Peer-graded Assignment: Ecological Aspects of an Organism

You passed!
Congratulations! You earned 18 / 18 points. Review the feedback below and continue the course when you are ready.

Instructions | **My submission** | Discussions

Your fellow learners have submitted their reviews anonymously. All names are still visible to course instructors.

Dietary partitioning and competition between sika deer and Japanese serows at high altitudes

Submitted on April 8, 2024

PROMPT

Pick an ecosystem and an organism in it. Provide the common name and the scientific name of the organism.

Native Japanese serows (*Capricornis crispus*)

RUBRIC

Does this reflection include an ecosystem, an organism in it, and the scientific name of the organism? (Select "yes" even if you don't think the scientific name is correct. You're welcome to suggest what you think as correct in the comment section below.)

- (selected) **1 point**
  Yes
- ( ) 0 points
  No

Additonal comments from reviewer:

.

Translate to English

no ecosystem written

Translate to English

PROMPT

Using your own knowledge and research, provide information on the following ecological aspect of your organism in the ecosystem you specified. Select at least 3 categories and elaborate on the aspects under each category. Type in "N/A" if a category doesn't apply to your organism.

Category 1: Abiotic conditions that determine where the species can persist

- Temperature/ Amount of light
- Amount of rainfall /Soil conditions
- Elevation
- Others

・ **Temperature / Amount of light**

Annual mean temperature : -6.2℃

The forest floor is dark in subalpine forest. In contrast exposed to direct sunlight in alpine desert.

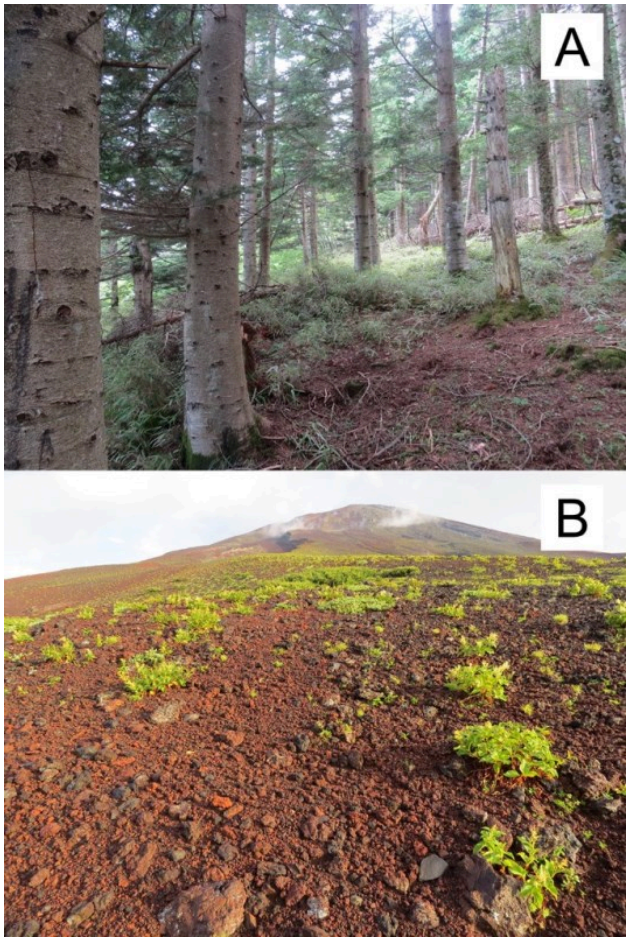
・ **Amount of rainfall /Soil conditions**

Annual average precipitation : 0.0mm

Scoria in alpine desert

・**Elevation**

A subalpine forest (1000m to 2500m)(A) and an alpine desert (more than 2500m)(B) of Mt. Fuji, central Japan.



RUBRIC

Does the learner's reflection cover the abiotic conditions that determine where the species can persist?

- Temperature/ Amount of light
- Amount of rainfall /Soil conditions
- Elevation
- Others

0 points
It doesn't cover this category.

1 point
It mentions one of abiotic conditions.

2 points
It mentions two of the abiotic conditions.

3 points
It mentions 3 or more of the abiotic conditions.

Additional Input from Reviewer

.

