JOIN US EVERY WEEK!

WEEKLY SERIES OF INTERACTIVE PODCASTS WITH ISSUES RANGING ACROSS ALL AREAS OF THE EXTERNAL ENVIRONMENT AND URBAN ECOLOGY

LANDHEALTH INSTITUTE

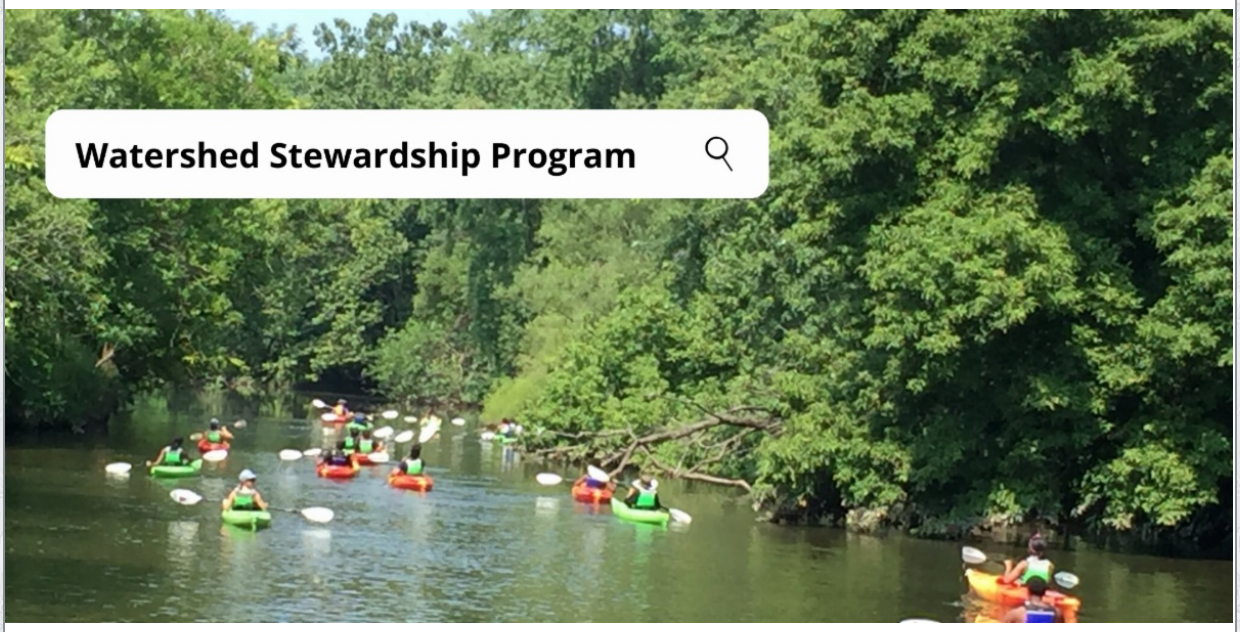
What's All the Fuss About the Spotted Lantern Fly?

Thursday, June 18th
6:30 pm - 7:30 pm

You've either heard about them or seen them outside, but how much do we really know about the Spotted Lanternfly? Where did they come from? What should you do when you see one? Join LandHealth in this week's podcast to discuss the interesting tale of the life of the Spotted Lantern Fly.

Join us on Zoom!
Click below for more details on the event!

