

Speciation

Biology

How one species becomes two, and the barriers involved.

Allopatric

- Geographic separation first
- Populations diverge independently
- Mutation, drift and different selection
- Isolation becomes reproductive
- The commonest route

Sympatric

- No geographic separation
- Ecological, behavioural or temporal isolation
- Polyploidy — common in plants
- Rarer, and contested in animals

THE DIFFERENCE THAT MATTERS

Prezygotic barriers prevent mating; postzygotic barriers prevent viable fertile offspring. Both maintain species boundaries.

Ring species — where adjacent populations interbreed but the ends do not — show speciation as a continuum, not an event.