Blood Sucking Leeches
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Meet the leech

It's the monsoon season in Kerala, India. Raj, whose dad works in the coffee plantations, is taking a stroll. It's damp and wet everywhere. This is leech country and the wet season is the perfect breeding ground for leeches. Raj stops to pick a coffee berry. He steps into a puddle.

In those few seconds, a leech has firmly fixed itself on his leg. What's worse, he didn't feel a thing. As Raj looks down at his leg he begins to panic. His dad, an expert on leeches just slides his finger nail under the leech's head, removes it and then cleans the wound with antiseptic solution.

Meet the leech, one of the top ten blood suckers of the animal kingdom, sharing the spot with ticks, mosquitoes and bed bugs. They may look and sound terrifying, but as you will see, they are pretty harmless to us. This book will teach you all you need to know about these blood sucking wonders. As you read you will learn about their special features, you will go on a unique journey across their body and study their body parts and you will learn how they effortlessly draw blood. Being bitten by these creatures, though not dangerous can be quite a menace. Learn the techniques of getting leeches off your body, and some tips on how to keep them off limits.

Next time you go to a pond or marshy area, be sure to watch out for these draculas in disguise.
All About Leeches

So what exactly are leeches?
Leeches are worms, just like earthworms. They belong to the family of Annelids which means “ringed one”. As the family name suggests leeches have ringed or segmented bodies like their cousins the earthworm. All worms are invertebrates, and so are leeches. This means that they don’t have any bones in their body. No wonder leeches are really flexible. They can stretch like a thin rubber band. Leeches like earthworms are hermaphrodites. This means that a single leech is both a male and female. Though these bloodsuckers seem ferocious they are nurturing parents. Leech parents take care of their young protecting them from predators and even feeding them by passing food through their body walls.

Where do these ringed bloodsuckers live?
Leeches live almost anywhere that is wet or damp. Swampy or marshy areas are leech hot spots. Most leeches are found in fresh water environments, though some have been seen in marine environments as well. They typically thrive in tropical and temperate climates. The wetlands of India, Southeast Asia, Madagascar and Australia are favorite leech hangouts.

Wondering what leeches look like?
Well leeches come in many sizes. They maybe as small as 7mm or as long as 30 cms. These worms start of being as thin as a pin, but feed them some blood and they can swell up to more than 5 times their size. Leeches may be brown, black or red in color. This helps them perfectly blend into their environment, making it difficult to spot them with our naked eyes. You may be walking through a marshy pond or a damp forest. These little suckers may crawl on to your body and you may never see them.
Ever thought about how leeches move?
When on land most leeches move making a looping movement much like their other wormy cousins.

Leeches moving on land - J. Boule, © BIODIDAC

When in water leeches move by swiveling their whole body, like a wave. This helps them propel their bodies forward in the water.

So what makes the leech stand out from the rest of the crowd?
You probably guessed right, it’s their diet. Leeches feed on blood, they eat only blood meals. Infact, blood is their staple food, just like rice or bread is to humans. These worms are parasites, living off other animals. Leeches live off the blood of other animals making them sanguivorous. A leech can drink up to 6 to 8 times its body weight in blood. This heavy meal is enough for it to go a whole year without eating. Blood is pretty much all the leech will ever eat.
Body parts - Journey across a leech's body.

Now that we know more about leeches, get ready to go on the journey of your lifetime. You are going to shrink to the size of a grain of sand, and travel across the surface of a leech's body. On this journey you will see the unique and interesting features on the outside of the leech that make this worm on the top ten list of blood suckers.

