

Assessment Report

New Zealand Scholarship Biology 2024

Performance standard 93101

General commentary

Successful candidates critically analysed the questions and resource material provided and integrated this with relevant biological ideas across a range of contexts.

Candidates who demonstrated broad biological knowledge, as well as deep understanding of biological ideas, used and defined appropriate terminology successfully and justified their ideas, providing supporting examples.

Successful candidates wrote concise, well-structured responses that demonstrated insight and that addressed all parts of the questions.

Report on performance standard

Candidates who were awarded Scholarship with **Outstanding Performance** commonly:

- demonstrated perception and insight
- demonstrated depth and breadth in their understanding of biological knowledge, and were able to link several ideas together to tell a context-based story
- attempted all aspects of all three questions
- demonstrated in-depth planning to ensure that all necessary aspects were covered
- used sophisticated integration of evidence from the resource material that supported their ideas.
- displayed high-level literacy, with a mastery of biological terminology
- wrote fluently, concisely, and logically, while directly addressing the questions.

Candidates who were awarded **Scholarship** commonly:

- demonstrated evidence of analysis and critical thinking in their response
- integrated biological ideas and evidence from the resource material
- answered each question in a precise manner that showed the development of logical and clear ideas
- attempted all questions, although Question Two was not completed with as much depth as the other two questions
- addressed one aspect of the question more than others, limiting their potential points for higher achievement
- used basic planning to guide their thinking
- demonstrated broad biological knowledge.

Candidates who were **not awarded Scholarship** commonly:

- did not answer all questions
- did not answer all parts of each question
- repeated resource material without linking to biological ideas

- used incorrect biological terminology
- excluded key biological terminology from explanations
- lacked knowledge of and ability to articulate key biological definitions
- lacked depth and breadth of biological knowledge.

For Question One, they:

- often spent a lot of time discussing speciation issues facing the dolphins and missed the focus of the question
- incorrectly gave the definition for genetic drift as the cause of death of individuals (e.g. in nets) rather than variation in the relative frequency of different alleles in a small population, due to loss of alleles via death or lack of reproduction
- did not define a home range
- demonstrated confusion about the reproductive strategies of the Hector's dolphins, with many candidates explaining that the behaviours of the dolphins were not successful without acknowledging that, before human interventions, the dolphins would have been successful in their niche
- often explained echolocation as a negative rather than an effective strategy for finding prey
- could identify some of the interventions needed to reduce the threats to the Hector's dolphins but often did not provide the detail required
- did not discuss the details of captive breeding and / or translocation.

For Question Two, they:

- found this question challenging
- could not define punctuated equilibrium and struggled with making definitions concise and clear enough for Scholarship
- used incorrect examples of the olive shell snails when trying to justify allopatric / sympatric speciation
- did not do well in the DNA analysis section of the question, with many candidates not being specific about what DNA can tell us about relatedness or how it works
- often rewrote large sections of the text
- often provided timelines that did not match the general biogeography story of New Zealand
- found it challenging to draw appropriate examples from the resource material to support their answers across all sections.

For Question Three, they:

- demonstrated some confusion around the woolly rhinoceros and its role as a herbivore
- could speak in general terms about 'hominins', but many did not name specific hominins or their tool cultures
- often discussed the 'use' of fire but not the 'controlled' use of fire
- demonstrated confusion about broken-and-healed bones, with some suggesting this showed more competition towards the end of the woolly rhinoceros' existence with the hominins; many candidates missed the point that these bones indicated the woolly rhinoceros had survived the attack / damage
- could describe the physical attributes required by the woolly rhinoceros to stay warm in a cold environment, but they did not describe them as 'adaptations'
- demonstrated knowledge of the hominin species in their discussion of what the evidence showed but failed to name them; other students could name them, and linked the evidence to the artefacts, but failed to acknowledge that the dates overlapped with the woolly rhinoceros.