hedgehogs is 96,55%.
- Four helminth species have been detected: *C. erinacei*, *B. erinacei*, *C. aerophila* and *C. striatum*.
- *C. erinacei* is the parasite with the highest prevalence (89,66%), and *C. aerophila* is the lowest (33,33%).
- *C. erinacei* is the helminth with the highest loads (mean of 864,24 parasites) and *C. aerophila* is the lowest (mean of 1 parasite for each hedgehog).
- More than a half of hedgehogs (51.85%) present infection by three different types of helminths.
- Parasites observed are autochthonous, because all the animals were captured in Catalonia.
- Other helminths also can infect the hedgehog, but they haven not been found in this study, as in the case of some nematodes and acanthocephals.