Education Module from Talking Talons Youth Leadership

Cryptobiotic Soil, a.k.a. Biological Soil Crust

Cryptobiotic means "hidden life". Cryptobiotic soil is the superhero of the desert! It made up of tiny organisms that help to hold the soil together, absorb water, and provide nutrients to the other living things around it.

The main part of cryptobiotic soil is something called **cyanobacteria.** Under a microscope they look like tiny little worms. When wet, they move through the soil, leaving behind sticky fibers that form an intricate web, kind of like underground spiders! This web they make is what helps to hold the soil together.



Spotting cryptobiotic soil:

Young cryptobiotic soil is a little harder to identify than a mature crust. It's flat and brown, much like regular dirt. But mature crust is **thick**, **bumpy**, and **dark brown** or **black**.

Turn over to learn where to look and how to protect this superhero!



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– (Please Turn Over) -

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WHERE CAN I FIND THIS SUPERHERO?

Some places to look for cryptobiotic soil are in the **Manzano Mountains**, in the **Bosque**, and at **White Mesa** (northwest of Albuquerque). In the Southwest, these soil crusts have evolved in areas that receive harsh sunlight, strong and frequent wind, and sudden heavy rains that run off quickly.

ANCIENT AND FRAGILE

The cyanobacteria in cryptobiotic soil has been around for over a billion years and they are <u>one of the oldest known life forms</u>! However, it is easily destroyed and can take many, many years to grow back.

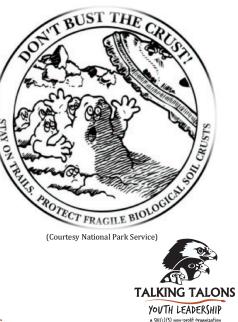
HOW TO HELP

- Help protect this fragile, but crucial, life by staying on roads and trails at all times. Where hiking trails are not established, hike in sandy washes or on bare rock, and keep an eye out for these soil crusts.
- 2. Teach others about them.

Don't bust the crust!

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Inspiring tomorrow's environmental leaders, today.