# Marthasterias glacialis vs Pecten maximus

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# Observation

#### In the aquarium

- The Pecten maximus moved away from the Marthasterias glacialis after coming into contact
- Only reacted when in contact with this specific species of star fish



# Explanation

- The Pecten maximus escapes from the Marthasterias glacialis due to the possibility of being preyed upon.
- Do different sizes of Marthasterias glacialis affect the reaction time of Pecten maximus when it escapes?

#### Variables

- Independent variable: Three varied size of star fish
- Dependent variables: The time it takes for the Pecten maximus to react.
- Controlled variables:
  - Size of the Pecten maximus (4cm)
  - Water depth (3 cm)
  - Temperature of water (13°C)
  - Type of water (salt water)
  - Species of star fish (Marthasterias glacialis)



### Hypothesis

- The larger the size of the Marthasterias glacialis, the shorter the amount of time it will take for the Pecten maximus to react.
- Reason: When the size of the Marthasterias glacialis increases, it is easier for the Pe maximus to detect the threat

# Null Hypothesis

- The size of the Marthasterias glacialis will not affect the reaction time of the Pecten maximus
  - Other variables might affect the behaviour of the Pecten maximus





# Conclusion

- Hypothesis proved right for this particular Marthasterias glacialis
- However, this experiment consisted of many errors :
  - Mollusc fatigue
  - Test environment
  - Alert & non alert
  - Distance between mollusc and starfish

# Works cited

- http://www.habitas.org.uk/marinelife/ species.asp?item=ZB2000
- http://www.marlin.ac.uk/ speciesinformation.php?speciesID=4056