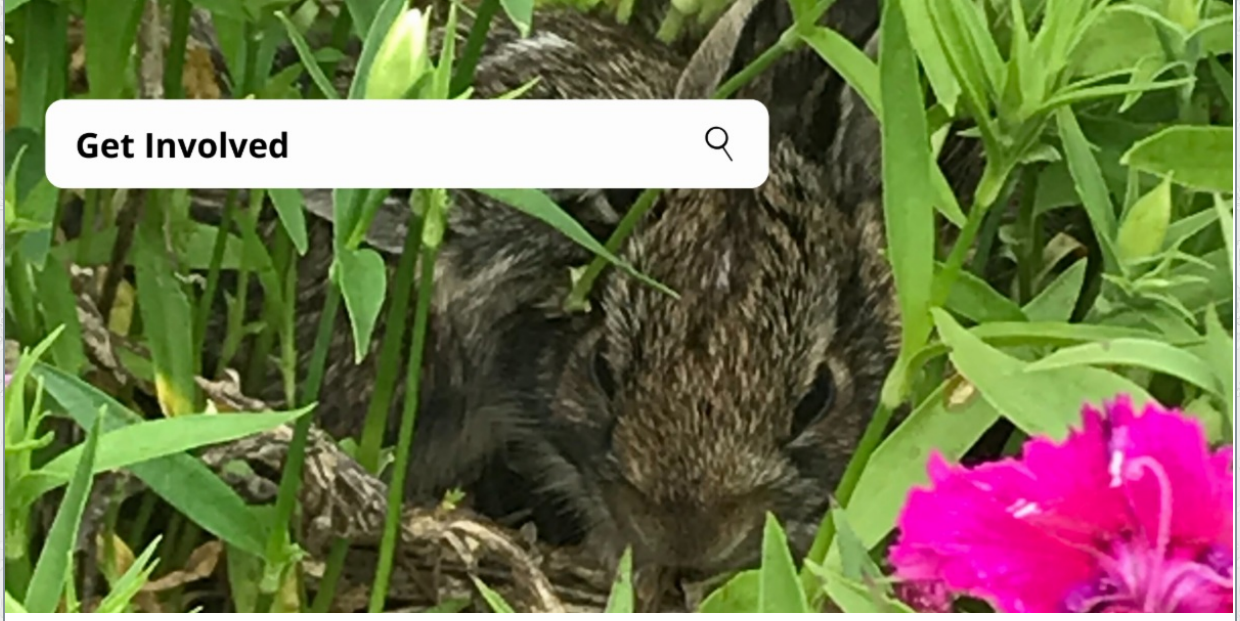
Register and Learn More About Land Health!



Philadelphia Watershed Stewardship Updates

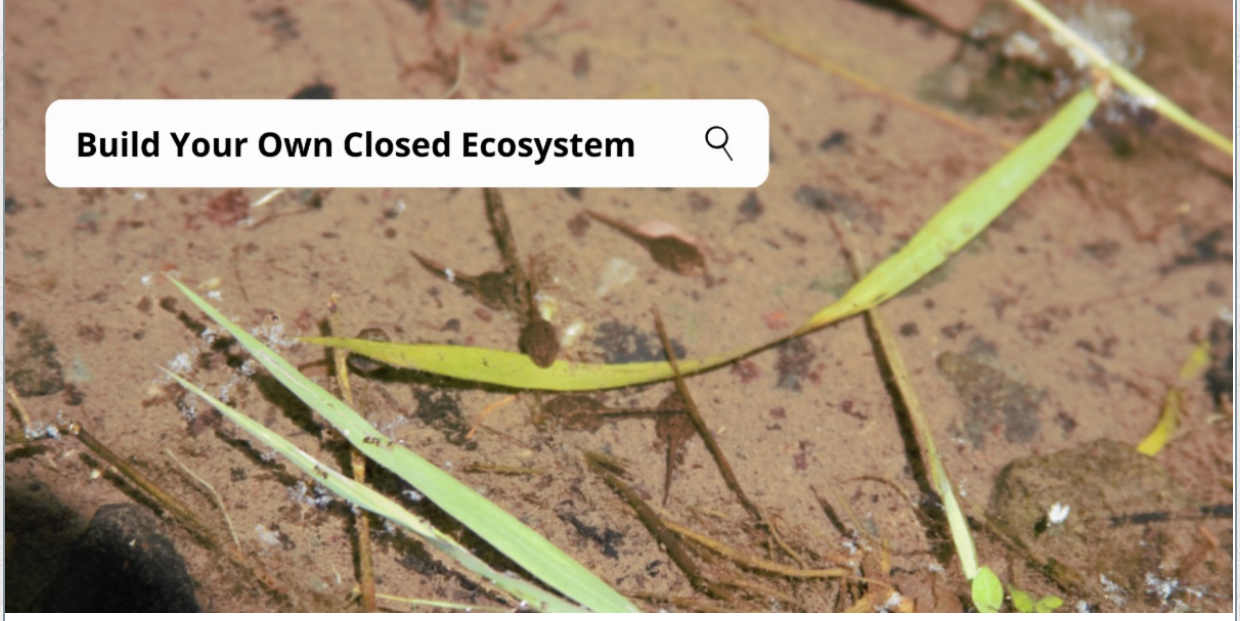
This week is the third week of the Philadelphia Watershed Stewardship Program! This week, the stewards are learning all about water. Water is more than just H_2O, which is why the stewards are learning all about how to protect it. One way water is protected is through legislation like the Clean Water Act. The Clean Water Act was enacted in 1948, but was reconstructed in 1972. The act establishes the basic structure for regulating discharges of pollutants into U.S. waters and for regulating quality standards for surface waters. The stewards will also be learning about piers and peninsulas of the Delaware River, tidal rivers, and urban archaeology.

