**E7 Within communities different species use different reproductive strategies**

E7.1 Know that species with high reproductive effort, short life, and many offspring, are more common in early succession or disturbed communities (r-selected)

Read p208-209 of the text book

* Species have evolved different reproductive strategies to maximise the chance of survival of the species.
* In early succession or disturbed communities those organisms that can reproduce quickly, giving rise to lots of offspring will have a distinct advantage. This is known as exponential growth (see graph).
1. Explain why grasses are more likely to be among the first species to colonise an area.
2. List the typical characteristics of those species with high reproductive effort.

E7.2 Know that species with low reproductive effort, long life, and few offspring, are more common in stable communities (k-selected)

* Stable communities
* Organisms are generally larger and more complex.
* Bigger, fewer young (and give the young greater care).
* Live together, reproduce less.
1. Explain why species with high reproductive effort are less favoured in a stable environment compared to a species with low reproductive effort.
2. Complete the following table comparing the reproductive strategies of opportunistic species (r-selected) and equilibrium strategies (k-selected)

|  |  |  |
| --- | --- | --- |
| **Characteristic** | **Opportunistic species** | **Equilibrium species** |
| Reproductive effort |  |  |
| Life span |  |  |
| Number of offspring |  |  |
| Size of organisms |  |  |
| Parental care given to offspring |  |  |
| Type of community |  |  |

E7.3 Understand that r and k strategies are extremes on a continuum

R and K strategies are extremes and most species cannot be classified as low or high reproductive effort. Reproductive strategies are more complex than this, therefore most organisms lie between the two extremes.

Most k strategy examples follow an s-shape curve and tend to become stable over time.

1. Where would humans lie on the continuum? Why?