

Name: _____ Teacher: _____ School: _____

Grade 8: Lesson 14 Parasites

Texts for lesson:

Top 10 Real-Life Body Snatchers

Parasites and zombies are not science fiction; they infest rats, crickets, ants, moths and other creatures, sucking the life out of them.

By Megan Gambino, Smithsonian.com October 24, 2011

Sacculina carcini A parasitic barnacle, *Sacculina carcini*, invades crabs and turns them into surrogate mothers. In the larval stage, female *Sacculina* swimming in seawater are able to sniff out crabs. They tend to latch onto European green crabs, an invasive species native to the northeast Atlantic. Once the parasite lands on a crab, it makes its way to a joint in the crustacean's exoskeleton. The barnacle sheds a good portion of its body and, slim as a slug, slips into the hole at the base of one of the crab's hairs. The parasite travels to the tail end of the crab, where it camps out. The *Sacculina* grows tendrils that wrap like vines around the inside of the crab, and it pilfers nutrients from the crab's blood. If a male barnacle locates the bulge on the crab's underside where the female resides, he too squeezes in and fertilizes the female's eggs.

Crabs infected with *Sacculina* are essentially sterilized by it. But since the parasite's eggs sit in the same place where the crab would carry an egg pouch, the crab cares for them as if they were its own. Even if the crab is a male, it takes on the maternal role. When the larvae have developed enough to exist on their own, the crab goes to a high rock, where it bobs up and down as it pushes the *Sacculina* larvae out. The crab flails its claws in the water to spread the parasite, as it would its own young.

Polymorphus paradoxus Pond- and river-dwelling crustaceans called *Gammarus lacustris* typically dart deep into the water, away from light, when ducks are at the surface. But when the crustaceans are infected with *Polymorphus paradoxus*, a type of thorny-headed worm, they practically throw themselves at their predators. Oddly attracted to light, the parasitized crustacean swims to the surface and clings to a rock or plant. There, fully exposed, the crustacean is more likely to get eaten by a duck. Inside a duck is exactly where the parasite needs to be to reach adulthood. The clinging position of the crab on the rock is the same one that the male crustacean takes while copulating. Scientists speculate that the parasite increases serotonin levels in the crustacean, perhaps making it think it is having mating.

Independent Practice:

In a brief essay, compare and contrast the parasitic relationships discussed today. What are the similarities between the barnacle and the crab relationship, and the thorny-headed worm and the crustacean relationship? What are the important differences between them? Be sure to use specific details from your notes to support your answers.

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