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

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June 2016

**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.

**Objectives**

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**

- Prevalence for each helminth specie (n=29)
- Loads of *Capillaria erinacei* in the digestive tract (n=29)
- Loads of *Crenosoma striatum* in the respiratory apparatus (n=27)
- Loads of *Brachylaema erinacei* in the digestive tract (n=29)

**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.