

Abstract

We aim to test epigeic earthworms *Eisenia fetida* (*E. fetida*) to see if they can change the decomposition process of fresh organic matter in the short term. To test this, we plan to incubate three mesocosms in the dark at a constant temperature of 20°C containing approximately 6.5cm depth micronutrient-depleted dirt. One mesocosm will be our control, containing no worms, another contains approximately 135 worms, and a third contains approximately 400 worms. We will keep the soil-water content for all three mesocosms consistent at 60%. After the first day, we will test the levels of carbon, nitrogen, phosphorus, potassium, and pH levels weekly to determine whether worm content increases the bioavailability of these nutrients.