Looking to learn more?:
www.landhealthinstitute.org/watershedstewardship



Turn your shopping into a force for good! Shop at smile.amazon.com/ch/46-2655132 and Amazon donates to LandHealth Institute, it's as easy as that! Your support plays an important role in our mission to put nature back.

We thank you for your generosity!



A closed ecosystem is a great way to study how an ecosystem works up close. You will be able to see all the ways organisms and plants interact with each other and see the tiny creatures that make up a fresh water biome. These closed aquatic biospheres are completely self sustaining, too! The plants provide food for the animals, the sun provides life for the plants, it is the constant exchange of food and energy that allows the closed ecosystem to support itself!

What You Need:

- A large clear jar that seals
- Freshwater from a pond, lake, river, creek etc.
- Gravel, rocks
- Mud, sand, dirt
- Aquatic plants, like algae, moss, and other plants next to/in the water
- Twigs, decaying plant matter
- Plastic container
- Tweezers (optional)

Steps

1. Taking a clean jar, head over to the nearest area of fresh water. This could be a river, pond, lake, creek etc.
2. Scoop some sand, rocks, and gravel into the bottom of your ecosystem.
3. Now, using your separate container, fill it with water to then pour in your jar.
4. Next, place any aquatic plants, twigs, and decaying plant matter into your jar, these plants will be the main source of food and energy for any other organisms living in the jar. You can use tweezers to place the plants in, but you don't need them.

The Next Steps

1. Your ecosystem may appear cloudy at first, but the sediment will fall to the bottom in a short period of time.
2. Keep your jar in an area of indirect sunlight. Your ecosystem thrives from sunlight, but direct sunlight can kill what is living inside the jar.
3. Keep a journal of everything you see! There is so much life that we don't notice just looking at water, but a closed ecosystem allows you to get a closer look!

Here are some great videos to show you how to create your ecosystem in a jar, as well as what you can expect to see in yours!

Antonie van Leeuwenhoek: The Father of Microbiology

Antonie van Leeuwenhoek was a scientist during the Golden Age of Dutch science and is commonly referred to as the "Father of Microbiology." Leeuwenhoek was the first person to discover protists and bacteria. He observed the microscopic universe that many couldn't even imagine. Many of Leeuwenhoek's discoveries were doubted because scientists could not replicate the powerful microscope he used for his work to see the microscopic organisms Leeuwenhoek observed. He sent a letter to the Royal Society in 1675 discussing his observations of bacteria.

