Graduate Degree Program In

ECOLOGY

The Complex World Beneath Our Feet

Explaining the Structure of the CSU Ecology Program Through the Soil Matrix

Each **sand-sized particle** in the soil is like a different **college** in the Ecology Degree Program, helping to build the structure of the soil matrix.

Mites are important to soil processes, as the **president of CSU** facilitates learning, mites facilitate decomposition and nutrient cycling.

President Tony Frank

"Society has its roots in the soil"
~Charles Kellogg

College of Agricultural Sciences

School of Global Environmental Sustainability

This school facilitates collaboration between departments, like **fungal hyphae** serve as a network connecting various components of the soil.

College of Veterinary Medicine & Biomedical Sciences

Soil water is like **research funding**, necessary for many essential biotic processes, but occasionally (i.e. drought), it is difficult to come by and without it, scientific studies may be postponed.

"Fulfill your passion, sustain our world"
Warner College of Natural Resources

College of Natural Sciences

"To provide extraordinary education in natural sciences to prepare students for careers in modern research, industry and academia"

College of Liberal Arts

"Live your passion"

As plant roots provide organic exudates for the microbial community as a nutrient source the Colorado community provides support for this public university.

As **nematodes** are abundant in water filled soil pores, the **Vice President of Research**, when funding is available, can help scientists on campus achieve their goals by developing programs and providing the resources necessary to meet their goals.

VP Research
Alan Rudolph

College of Engineering

"To educate the next generation of innovators, entrepreneurs and corporate civic leaders"

Each college is made of various **silica particles** or **departments**. For example, Warner College of Natural Resources consists of:

- Fish Wildlife and Conservation Biology (FWCB)
- Forest and Rangeland Stewardship (FRS)
- Geosciences
- Human Dimensions of Natural Resources (HDNR)
- Ecosystem Science and Sustainability (ESS)

Natural Resource Ecology Lab is an interdisciplinary research and teaching unit, affiliated with the College of Natural Resources. It is like soil **organic matter** (below) that cements other components of the soil matrix together, provides substrate for microbes, facilitating biotic activity and collaboration.

Protozoa (right) are important aquatic grazers that consumer other microorganisms and aid transformation of nutrients, just as the **professors** on campus pass along knowledge and transform the students into professionals and research scientists.

The soil **bacteria**, (above) most numerous of microorganisms, are important for nutrient cycling, just as the students play an integral role in the cycling of information and knowledge.

100 μm

Soil information found in Principles & Applications of Soil Microbiology (Sylvia, Hartel, Fuhrmann, Zuberer) and Kim Lyoma's Diagrams.
University information from Colorado State University webpages - as hyperlinked

Eco Press