

# Opening The Windows Of Curiosity

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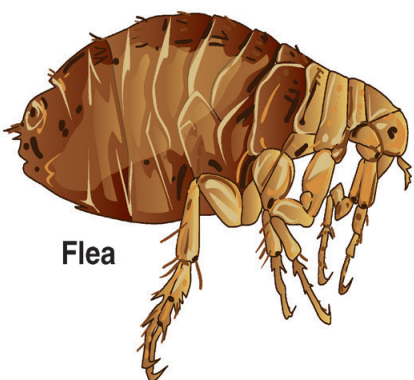
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## WORLD OF WONDER

Exploring the realms of history, science, nature and technology

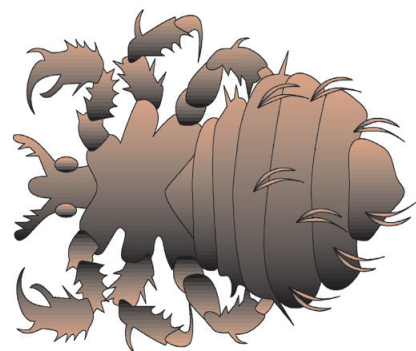
# PARASITES

Parasites rely on other organisms for food, shelter and help in spreading to other organisms. Some parasites live in or on humans. Others live in or on plants or animals. The parasite's victim is called its host. Hosts are usually much larger than the parasite, but sometimes the parasites overwhelm the host by sheer numbers.

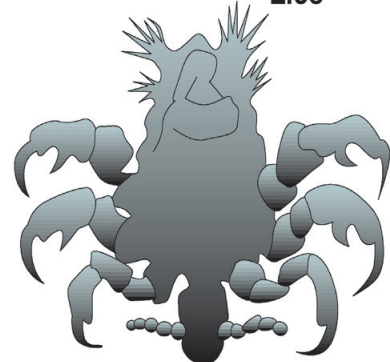


Flea

Fleas are blood-feeding parasites. A single flea can bite up to 400 times per day, and their bites are itchy. They don't have wings, but they are strong jumpers. Flea infestations on animals can cause anemia.



Lice



### Parasite vs. host

Different kinds of parasites have different effects on their hosts. Some cause disease, others cause pain and some are simply annoying. Many parasite species survive unnoticed by their hosts.

### Parasite types

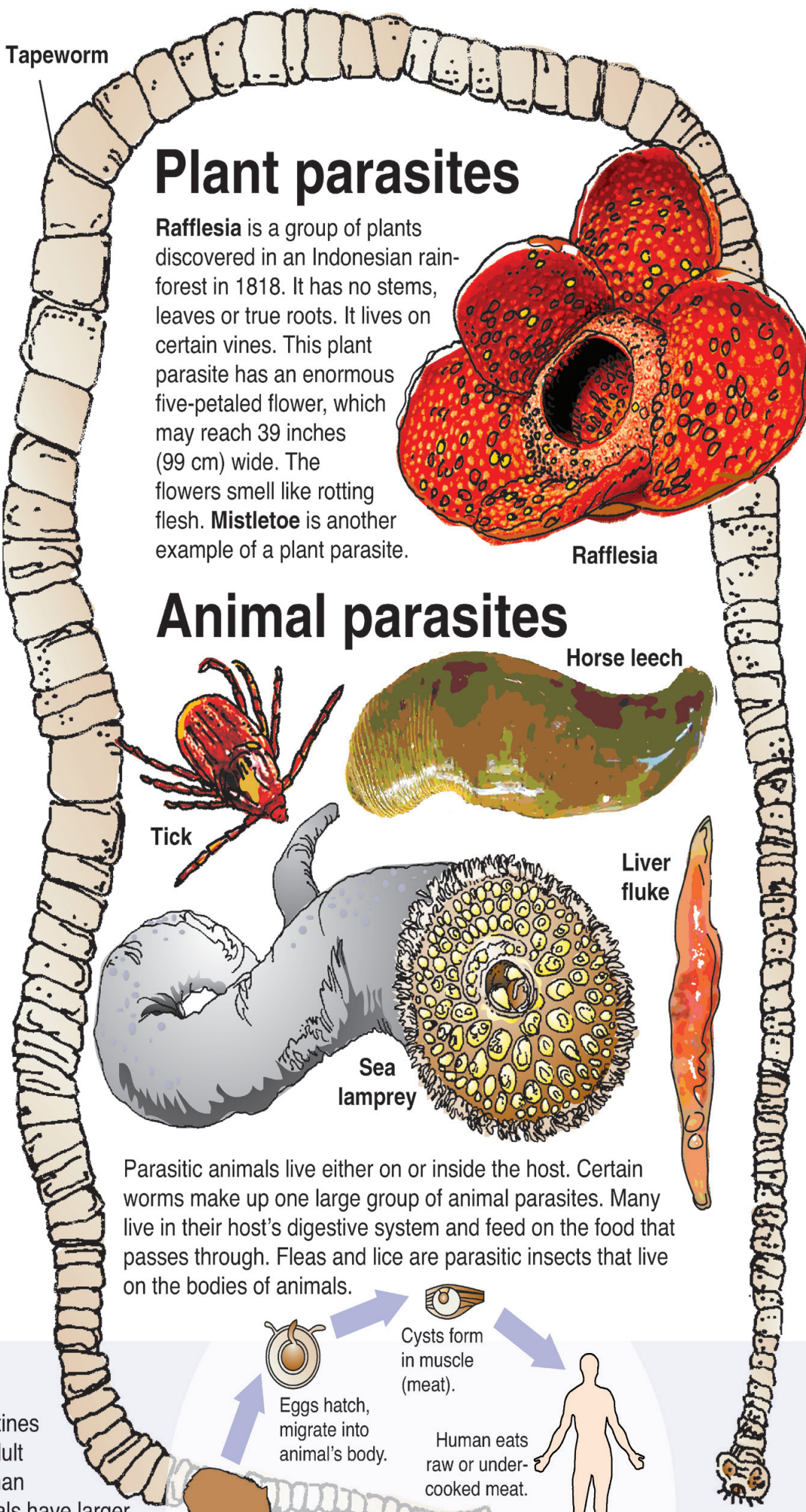
Parasites can be found among all the major groups of living things. Viruses, bacteria, protozoans, fungi, plants and animals all may live as parasites.

