Conservation Corner

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Last week during an elementary biology class, we reviewed the animal kingdom, including the Annelid Division of earthworms and leeches. The next day a fellow naturalist posted a recent study in which leeches are described as the latest in conservation technology. Must be time to encounter the leech.

Leeches – one of those links in nature's chains most of us could do without. Or could we? After all, leeches are an integral part of any moist habitat on Planet Earth comprising 100 marine species, 90 terrestrial species, and over 500 freshwater species. Leeches are native to Iowa and common across the state in rivers, lakes, marshes, bottomland forests, ponds, reservoirs, even temporary water supplies.

Leeches, like their cousins the earthworms, are segmented worms. While earthworms may have from 100-150 segments, each and every leech has 34 segments. While many leeches are external parasites, some are scavengers and others predators. After making a small cut, the leech first injects a painkiller and anticoagulant to keep the host unaware of its presence. Feeding quickly, the leech may swell up to 10 times its weight. Did you know one feeding may last a leech for several months?

Not all leeches are created equal, of course. While many range from one-half to three inches in length, the Giant Amazon Leech may grow up to 18 inches and live up to 20 years. Leeches move around by swimming, crawling with an inch-worm type of movement, or by hitching a ride on a turtle or other mobile animal.

Like earthworms, leeches are hermaphrodites with each leech producing both eggs and sperm but at different times. Leeches are caring parents, which is unusual in the invertebrate world. They protect their offspring by covering the eggs with their bodies, creating water movement to bring oxygen to the eggs, even carrying the newly hatched leeches to their first blood meal.

Like earthworms, leeches are also used as bait, especially by walleye fishermen. For many centuries, leeches were used for bloodletting. Today leeches are once again being used in the medical field to help clean up blood and wounds. Recently another use has been discovered for leeches as a means to identify wildlife in remote habitats.

The unconventional idea originated in a criminal case in Tasmania in 2009 in which forensic scientists recovered DNA from a leech to link a host/suspect to a robbery. It turns out the technology also applies to the field of conservation. Geneticist Dr. Michael Tessler and Biologist Sarah Weiskopf have recently co-authored two papers presenting their findings of collecting and analyzing leeches to id wildlife and survey biodiversity in a jungle, pond, or marsh.

And so the oft-maligned leech has been added to the conservation toolbox as a much quicker and cheaper way to survey wildlife than current methods. Analysts simply sort out the blood meal of the leeches into short, known sequences of DNA material to id the blood donor species. Something to think about the next time you pull a leech off your leg.