

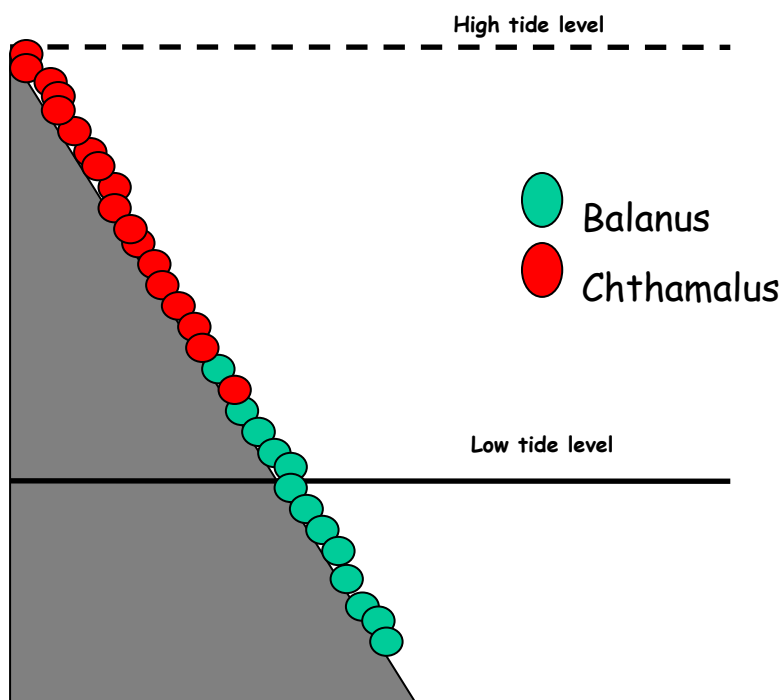
Competition and its effects on distribution

In the marine environment competition for resources is just as important as in the terrestrial environment. Organisms can compete for food, space, light and water. There are two types of competition:

- Interspecific competition: occurs when two different species compete for the same resources.
- Intraspecific competition: occurs when the same species compete for the same resources.

Read the information below and answer the following questions.

Barnacle species of the UK



Around the UK coast there are two species of barnacle, *Chthamalus stellatus* and *Balanus balanoides*. Both species are sessile, living on rocky seashores. Adult barnacles do not move but do reproduce sexually. They use external fertilisation. Their larvae are capable of swimming, resemble microscopic crabs and live in the zooplankton community. As their life cycle continues they settle onto rocks where they become fixed for the remainder of their lives.

Barnacles can only feed whilst submerged. Adult Chthamalus are found living higher on the rocks than Balanus barnacles.

Questions

1. Name the genus of each barnacle.
2. What does sessile mean?
3. Which type of competition is occurring here?
4. Explain one advantage of having larvae that are mobile?
5. Why does Chthamalus exist at a lower shoreline than Balanus?