



NTNU – Trondheim
Norwegian University of
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Department of Biology

Examination paper for BI2045 Communication and Reproductive Behaviour

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Examination time (from-to): 09:00 – 13:00

Permitted examination support material: None

Other information:

All questions count equally for the grade

Language: English

Number of pages (front page excluded): 1

Number of pages enclosed:

Checked by:

Date

Signature

Question 1

What is sexual selection, and how does it relate to natural selection? What kinds of traits can be selected for by sexual selection (give examples)? What role does variation in mating success play in sexual selection?

Question 2

What is mate choice? What are the potential benefits and costs of mate choice? Does mate choice occur in both sexes and if yes, in which sex does it occur more commonly? How can mate choice be studied empirically?

Question 3

Sexual selection involves selection for mating success and selection for fertilization success. Explain these two mechanisms and explain how these two mechanisms express themselves in flowering plants.

Question 4

- (a) Describe the question (phenomenon) that was the basis for your group's project, and the hypotheses that have been suggested to explain the phenomenon. Which hypothesis do you think best explains the phenomenon, as judged from existing evidence? Explain why you think that particular hypothesis is most likely to be true. If you think several hypotheses may apply, explain why.
- (b) Describe the questions that were the basis for two of the other group projects (your choice which), and outline potential explanations (hypotheses) that may explain each of these phenomena. (You do not need to discuss evidence for or against each).

Part (a) counts twice as much as (b) for the grade.