



EASTERN UNIVERSITY SRI LANKA
SECOND YEAR IN SCIENCE (2014/2015)
ANIMAL BEHAVIOUR AND EVOLUTION
ZL-252



CASE STUDY (Final Practical examination)

Time: 45 minutes

Index No:

Mating behaviour in red deer

Red deer (*Cervus elaphus*) is one of the largest deer species. The red deer inhabits parts of Europe, the Caucasus Mountains region, Asia Minor, Iran, parts of western Africa, and central Asia. It also inhabits the Atlas Mountains region between Morocco and Tunisia in northwestern Africa, being the only species of deer to inhabit Africa. Red deer have been introduced to other areas, including Australia, New Zealand, Peru, Uruguay, Chile and Argentina. Red deer in Europe generally spend their winters at lower altitudes in more wooded terrain. During the summer, they migrate to higher elevations where food supplies are greater and better for the calving season. European red deer have a distinctive "roar"-like-sound (not to be confused with the roars made by lions, panthers and the like) during the rut. The male deer roars to bring his harem of females together. The females are initially attracted to those males that both roar most often and have the loudest roar call. Males also use the roar call when competing with other males for females during the rut, and along with other forms of posturing and antler fights, is a method used by the males to establish dominance. Roaring is most common during the early dawn and late evening, which is also when ruminant deer are most active in general.

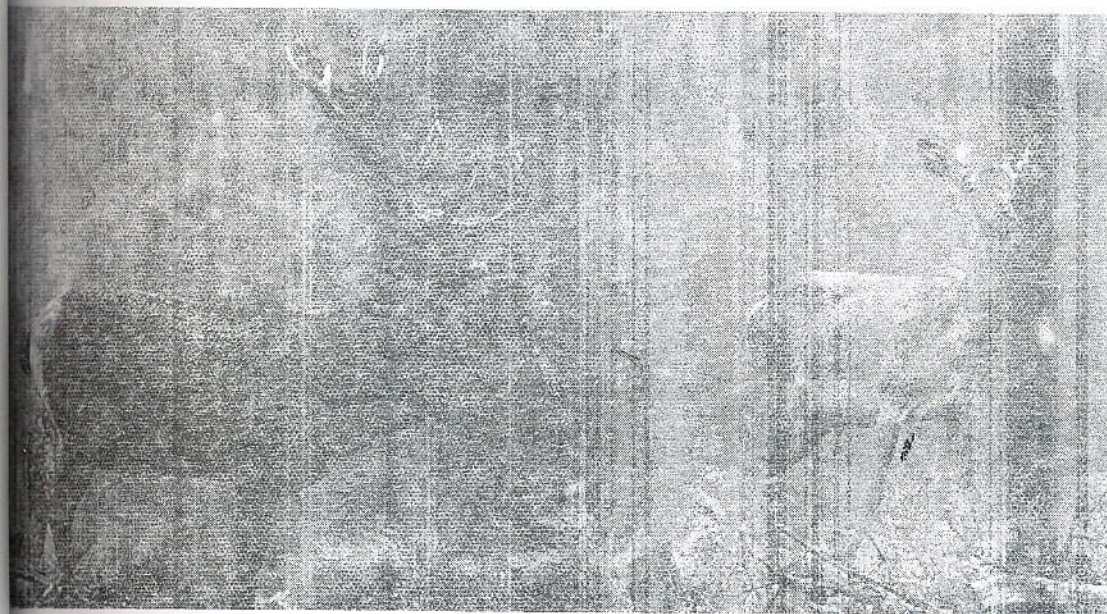


Figure 1: Female and Male red deer

ANSWER THE ALL QUESTIONS

1. Identify TWO differences between male and female red deer

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..... (2)

2. What term is used to describe the differences that occur in structure and appearance between male and female animals of the same species?

.....
..... (1)

3. Identify ONE other animal species in which differences between male and female occur.

.....
..... (1)

4. State 3 advantages to animals by the term write in question no 2?

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5. In the breeding season (known as the rut), red deer stags roar frequently. They are trying to hold onto a number (harem) of females in order to mate with them when the females are ready.

i) Give ONE reason why it is important for stags to feed well during the rut before the breeding season begins?

.....
..... (1)

ii) Roaring is believed to be an 'honest' signal of male quality. What does 'honest' mean in this context?

.....
..... (1)

iii) Roaring is often the first behaviour observed when two stags compete. Other behaviours may also occur before the contest is decided. Identify TWO behaviours and for one of them briefly outline the sequence of events.

.....
.....

.....(1)

4. Comment on the data in the table.

.....(2)

5. For any study of animals living in a group, outline what the findings of the study suggest are some of the advantages of living in a group for prey animals.

.....(3)