Translate to English

nice pictures

Translate to English

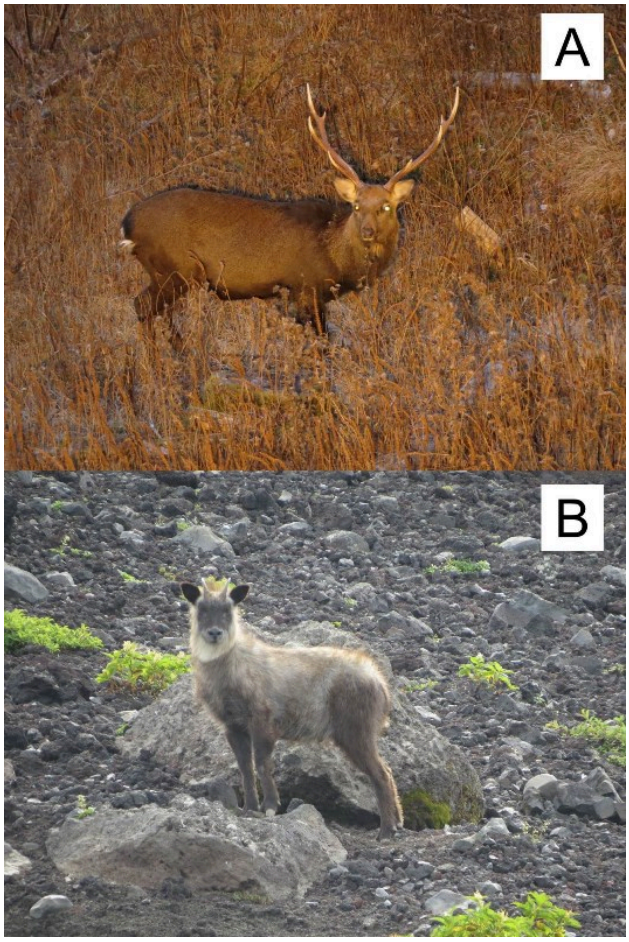
PROMPT

Category 2: Biotic interactions critical to the species survival

- What does the species eat?
- What eats it?
- What species does it compete with?
- What species does it form mutualisms with?

・ **What species does it compete with?**

Native sika deer (*Cervus nippon*) (A) compete Japanese serows (B) in the alpine desert.



・ **What does the species eat?**

RUBRIC

Does the learner's reflection cover the biotic interactions critical to the species survival?

- What does the species eat?
- What eats it?
- What species does it compete with?
- What species does it form mutualisms with?

○ 0 points
It doesn't cover this category.

○ 1 point
It answers one of the questions.

○ 2 points
It answers two of the questions.

○ 3 points
It answers three of the questions.

◉ **4 points**
It answers all four questions.

Additional input from reviewer:

Translate to English

■ In the subalpine forest

Native Japanese serows : conifer leaves

Native sika deer : graminoids

■In the alpine desert

Both species : dicot leaves

・**What eat it?**

Human (*Homo sapiens sapiens*)

・What species does it form mutualisms with?

N/A

nice pictures

Translate to English

PROMPT

Category 3: Population growth

- How does the species reproduce?
- How quickly does it reproduce?
- What limits its population growth?

・**How does the species reproduce?**

Fertilisation of gametes by mating, followed by nurturing of the offspring in the placenta.

・**How quickly does it reproduce?**

Native sika deer : 1 individual per year

Native Japanese serows : Rarely have children in two consecutive years

・**What limits its population growth?**

Feeds, temperature, presence or absence of snow cover, etc.

RUBRIC

Does the learner's reflection cover population growth?

- How does the species reproduce?
- How quickly does it reproduce?
- What limits its population growth?

0 points
It doesn't cover this category.

1 point
It answers one of the questions.

2 points
It answers two of the questions.

3 points
It answers all three questions.

Additional input from reviewer:

.

Translate to English

short but precise

Translate to English

PROMPT

Category 4: Ecological role

- What role does this species perform in its ecosystem?
- What are the consequences of its absence?

・What role does this species perform in its ecosystem?

Primary consumer

・What are the consequences of its absence?

Reduced plant overpopulation and disturbance

RUBRIC

Doe the learner's reflection cover the organism's ecological role?

- What role does this species perform in its ecosystem?
- What are the consequences of its absence?

0 points
It doesn't cover this category.

1 point
It answers one of the questions.

2 points
It answers both questions.

Additional input from reviewer:

.

Translate to English

a little ore elaborate next time

Translate to English

PROMPT

Category 5: Impact of humans

- What activities performed by humans are affecting this species?
- Is the species threatened with extinction? What is its IUCN redlist classification?
- What actions can humans take to preserve this species and ecosystem?

・What activities performed by humans are affecting this species?
Deer proliferation due to human predator reduction.
Vegetation change due to climate change.
・Is the species threatened with extinction? What is its IUCN redlist classification?
■LC : Least Concern (IUCN Red List Ver.3.1 (2001))
■Four areas in Japan are designated as endangered local populations.
■The number of Japanese serows in high altitude areas, including alpine zones, is thought to have been declining in recent years.
■Japanese serows in Mt.Fuji is an isolated population and the population is so small that if the decline continues, there are fears of regional extinction.
・What actions can humans take to preserve this species and ecosystem?
In order to conserve alpine ecosystems, including Japanese serow, there is a strong need to manage competing Native sika deer populations and maintain and restore plant abundance and diversity.

RUBRIC

Does the learner's reflection cover impact of humans?

- What activities performed by humans are affecting this species?
- Is the species threatened with extinction? What is its IUCN redlist classification?
- What actions can humans take to preserve this species and ecosystem?

○ 0 points
It doesn't cover this category.

○ 1 point
It answers one of the questions.

○ 2 points
It answers two of the questions.

◉ **3 points**
It answers all three questions.

Additional input from reviewer:

.

Translate to English

very elaborate. well done

PROMPT

Provide sources of your research, such as book chapters, links to webpages, etc.

RUBRIC

Does the learner's work include research sources?

・ Hiruma, M., Takada, H., Washida, A., & Koike, S. (2023). Dietary partitioning and competition between sika deer and Japanese serows in high elevation habitats. *Mammal Research*, *68*(3), 305-315.
・ Takada, H. (2023). Unique spatial behavior of the Japanese serow (Capricornis crispus) in the open mountains of Mt. Fuji. *acta ethologica*, *26*(2), 127-132.

2 points
Yes

0 points
No

Start new attempt

Comments
Comments left for the learner are visible only to that learner and the person who left the comment.