Symbiosis

Mutually Beneficial Symbiotic Relationships

Animal-animal relationships

The Egyptian Plover bird and the crocodile. You might think that if a bird landed in the mouth of a crocodile, the crocodile would eat it. Well, not the Egyptian Plover bird. Egyptian Plovers and crocodiles have a unique symbiotic relationship. Because crocodiles can't use dental floss, they get food stuck in their teeth. All that food rots their teeth and probably causes them some pain. When a crocodile feels the need for a good tooth cleaning it will sit with its mouth wide open. The Egyptian Plover bird recognizes this invitation, and if one is nearby it will fly into the mouth of the crocodile, eat the food stuck in its teeth, and fly away. The plover gets a meal and the crocodile gets a valuable tooth cleaning: they both benefit.

Animal-plant relationships

Bees and flowers. You are all probably familiar with the idea that bees and flowers have some kind of relationship. A bee goes from flower to flower gathering nectar. While it is doing this, some of the flower's pollen ends up sticking to the bee's hairy body and legs. When it goes to the next flower, some of that pollen rubs off of the bee and gets into the flower. The flower needs pollen to reproduce, but since flowers can't move to get it themselves, the bees get it for them. Without bees, some flowers would have no way of getting the pollen they need to reproduce. Without flowers, bees wouldn't get the nectar they need to eat.

Plant–plant relationships

Lichen. The first time you see lichen, you may be surprised that it is alive! It can be flat and not very obvious; it almost looks like a discoloration on a rock. Lichen is special because it can live in places where other organisms cannot. Lichen is a partnership or symbiotic relationship between two different species. Fungi and algae combine to create lichen, because together they can live in places where alone, as just algae or fungi, they could not survive. Their relationship is mutually beneficial—both species benefit from their relationship.

Human-bacteria relationships

Your intestine and bacteria. You might wonder how you can have your very own symbiotic relationship going on right now and not know it. It's because it happens in your intestine where you can't see it. When you eat food, very little

of it gets digested in your stomach. It travels through your intestine where bacteria further digest the partly digested food. The bacteria also produce vitamins. Your food gets digested, you get vitamins, and the bacteria get a meal. You have your very own partnership, without which, your body would not be as healthy!

Parasitic Symbiotic Relationships

Tapeworms

Tapeworms are long, flat parasites that live in the intestines of pigs, cows, and even humans. A tapeworm gets into its host by laying its eggs in the host's food source. The host eats this food, and the eggs develop and grow into tapeworms, which attach themselves to the intestines of their host. Tapeworms feed off the food that the host eats, and sometimes a tapeworm has been known to live in a human for ten years without being detected! The tapeworm has a safe, warm home and a constant food source, but the host does not benefit from the relationship. In some rare cases, the tapeworm can make the host sick or even cause death.

Ticks

Ticks are pinhead-sized arachnids that form parasitic relationships with birds, reptiles, animals, and sometimes humans. Ticks attach to their host's skin and feed off its blood. In this way it gets both food and a home. Ticks can consume enough food to grow 200 to 600 times their original body weight. In this relationship, the tick gets the benefits of a warm home and food, while the host gains nothing. The tick may even give the host a disease, which could weaken or kill it.

Mistletoe

Mistletoe is a plant that people hang above doorways at Christmas-time. Before it gets picked and hung inside it grows by living off of other plants. Mistletoe grows on woody plants, taking nutrients and moisture from them. It also "strangles" it—reducing the nutrients that the plant can take in. Mistletoe is considered a parasitic plant, because the mistletoe gets all the benefits, while the woody plant or tree has to support itself as well as the mistletoe.