

Symbiotic Relationships



Definition



Symbiosis is a close ecological relationship between the individuals of two (or more) different species.

Three Types



☞ Commensalism

☞ Mutualism

☞ Parasitism

Commensalism



- ❧ A symbiotic relationship in which one species benefits and the other species is neither harmed nor benefited.
- ❧ Example: In Siberia, Russia a peregrine falcon and red-breasted goose have a commensal relationship. During the nesting season the falcon protects the geese from predators. The geese benefit, while the falcon is neither benefited or harmed.

Mutualism



- ❧ A symbiotic relationship in which both species benefits.
- ❧ Example: Mutualism is illustrated between a type of ant and a species of acacia tree living in the subtropics. The ant protects the tree by attacking any herbivore that tries to feed on it. The ants also kill any plant that begins to grow too close to the acacia. The tree provides nectar and a home for the ants.

Parasitism



- ❧ A symbiotic relationship in which one organism benefits at the other's expense.
- ❧ Example: All over the world, tapeworms and roundworms live in the intestines of dogs, cats and other animals (including humans!).

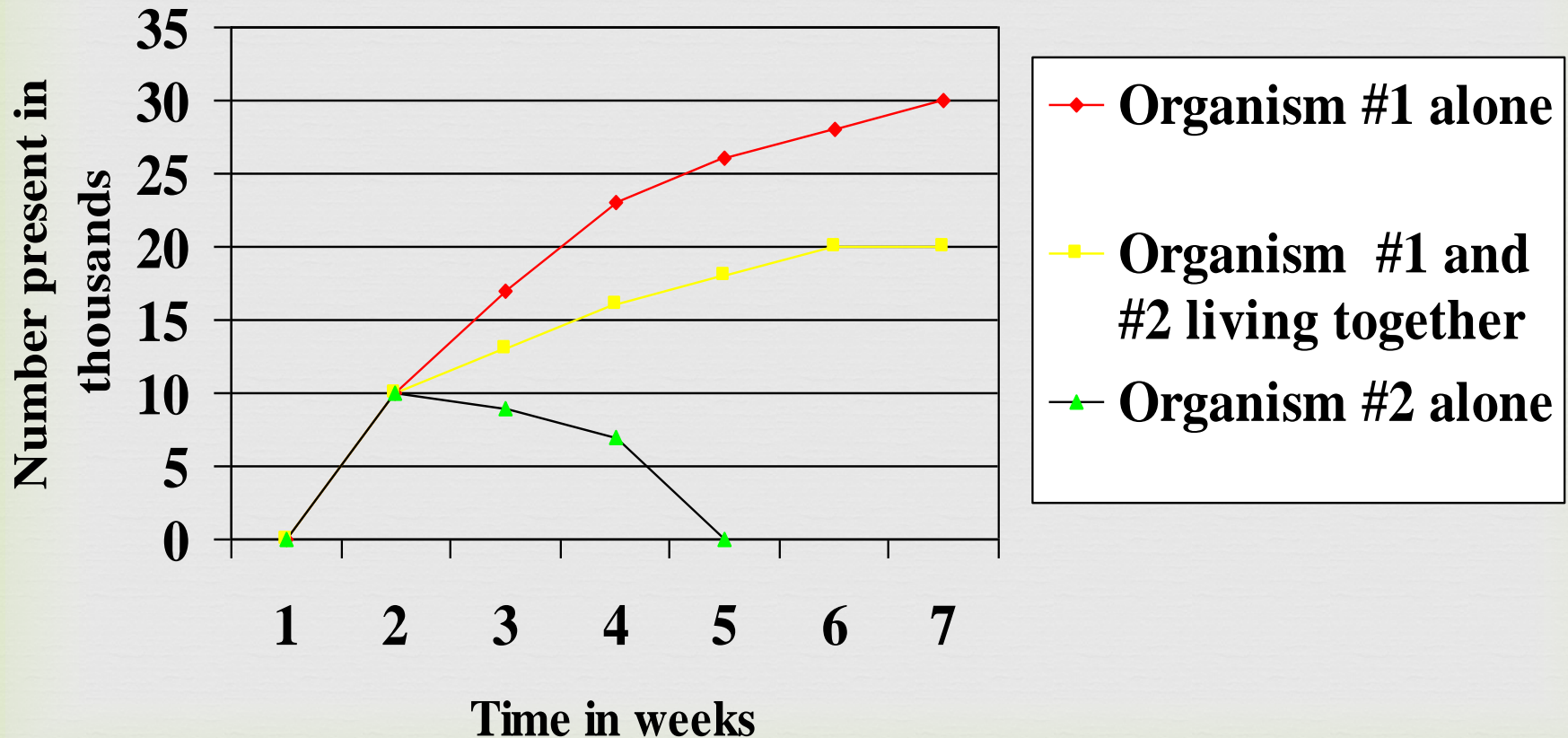




Why would it be bad for
the parasite to kill off its
host?

After analyzing the graph, the association between the organisms is either commensalism, parasitism, or mutualism? Explain why.

Growth Rates of Two Organisms



Two More Types



- ❧ Competition: Neither organism is benefited or harmed
- ❧ Neutralism: Both organisms are unaffected