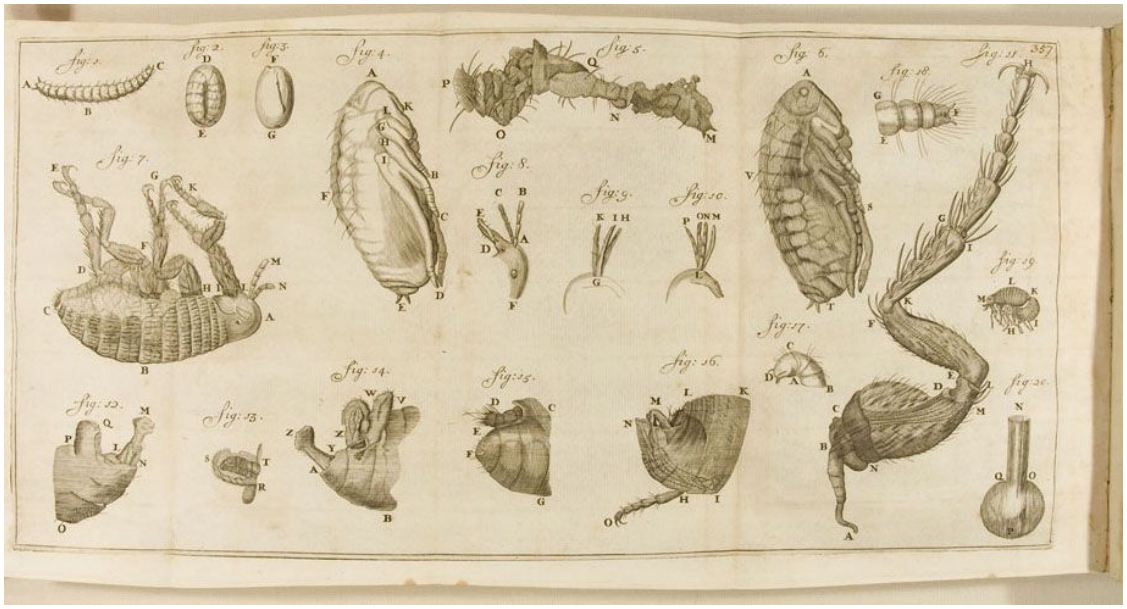
The Royal Society replied:

"Your letter of October 10th has been received here with amusement. Your account of myriad "little animals" seen swimming in rainwater, with the aid of your so-called "microscope," caused the members of the society considerable merriment when read at our most recent meeting. Your novel descriptions of the sundry anatomies and occupations of these invisible creatures led one member to imagine that your "rainwater" might have contained an ample portion of distilled spirits--imbibed by the investigator."

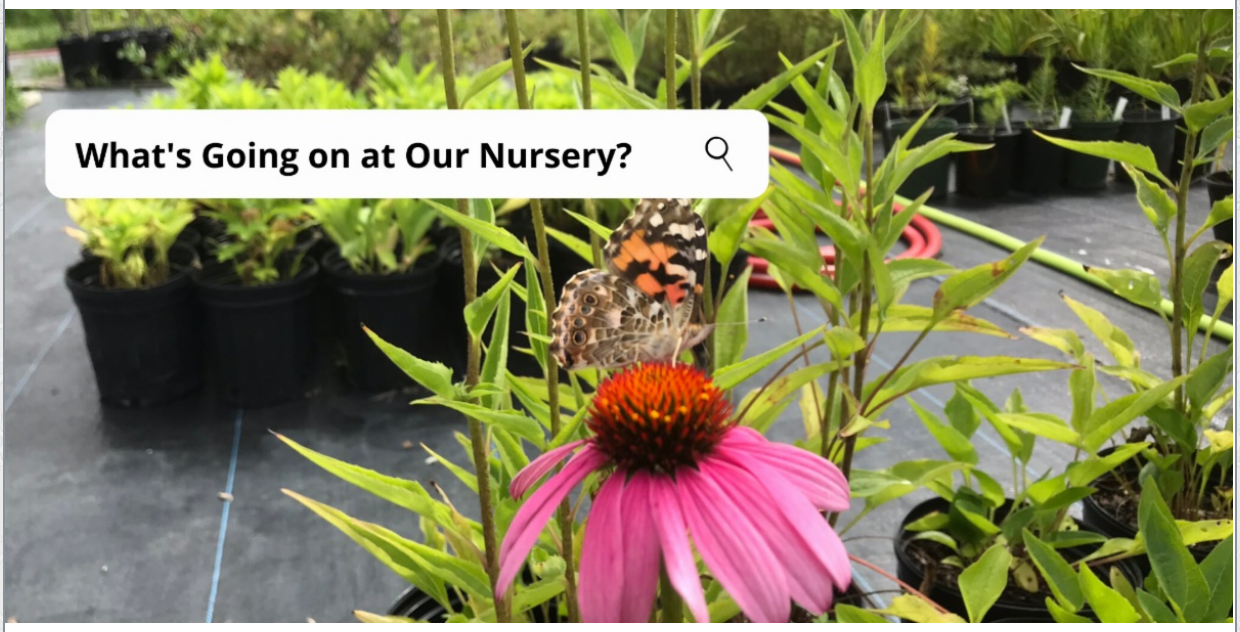
Eventually, the scientists used a microscope strong enough to see what Leeuwenhoek saw and confirmed his observations. After this, he was considered a scientist by the Royal Society and was named the first person to discover bacteria.

