Biotic and Abiotic Influences on Ecosystems

Limiting Factors

- What determines the size of a population and where a particular species can live?
- Ideal _____ and _____ conditions allow species to flourish.
- Other conditions may lead to a species' _____ or even _____.
- A _____ _____ is any factor that places an upper limit on the _____ of a _____.
- Limiting factors may be _____, such as the availability of food, or _____, such as access to water.
- Human influences often act as _____ _____.
- Abiotic factors, such as _____, _____ and _____, can influence a species' ability to survive.
- Every species is able to survive within a _____ of each of these factors. This range is called the species' _____ _____
- Near the upper and lower limits of the tolerance range, individuals experience _____.
- This stress will reduce their _____ and rate of _____ and _____.
- Within a species' tolerance range is an _____ range in which the species is best _____.
- The largest and _____ populations of a species will occur when conditions are within the _____ _____
- Each species has a tolerance range for every _____ _____.
- Some species have _____ tolerance ranges, while others have much _____ ranges.
- Species with broad tolerance ranges will tend to be widely _____ and may easily _____ other ecosystems.

Abiotic Factors

- The distribution of most terrestrial _____ species is largely limited by a combination of _____, _____ and _____.
- The key abiotic factors in aquatic ecosystems are _____ _____ as well as the availability of _____, _____ and _____

Biotic Factors

- While abiotic factors determine _____ a particular species is able to _____, biotic factors often determine the species' _____.
- Many key biotic factors involve _____ between _____.
- Individuals are often in _____ with members of their own species and with other _____.
- They compete for _____ _____, such as food, light, space and _____
- However, _____ between individuals are not limited to _____…
- _____ occurs when an individual (the predator) kills and _____ another individual (they _____).
- _____ occurs when two organisms interact, with both _____.
- eg. _____ are formed by a mutualistic relationship between algae and fungi
- _____ occurs when one organism _____ and the other neither benefits nor is _____.

Carrying Capacity

- As a population's size increases, the demand for _____ such as food, water, _____ and _____ also increases.
- Eventually, there will not be enough _____ for each _____.
- Furthermore, as individuals become more _____, they become more susceptible to _____ and _____.
- Eventually, this will result in the population reaching the _____ _____ _____ that the ecosystem can support - called the _____ _____.
- **Carrying capacity** = _____ _____
- The _____ _____ can be altered through natural or human activity when _____ are _____ from or _____ to the ecosystem.
- eg. the loss or introduction of a species can change the carrying capacity of the ecosystem for the other species