

## Pyramids

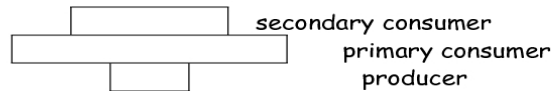
Feeding relationships and energy transfer in an ecosystem may be quantified and shown as ecological pyramids.

### Pyramid of numbers



Organisms are counted in a given area and grouped into trophic levels. Typically there are decreasing numbers as you go through the trophic levels but there are exceptions.

For example if the producer is a tree there is only one organism supporting the rest of the trophic levels.



If a consumer is a parasite the pyramid of numbers will often be top heavy as parasites are usually smaller than their host and occupy it in large numbers.

The number of organisms is represented as a rectangle whose length or area is proportional to the number of organisms in the unit area or volume.

Problems with pyramids of numbers:

- Deciding which trophic level an organism belongs to. Many feed at more than one level.
- The size of the producer varies and yet one grass plant is given the same status as one tree.
- The range of numbers from the producers to the top carnivores may be so great that it is impossible to represent the pyramid to scale even using a log scale.

To overcome these problems a pyramid of biomass may be used.