

Artificial Selection

Biology

Selective breeding, and what it demonstrates about natural selection.

Deliberate breeding of organisms with desired traits, which changes allele frequencies in the same way natural selection does, but with humans as the selecting agent.

SAME MECHANISM
as natural

COST
reduced diversity

- Darwin used it as his opening argument in Origin of Species.
- All dog breeds derive from wolves within roughly 15,000 years.
- Modern maize is descended from teosinte, which looks nothing like it.
- It reduces genetic diversity substantially.
- Inbreeding depression follows from that loss.
- Extreme selection often produces health problems.

LOOK FOR IT

Brachycephalic dog breeds suffer breathing difficulties directly caused by the selected facial structure.

Artificial selection is the strongest everyday demonstration that heritable variation plus differential reproduction changes populations.