Leeuwenhoek's discovery teaches the important lesson that even though you can't always see life, it is still there! Building an ecosystem

in a jar shows you all of the tiny organisms that make up the rivers and lakes that you swim and fish from. No matter how small an organism is, they are just as important to contributing to an ecosystem as any organism you can see is!



Detailed flea anatomy in Arcana Naturae Detecta (1695) by Anton van Leeuwenhoek



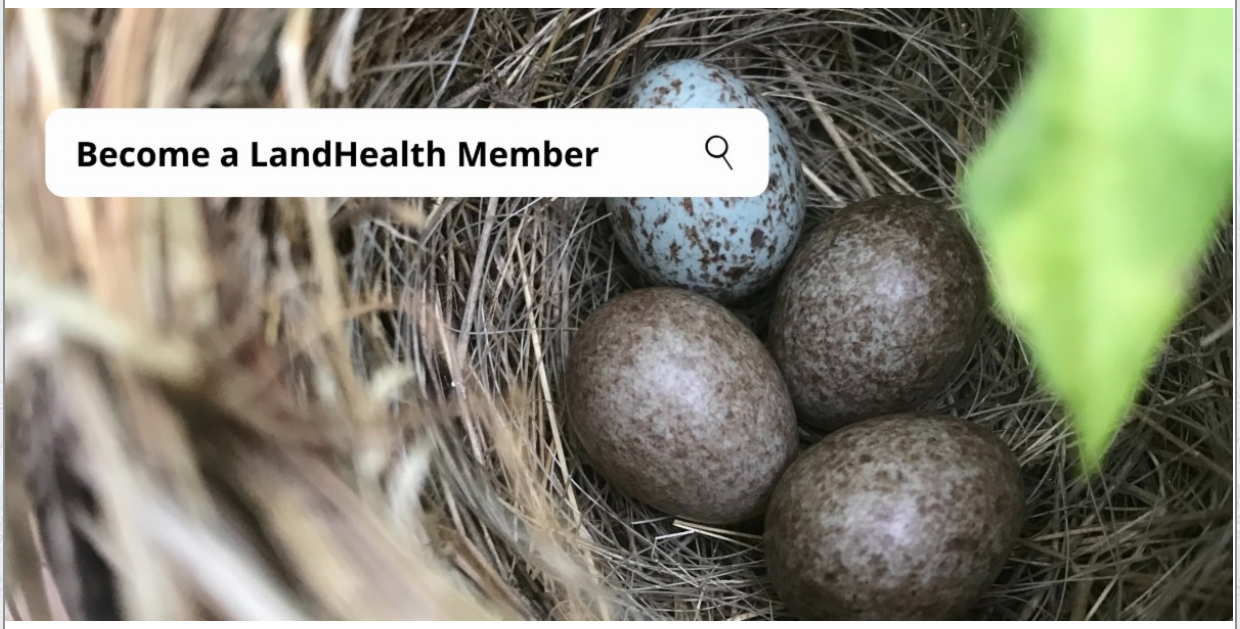
The Great Lobelia is growing at our nursery right now! Aren't its brightly colored flowers so wonderful?

Lobelia Siphilitica, commonly called Great Lobelia or Blue Cardinal Flower, is a flower native to eastern and central Canada and United States. Their colors range from all

shades of blue, to purple, pink, and white. Typically, the flower grows in moist to wet locations along streams, sloughs, springs, swamps, meadows and in low wooded areas. Like the Foxglove Beardtongue, the Great Lobelia's nectar attracts bumblebees and other long-tongued bees.

You can add native plants, like the **Lobelia Siphilitica**, to your own garden! Click the link below to learn about the large variety of native species we offer at our nursery and how you can get some too!

https://www.landhealthinstitute.org/nursery



We appreciate the shared commitment it takes to build environmental awareness and sustain healthy ecosystems. Our goal is to design our membership with you in mind! Please click the link below to fill out a very short survey to help us create the perfect membership for our members, you deserve it!

Click Here!

Coming this June. Contact us at info@landhealthinstitute.org with questions. Be a part of our growing LandHealth community!