

A comparison between the hare and the rabbit

Introduction

In this essay I have made a comparison between the hare and the rabbit. I have considered things like how they live, how their offsprings look like, how they behave and how long they live in the free. Further on I have taken up an investigation that was made in Australia concerning possible avoidance between the European hare (*Lepus europaeus*) and the European rabbit (*Oryctolagus cuniculus*) when they lived sympatric.

Lagomorpha

Many people thinks that the hare and the rabbit belong to the rodents, this is, however, not true. Instead both the hare and the rabbit belong to lagomorpha. The lagomorpha and the rodents are different concerning the following things:

- Incisors: Lagomorpha have 2 pair incisors in upper jaw and one in the lower while the rodents
1 pairs both in the upper and lower jaw.
- Penis: The rodent male have a penisbone but the lagomorpha male has not
- Toes: lagomorpha has 5 toes on forelimb and 4 toes on back limb, rodents has 5 on forelimb and 5 on back limb

Together the lagomorpha consist of 44 different species and they are nowadays spread throughout the whole world but it was in Asian and North America they arised 50 million years ago.

How different are they really and why?

The hare and the rabbit have specialized on different things that is why they are so different even thou they are related. The hare for example have specialized on running fast; some kind of hare can run as fast as 86km/hour, so when they meet a predator they try to escape. The rabbit on the other hand has specialized on digging and when a rabbit meet a predator it rather hide than tries to escape.

Another thing that differ the hare and the rabbit is that the most kinds of hares prefers to live alone or in small groups. The rabbit lives in big colonies.

In free condition the hare can be as old as 7 -12 year but 75 % of the rabbit dies before they reach an age of three month.

Also the offsprings looks different. The leverets* are born after 42 days, in a grope on the ground. They are between 1-4 and they have already fur and are not blind. After 3 days the mother is placing them out in different gropes and they only come together when they are going to eat and she stays with them for about tree minutes. They become sexual maturity at an age of three month but there are also some kinds of hares that do not become sexual mature until an age of two years.

The rabbit kittens are naked and blind and the mother visit them one time a day and stay for about five minute. The duration of the pregnancy is about 33 days and the are placed altogether I one hole in the ground that is furnished with fur and grass. They reach sexual maturity at an age of three month.

Are there any avoidance between the European hare and the European rabbit when living sympatric?

An investigation was made in October 1999 till April 2000 concerning possible avoidance between the European hare and the European rabbit. The studie was made at Hartely in South Australia. The goal of this investigation was to see if there was any avoidance between the hare and the rabbit then they lived sympatric under different food conditions. One was using telemetric methods in the studies. The day was divided into four different part called twilight, that was the time one hour before sunrise and one hour after sunset. What was left of the night was called adjusted night the day also was divided into two different part named preset/post rise and adjusted day. Early and late daytime activity was called preset/post rise and the rest of the day was then called adjusted day. Mild winters and hot, dry summers is the climate in the south Australian where the studie was made and during the period the wind was light except during one season when it was moderate. All rabbit in the district was captured but not all the hares. The place where the studie was done was a wheat/sheep farm. The geographic was crop, pastern and shrub. Home range for the rabbits were 10 ha and the hares home range where 149 ha. When the succulent green food was increasing the rabbits home range and the overlap between the male rabbit was decreasing. This difference could not be noticed in the hare.

With this investigation one found out that during adjusted day both the hares and the rabbits where in the scrub even thou there was some fine difference it was thought to be because of the behavior difference between the species rather than due to avoidance between them. During preset/post rise they where both active but close to the scrub. The hare went further away then it became darker while the rabbit stayed near the scrub all night. Both the hare and the rabbit spent time in the scrub during adjusted night even thou

the rabbit spent a whole lot more time there than the hare. Rabbit was active along south of the scrub. The hare slowly was moving through the area used by the rabbit but avoided during preset/post rise and twilight the stone piles.

Both the rabbit and hare had very strong site fidelity and in the hares case it can depend on that they have to know the food well and they also have to know the place well if they need to escape.

Some attacks against the hare from the male rabbit occurred but it was probably because of the fact that the rabbit thought that the hare was another male rabbit and it was much more common that they got along.

The day shelter was important for both the rabbit and hare but a bit more important for the rabbit. Since the hare and also the rabbit spent more time in there when the food was insufficient this indicates that there could be something eatable in the shelter. The shelter also was offering protection against the wind and predators.

The result of this studie was that one found some avoiders during preset when the hare was avoiding the stone pile otherwise none.

It should be mentioned that earlier studies have been done (Rolls -69 Jarman -86 and wilson -92) that indicated that there was a fine inversely influence on the hare density by the presens of rabbits.

One thing that I find strange is that it seems like the rabbit is more guardedly against the hare. I thought that it should be the other way around that the hare, that I have found out is a bit of a "lone wolf," should be the one that avoided or showed aggressively against the rabbit.

References:

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*Leverets= the hare offspring is called that