

Background

The isopods

The freshwater isopod *Asellus aquaticus* can in some lakes be found as two different variations. The variations are associated with a specific type of habitat and are called ecotypes.

One ecotype mainly lives in the reed while the other mainly lives in the stonewort stands. The ecotypes differ in size, colour and behavior, as shown in the table.

	Stonewort ecotype	Reed ecotype
Size	Small	Big
Colour	Light	Dark
Behavior	Low activity	High activity
Predator	Fish	Invertebrates

The predators

Each habitat has a dominant type of predator which has a specific type of hunting tactic.

In the stonewort stands fish is the most important predator. To avoid these sight oriented predators the best way is to be as small and as invisible as possible.

Invertebrate predators, such as damselfly larva, dominate the reed habitat. The size of the prey these predators are able to eat is often limited the predators' gape. This mean that as a prey, you can outgrow them.

Methods

Size

Both ecotypes were subjected to predation according to the table.

The length of the isopods was measured before and after the trials.

Predator	Substrate
Perch	Stonewort
Perch	Reed
Damselfly larva	Reed
Damselfly larva	No substrate



Behavior

Both ecotypes were presented with chemical cues from either perch or damselflies. The activity was measured before and after the cues were added.



Results

Size

The predators affected the mean size of the isopods in some cases.

This was the expected result and indicates that the predators are the cause of the size difference between the two ecotypes.

Predator	Substrate	Ecotype	
		Stonewort	Reed
Perch	Stonewort	○	—
Perch	Reed	○	○
Damselfly larva	Reed	+	○
Damselfly larva	No substrate	+	+

- The mean size decreased
- +
- The mean size increased
- No difference in the mean size

Behavior

The isopods showed no difference in activity in any of the treatments.



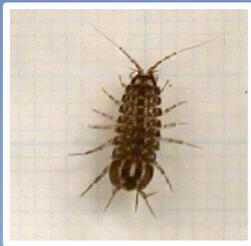
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The Question

Are predators the cause of the differences between the two ecotypes of the freshwater isopod *Asellus aquaticus*?

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Conclusion

**The predators are likely to cause the difference in size between the ecotypes.
No effect on the behavior could be found.**



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Is size & behavior in isopods affected by predators?



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