Here is the body of the leech. Do you notice it is cylindrical in shape and is kind of flat? Although leeches are said to be smooth and slimy, covered with mucus, that helps them slither and slide, you will find that their body is divided into rings or segments. The body is 33 segments long. The first five segments make the head, the last seven make the rear. Everything else in between is the body. Below is a diagram that will guide your journey.
We are now standing on the head of the leech. The head is an important part of the leech. It houses the front sucker, which looks like a suction cup. Now look all the way to the rear. You will see another suction cup, that’s the rear sucker. Leeches use both their suckers for different reasons. The front sucker aids blood sucking and the rear sucker helps in movement. Did you know that unlike other annelids, leeches do not have bristles to help them move? Instead, they use their rear sucker for grip. It functions almost like a vacuum cup, fixing itself firmly on a surface while the rest of the body moves in a wave like or loop like movement.

Move along the head and you may suddenly feel something sharp, almost razor like. Well, leeches have nearly 300 razor sharp teeth in their jaws. This can easily bite into your flesh, if the leech is hungry, so let’s move along fast. Some leeches have a straw like instrument called a proboscis, instead of a jaw. Both these blood sucking instruments is what makes the leech unique and different from other members of the annelid family.
Now you are standing on the body of the leech. Well leeches have no bones, so you might feel that you are sinking in. Hold on, cause the leech can bend and stretch, like a ballet dancer or a circus artist. If you do manage to touch the leech, you will find that the body is cold, like a chilled strand of fettucine.

As you journey your way along the leech’s body, you may spot two or more pairs of eyes peering at you. Do not worry, leeches have poor eyesight. Their **simple eyes**, form poor images and are used to sense light than to see. However, leeches are armed with an incredible array of senses that make up for their poor eyesight. They use their advanced sense of smell, taste and touch to track their host.

Can you feel the leech breathing? Leeches breathe through their skin. They do not have a heart but they do have a brain. A bunch of nerves inside the body function as the brain. Imagine being brainy and heartless. Well that’s what a leech is.

We are now in the last seven segments of the leech’s body, the rear. Right at the tip is the rear sucker ready to help the leech move.

Can you feel the leech move? I guess it’s time for us to get off and run. Let’s end the journey and return to normal size.
Blood sucking

Now that you know that the bloodsucking leech has instruments and tools to suck blood, its no big mystery as to how they actually drink blood.

First the leech attaches itself to the victim's body with it's tail or rear sucker. This helps it latch on and not fall off. Then the front suckers get into action. Leeches suck blood in two ways, depending on what instruments they possess. One type of leech uses its proboscis to suck blood while another uses its jaw. If the leech has a proboscis it sucks blood through the straw like structure. Imagine you are at the laboratory for a blood test. The syringe pierces your skin and sucks the blood from your body. In much the same way, the leech's proboscis punctures your skin and sucks the blood draining it out like a syringe.

If the leech has jaws it bites into the skin with it's sharp teeth, making a V like incision. After latching on, it goes ahead to suck the blood just like a baby sucks milk from a bottle.

But here's where it gets tricky. Our blood clots very quickly and you would think that the poor worm would soon run out of blood. But it's cleverer than you think. Leeches release something almost magical, that keeps the blood flowing continuously. As our wormy Dracula is busy sucking blood it releases a saliva into the wound. This saliva contains an anti clotting agent called hirudin, that keeps the blood flowing for the leech to easily suck. It doesn't end here. The saliva also releases a substance that deceives the host. It numbs the pain by blocking the pain sensors in the skin. That explains their wiliness, latching onto their unsuspecting victims, while they hardly notice.

Leeches drink tons of blood and they take a long time to feed. But there's really no cause for worry. Leeches actually drink only 5ml to 20 ml in one feeding, making this whole blood sucking saga actually quite harmless.
Getting Leeches off your body

Most often leeches, once satiated, curl up into a round ball and fall off. But who is going to wait for two hours as a leech has its dinner, feasting on your blood. You need to get rid of them as soon as they latch on.

Rule 1

The first rule when you are bitten by a leech is DON'T PANIC. Remember you are not a small animal that this blood sucking worm can completely drain. The loss of blood is so insignificant that it is not worth getting worked up over.

Rule 2

Second rule is that in case the leech has already latched onto you and is busy sucking, do not just pull it off. There's nothing worse than an angry worm vomiting all over your wound.