**External, or ectoparasites,** live on the skin, bark, scales, feathers, fur or hair of the host.

**Internal, or endoparasites,** live inside the host. Some endoparasites, called intracellular parasites, invade the cells of the host.

Many **intracellular parasites,** such as bacteria or viruses, rely on a **carrier or vector** to reach their final host. The vector carries the parasite inside the body, usually with little or no harm to the vector. An example of this type of relationship is malaria, which is caused by a **protozoan**. The protozoan cannot live on its own; it travels inside an insect, the mosquito. When the mosquito bites a human to feed, the protozoan is transferred to the human, where it reproduces and causes great harm as the disease malaria.

Tapeworm

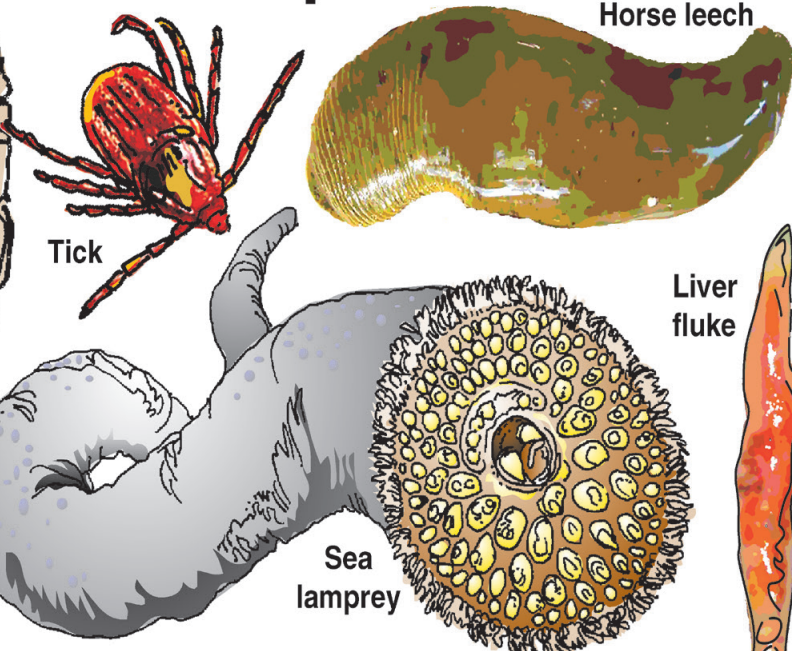


### Plant parasites

**Rafflesia** is a group of plants discovered in an Indonesian rain-forest in 1818. It has no stems, leaves or true roots. It lives on certain vines. This plant parasite has an enormous five-petaled flower, which may reach 39 inches (99 cm) wide. The flowers smell like rotting flesh. **Mistletoe** is another example of a plant parasite.

