

Micro versus Macro

Microevolution the accumulation of small changes.

Micro = changes in frequency of alleles.

Macroevolution the formation of new species, genera or groups of organisms.

Macro = speciation

Speciation

- Ernst Myer's Biological Species concept.
- A species is a population of interbreeding or potentially interbreeding organism capable of producing viable offspring.
- Each species is reproductively isolated from other species.

Speciation

How are new species formed?

They must become reproductively isolated from other members of their population

Prezygotic Isolating Mechanisms

No zygote is formed (i.e. gametes don't fuse to form a zygote.)

1. Habitat isolation
2. Temporal isolation
3. Behavioral Isolation
4. Mechanical Isolation
5. Gamete Isolation

Post-zygotic Isolating Mechanisms

A zygote is formed but viable offspring are not produced.

1. Zygote mortality.
2. Pre-reproductive mortality
3. Hybrid sterility
4. F_2 fitness