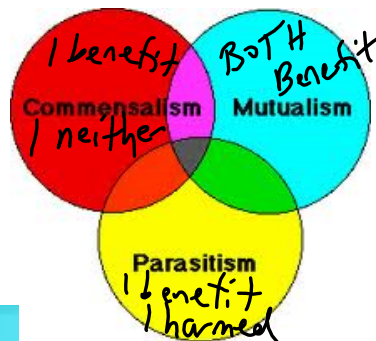


Symbiosis and Coevolution

- * • A relationship in which two organisms live in close association is called **symbiosis**
- * • Symbiosis is often used to describe at least one species benefiting from another
- * • Over time, species may **coevolve**
 - They develop adaptations that reduce the harm or improve the benefit of the relationship



3 types

1) Parasitism

2) Mutualism

3) Commensalism

*Parasitism

- *• An organism that lives on or in another organism and feeds on the other organism is a **parasite**
- *• The organism that provides the nourishment is the **host**
 - Ex. Ticks, fleas, tapeworms, sea-lice



Uploaded on Apr 27, 2009
A parasitic wasp has injected her eggs into a caterpillar
-- and now they're ready to hatch.

Jonathon Smith (2013)



*Mutualism

- * • A close relationship between two species in which each species provides a benefit to the other
 - Ex. Humans and certain types of bacteria in the intestines
 - Humans are better able to digest food and bacteria have a place to live



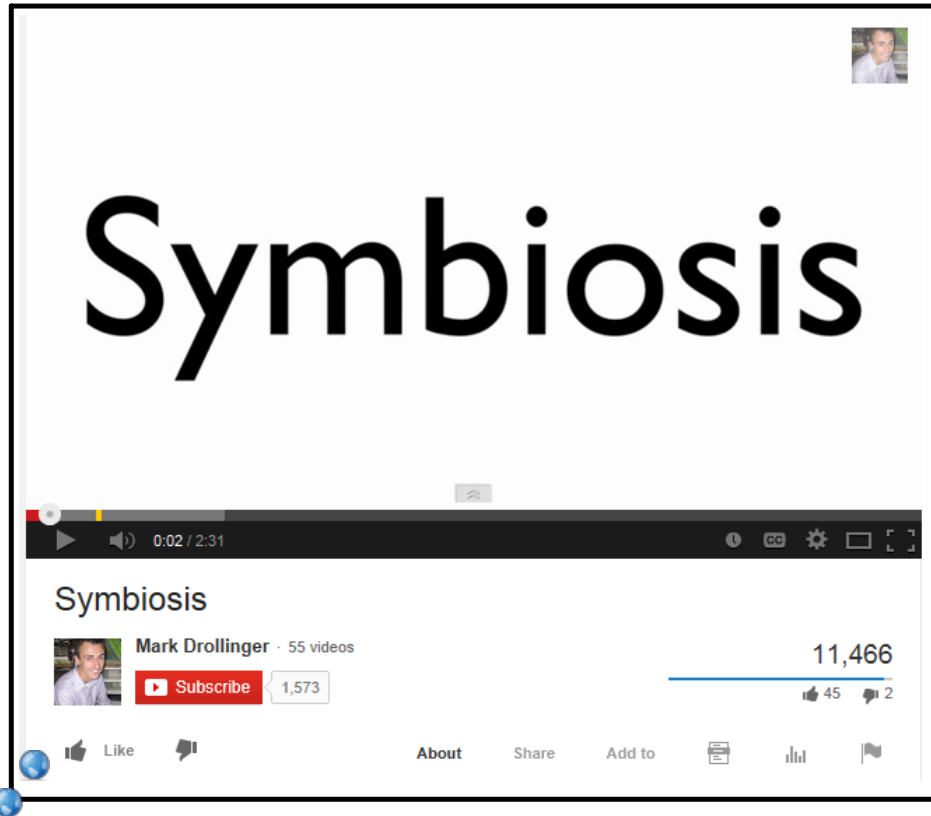
Amazing Symbiosis: Ant Army Defends Tree



*Commensalism

- * • A relationship in which one species benefits and the other species is neither harmed nor helped
- Ex. Sharks and remoras
 - Sharks are unharmed and fish are able to eat what the shark doesn't





A screenshot of a YouTube video player. The video title is "Symbiosis" and it is by the channel "Mark Drollinger" who has 55 videos. The video has 11,466 views, 45 likes, and 2 dislikes. The player interface includes a play button, a progress bar at 0:02 / 2:31, and various control icons like volume, closed captions, settings, and full screen. Below the video, there are buttons for "Like", "About", "Share", and "Add to". A "Subscribe" button is also visible with a subscriber count of 1,573. A small profile picture of Mark Drollinger is in the top right corner of the video frame.