

Quiz Summary

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Ⓜ Average Score

82%

📈 High Score

100%

📉 Low Score

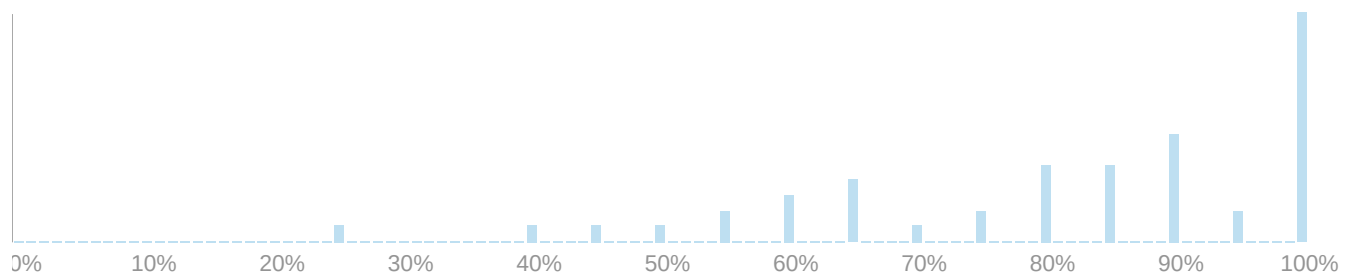
25%

⊖ Standard
Deviation

3.73

🕒 Average Time

31:09:75



Question Breakdown

Attempts: 50 out of 50

+0.39

There is a strict balance to nature.

Discrimination
Index ?

True 13
respondents 26 %

False 37
respondents 74 %

74%
answered
correctly

Attempts: 50 out of 50

Which type of relationship describes an ecological pattern where the underlying mechanism is **not** known?

+0.49

Discrimination
Index ?

theoretical 7 14 %

phenomenological	37 respondents	74 %	74% ✓ answered correctly
mechanistic	1 respondents	2 %	
observational	5 respondents	10 %	

Attempts: 50 out of 50

In class we examined a hypothetical case study, where impala mortality rates declined with increasing forest cover. What factors did we discuss that had a direct or indirect impact on impala mortality rates?

+0.38

Discrimination
Index ?

canine distemper virus	5 respondents	10 %	80% answered correctly
competing gazelles	1 respondents	2 %	
hyenas and canine distemper virus	40 respondents	80 %	✓
hyenas	4 respondents	8 %	

Attempts: 50 out of 50

Note: Visit the [Section 1 \(http://jdyeakel.github.io/teaching/ecology/section1/\)](http://jdyeakel.github.io/teaching/ecology/section1/) website to answer the following question:

In the Section 1 sea otter example, sea otter 5's most preferred food is

+0.62

Discrimination
Index ?

worms	2 respondents	4 %	90% answered correctly
urchins	45 respondents	90 %	✓
abalone		0 %	

snails **3** respondents 6 %

Attempts: 50 out of 50

Note: Visit the [Section 1 \(http://jdyeake.github.io/teaching/ecology/section1/\)](http://jdyeake.github.io/teaching/ecology/section1/) website to answer the following question:

In the population dynamics example, what value of 'r' results in cycles?

+0.58

Discrimination
Index (?)

1	3 respondents	6 %	92% answered correctly
1.5	1 respondents	2 %	
2		0 %	
3	46 respondents	92 %	

Attempts: 50 out of 50

From the *Sand County Almanac* reading, we understand that a decrease in the wolf population led to

+0.47

Discrimination
Index (?)

a decrease in vegetation	45 respondents	90 %	90% answered correctly
a decrease in deer populations	2 respondents	4 %	
extinction of deer	1 respondents	2 %	
an increase in vegetation	2 respondents	4 %	

Attempts: 50 out of 50

In the *Sand County Almanac*, Leopold describes the following dynamic:

An increase in rabbit populations leads to increased consumption of oak seedlings. This results in lower recruitment of juvenile oak populations. As oaks become less common, competition for food increases and rabbit population growth slows, decreasing herbivory on oak seedlings. If this continues over time we would observe

+0.47

Discrimination
Index (?)

Cycles in rabbit/oak populations	47 respondents	94 %	✓ 94% answered correctly
Extinction of oak trees	2 respondents	4 %	
Extinction of rabbits	1 respondents	2 %	
No change in rabbit/oak populations		0 %	

Attempts: 50 out of 50

Alfred Russell Wallace was the co-discoverer of evolution by way of natural selection. We described in class one of the inspirational ideas that led to this discovery. What was it?

+0.7

Discrimination
Index (?)

Populations grow exponentially, and this results in increased competition for resources, increasing the extinction risk for both species and making space for new species to evolve.	13 respondents	26 %	✓
Populations grow exponentially but have limited size in nature. The selective mortality of individuals must bias populations with individuals that have beneficial traits.	32 respondents	64 %	
Populations grow exponentially, and those that grow more quickly must have traits that have been selected for, benefiting the species.	4 respondents	8 %	
Populations grow exponentially, and species with larger population sizes are more resilient to external environmental disturbances, protecting those species from extinction.	1 respondents	2 %	

64%
answered
correctly

Attempts: 50 out of 50

+0.61

Which of the following favor grassland communities? Discrimination Index (?)

Extremely wet, low seasonality		0 %
Dry, seasonally hot/cold periods	7 respondents	14 %
Moist, seasonally warm/cool periods with frequent fire	41 respondents	82 %
Moist, seasonally warm/cool periods with infertile soils	2 respondents	4 %



82%
answered
correctly

Attempts: 50 out of 50

+0.29

Boreal forests are characterized by Discrimination Index (?)

a mediterranean-like climate	1 respondents	2 %	96% answered correctly
permafrost and coniferous trees	48 respondents	96 %	
warm temperatures and periodic rainfall	1 respondents	2 %	
proximity to coastal/maritime resources		0 %	



Attempts: 50 out of 50

The two axioms of ecology described by the science fiction writer Cixin Liu are:

- 1) Populations grow exponentially
- 2) Resources are infinite

+0.28Discrimination
Index (?)

True	5 respondents	10 %	90% answered
False	45 respondents	90 %	✓ correctly

Attempts: 50 out of 50

Note: Visit the [Section 1 \(http://jdyeake.github.io/teaching/ecology/section1/\)](http://jdyeake.github.io/teaching/ecology/section1/) website to answer the following question:

In the section activity that explores community assembly, we follow the recovery of a community following an experimental extermination treatment. How many of the 6 islands recover **as many or more species than they started with**?

Hint: the species richness of an island measured over time is saved as a vector labeled 'island1', 'island2', ... up to 'island6', where each element of the vector is a measurement taken at a different point in time. This question is asking you to compare the species richness at time 1 to the species richness at the last time richness was measured.

For example we can check the richness of island1 prior to the extermination treatment by using the 'head()' function:

```
head(island1,1)
```

and we can check the richness at the last time step by using the 'tail()' function:

```
tail(island1,1)
```

(An example of this will be demonstrated in class to help you answer this question)

+0.61Discrimination
Index (?)

3/6	30 respondents	60 %	✓ 60% answered correctly
2/6	5 respondents	10 %	
1/6	3 respondents	6 %	
4/6	12 respondents	24 %	