Rafflesia

### Animal parasites



Parasitic animals live either on or inside the host. Certain worms make up one large group of animal parasites. Many live in their host's digestive system and feed on the food that passes through. Fleas and lice are parasitic insects that live on the bodies of animals.

### Specialization

Parasites are specialized, and many species cannot live anywhere other than on or in a specific kind of host.

In plants, only those that physically connect to the host with a modified root are considered to be parasitic.

**Parasitoidism** is a relationship in which the host is always killed by the parasite. It occurs in the insect world in many moth, butterfly, ant, wasp and fly species.

### Did you know?

There are more than 430 species of parasite that can and do live on or in the human body.

Even parasites can have parasites. For example, a tiny protozoan may live inside a flea that in turn lives on a cat.

**Head lice** feed on human blood and live close to the human scalp. Head lice are not known to spread disease, but they can make you feel itchy and generally unwell.

All viruses and many bacteria are parasites. Diseases caused by viruses include measles and chicken pox. Parasitic bacteria cause diseases ranging from acne to the plague.

There are more than 800 different species of **ticks**. Some spread diseases, including **Lyme disease** and **Rocky Mountain spotted fever**. All ticks feed on the blood of mammals, birds or reptiles.

**Heartworm** is spread through mosquito bites.

Puppies and kittens get **roundworms** from their moms.

**Cheyletiella** (walking dandruff) is one of the only mites visible without a microscope.

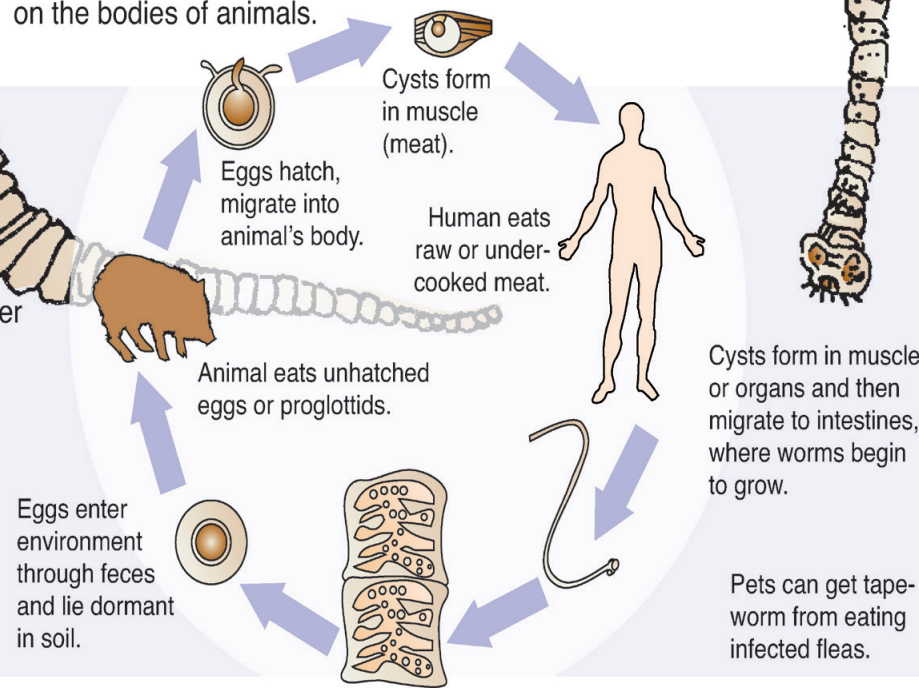
All people have **microscopic mites** living on them. These mites eat dead skin and absorb excess oils. Because they are harmless, their relationship with humans is called **commensal**, not parasitic.

### Tapeworm life cycle

Adult tapeworms live in the intestines of humans and other animals. Adult tapeworms can measure more than 80 feet (25 m) long. Larger animals have larger intestines and get bigger tapeworms.

Adult tapeworms develop and produce up to 1,000 proglottids (segments), each with approximately 50,000 eggs. They can reside in the small intestine for up to 30 years.

Rumor has it that some Victorian ladies used tapeworms as a way to diet and lose weight — gross and dangerous!



SOURCES: World Book Encyclopedia, World Book Inc.; <https://kids.britannica.com>; <https://en.wikipedia.org>; <https://www.cdc.gov>; <https://www.mentalfloss.com>

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