Name: _____ Teacher: _____ School: _____
Grade 8: Lesson 15 Student Packet

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

Dinocampus coccinellae A female parasitic wasp of the species *Dinocampus coccinellae* surreptitiously lays one egg in the abdomen of the ladybug *Coleomegilla maculata*. Like many parasites, the wasp larva munches on the ladybug's tissues. Once it reaches a particular stage in its growth, the maggot-like larva inches its way out between segments of the ladybug's underside. As it does, scientists suspect the larva leaves venoms behind that subsequently alter the ladybug's behavior. Stunned into a zombie-like state, the ladybug provides cover for a cocoon that the larva spins between the bug's legs.

After the adult wasp emerges from the cocoon, about 25 percent of ladybugs actually recover from the trauma. Scientists were surprised to find that there is a cost to the parasite: The longer the ladybug guards the cocoon, the less fertile the emerging wasp will be.

Dicrocoelium dendriticum One of the most active hitchhikers has to be a lancet fluke, or flatworm, called *Dicrocoelium dendriticum*. During its life cycle, the parasite lives in three hosts. First, a snail eats cow dung rife with the worm's eggs. The eggs hatch inside the snail, and in defense, the snail produces a slime that entraps the larvae. Eventually, the snail hocks a slimy, larvae-filled loogie. Then, an ant comes along and slurps up the slime. The parasites set up two outposts, one around the nerves that control the ant's mandibles and another in its head. Here is where it gets tricky. The parasite needs to spend its adulthood in the liver of a cow, so it has to get a cow—an herbivore—to eat the ant it has infected. With a little mind control, the parasite gets the ant to crawl up to the top of a blade of grass each night and bite down to stay in place. This way, a cow is more likely to chomp on it while grazing. In the cow's liver, adult worms reproduce, and the cow later defecates the eggs. And so, the cycle continues.

Leucochloridium paradoxum *A*nother parasitic flatworm, *Leucochloridium paradoxum*, infects a snail and then somehow has to get from a snail to a bird, its next and final host. One problem: Birds do not normally snack on snails. Undeterred, the parasite packs itself into the snail's translucent eyestalks. The green and brown-striped worms make the eyestalks, at least to a bird, look like juicy, quivering caterpillars. Infected snails also make themselves more visible to birds because they do not shy away from light as healthy ones do.

Independent Practice:
Using everything you've learned from the past few lessons on "Top 10 Real-Life Body Snatchers," write a response in which you cite evidence from the text to support the central idea that parasites "manipulate" other animals. As you give examples of how parasites manipulate their hosts, explain, why each parasite uses that particular host, and the effect of the parasites' manipulation on the hosts.

Sourced from LearnZillion