Here are some tips to remove it safely.

All you need is a small piece of newspaper or your fingernail. Easier ways of salting or burning using a cigarette butt really are not advisable. They cause the leech to puke back its food on your wound, leading to infection.

First locate the head with the sucker attached to the wound. This is usually the narrow end of the leech's body.

Next slide a thin edge of a newspaper or your finger nail under the sucker. Be quick, otherwise the leech may vomit back the blood it has sucked on your wound.
Slide the leech off with the piece of paper or your fingernail.

Then quickly flick the leech away—some distance away, before it reattaches and bites you again. Are you thinking of squeezing it to death at this point? I would suggest you let it be, after all they too have a role to play in their ecosystem.

Finally treat the wound with antiseptic or wash the wound with soap and water and use a band aid to stop the bleeding.

By being careful in removing leeches this way, the risk of infection is minimized.
If you get bitten in the mouth (which is possible if you go swimming in leech lands), make sure you wash your mouth with the stiffest, strongest alcoholic drink possible. I'd rather you get drunk, than let the leech make its way to the throat and almost strangulate you.
Did you know??

Leeches have such strong jaws, they can bite through a hippo's hide.
Leeches have 32 brains, 31 more than humans.
Leeches have a well-developed nervous system, almost as good as a human's.
Leech is an archaic English word meaning doctor. Leeches were used in medieval medicine to cure everything from headaches to obesity.
Protecting yourself from leeches

There are many good reasons for humans to avoid leeches. Though not dangerous leech bites if not taken care of can cause infection. More than anything else leech bites are annoying and it is wise to protect yourself from them.

Before enjoying the great outdoors, think about the places you would be. Will it be wet and marshy? If so remember, these are favourite spots for leeches.

Here are some safety measures that could protect you from these annoying worms.

1. Your best defense against leeches is to cover up. Cover your body especially your legs, toes and fingers. Leeches love soft spots to latch on to. That's because it is so much easier for its suckers to penetrate soft skin than hard skin. Skin between your toes and fingers, ankles, and the back of your knee are their best bets. This means you should wear long sleeved t-shirts and long pants, maybe even gloves. Socks and closed footwear is a must. Tucking your pants into long boots is a great idea. You can even buy anti leech socks today. They've been tried and tested in the jungles of South East Asia and even the most stubborn leeches haven't been able to penetrate through them.

2. Tobacco is the best leech repellant. Other repellants are toothpaste, mouthwash, balms used for relieving pain, heat rubs and sprays. Leeches hate the smell of these and stay away from them. Slather tobacco all over your body, before you venture into leech territory and you are sure to turn them off you. Some people even soak their socks in tobacco water and dry it before wearing it. Even if a leech manages to wriggle through you'll find it dead in a matter of a few seconds.
Protection is always better than cure. Keeping leeches away from you, will save you a lot of bother and of course the risk of infection. I'd rather smell like a medicine or tobacco factory than donate my blood to leeches.

Leeches may never become our best friends, but they definitely need not be the dreaded worms they are made out to be. As experts in the art of deception and exploitation of their host, these bloodsucking creatures show us that this is just another way of life. After all, every animal has its role to play in this world, blood sucking being one of them.
Glossary

Annelids- scientific term for ringed worms
bristles- hair like structures.
clotting- when free flowing blood turns into semi solid gel
invertebrates- animals that do not have a backbone
hermaphrodites- a single animal which is both male and female
hirudin- an anti clotting agent released in the saliva of the leech
parasite- an animal that lives on another's body.
proboscis- straw like instrument used for sucking
saliva- spit or drool, a watery substance produced in the mouth
sanguivorous- an animal that feeds on blood.
segments- any of the parts into which a thing is divided.
simple eyes- eyes that have a single lens that detects light.

References
The following websites were used as references. You could use them to learn more about leeches.

www.ehow.com
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Books
Leeches- Lola M. Schaefer