

Sermon: “Of all things visible and invisible”, TUMC, 5 May 2019

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## Introduction

Here’s a riddle: “What’s the smallest room in the world?” The answer is “A mushroom.”

But, the joke turns out to be on me. In 1988, foresters in the Blue Mountains of Eastern Oregon discovered the largest, single living organism in the world, and it is not a blue whale, it is...a mushroom. The thing we usually think of as a mushroom, what we see on our pizzas or popping out of the forest floor, is known as the fruiting body but it is just the small, visible, and transient part of a far larger entity that lives under the ground. This particular mushroom—or more correctly, its mycelium—is estimated to weigh up to 35,000 tons and cover almost 1000 hectares. And it is ancient, probably more than 8000 years old, handily beating the oldest living trees. More on this later.

This morning, we begin a five-week worship series on creation care that is titled “Mother Earth.” This crucial conversation was launched earlier today by Craig in the Adult Education class, “On the Way Café.” I would now like to contribute my meditations on one part of creation that often gets overlooked: I want to talk to you about fungi.

Why?

## Parable of the Sower

Well, today, Alak read us the Parable of the Sower. After those verses, the story continues; Jesus takes the disciples aside and deciphers the parable for them. He explains that the seed is the word of God and that those that fall upon the path, on the rocky ground, or among the thorns do not bear fruit.

“But,” he says, “those that were sown upon the good soil are the ones who hear the word and accept it and bear fruit, thirtyfold and sixtyfold and a hundredfold.” [Mark 4: 13-20]

So tell me, what was it that made the soil *good* in the first place? The answer is: fungi.

## Classification

I'm an historian of science, so I'm going to start with history. In 1735, when the great Swedish naturalist Linnaeus [(1707-1778)] tried to make sense of the rich variety of living things, he sorted them into two kingdoms: the animal kingdom and the plant kingdom.<sup>i</sup>

I grew up in the Anglican church and was steeped in the rich poetry of its Book of Common Prayer. In the Nicene Creed, God is called the “maker of all things visible and invisible.” This captured my imagination as a child. What exactly were all these invisible things that God had created?

Well, for scientists, the development of the microscope did indeed reveal a host of strange creatures that had been invisible before, whole new worlds of wonder in a single drop of water. By the 1800s it became clear that a third kingdom of life was needed to describe these micro-organisms<sup>ii</sup> and then, as our microscopes became even more powerful, a fourth kingdom was added to differentiate between those organisms that had a nucleus from those that did not.<sup>iii</sup>

Fungi were originally grouped with plants, but in 1969 they were recognized as a separate kingdom of life, neither plant nor animal. The key trait separating fungi from plants and animals is how they get their food; plants make their own food through photosynthesis; animals eat plants and other animals. Fungi get their nutrients from dead matter. Fungi break organic material into its basic components and these then become the building blocks of new life. Fungi feed on death and thus close the circle of life.

400 million years ago, at the start of the Devonian Period, one organism towered over the landscape. It was Prototaxites and yes, it was a fungus. It had a trunk up to 8 meters long and it dominated the scene for about 70 million years (a span which makes human history look like the blink of an eye). The plants that lived alongside it were small and simple, like liverworts, and the only animals were small arthropods like scorpions. Prototaxites sent out tendrils under the ground which secreted an enzyme able to dissolve solid rock. Together with bacteria, fungi created the soil that could be used by larger and more complex plants, which in turn supported larger and more complex animal life. So, when we praise the wonders of creation, when we picture birds of the air and lilies of the field, remember that everything we see around us would not be here without fungi!

## The Fungi Kingdom

Fungi today come in all sorts of amazing forms, from mushrooms and truffles to microscopic versions like yeasts and molds, like the green stuff that you find if you haven't cleaned out your lunch bag. True, fungi can cause horrific diseases, but did you know fungi ferment our wine and beer? They help us make chocolate, cheese, and soy sauce. Without fungi, we'd have to invite everyone to stay after the service today for "hot water hour."

And it was a fluffy white mold that bloomed by accident on a culture dish in 1928 that gave us penicillin, the world's first antibiotic. Scientists today are exploring how fungi might help make new medicines, clean up plastic pollution, create biodegradable packing material, and even make "smart concrete" that could heal itself.<sup>iv</sup>

Despite all this, fungi have gotten a bad rap.

I want to return to that mushroom in Oregon. It's been nicknamed the Humungous Fungus. It has a fruiting body that erupts every fall for a few weeks, but most of the year, it exists as thin, rubbery, white sheets of filaments that grow under the bark of trees, rather like a layer of latex paint. Below the ground, it sends out a network of shoestring-like fibres called rhizomorphs that can jump gaps between sources of food, thus allowing the fungus to expand its territory. This fungus, which was already ancient before the pyramids were built, has slowly, inexorably been devouring an entire forest. Work crews have tried to dig it out, but it has proved impossible to rake out every last fibre. From the limited human perspective of forestry use, the fungus is a parasite and this situation is a disaster. But from a larger, ecological perspective, it is simply life renewing itself; the fungus breaks down the trees and creates tiny fertile pockets in which new living things will thrive.<sup>v</sup>

## Fungi in the Bible

So, what does the Bible say about fungi?

Well, three fungi that get a mention in the Hebrew Scriptures are mildew, mold, and blight. They typically appear in passages beside drought and locusts, that is, passages involving a lot of smiting, along the lines of Haggai Chapter 2 verse 17: "I smote you and all the products of your toil with blight and mildew and hail; yet you did not return to me, says the Lord."

Of course, the fungus that has the most significant place in the Bible is yeast, or leaven. It is a powerful symbol in the marking of Passover as Jews remember the haste of their exodus from Egypt by giving up leavened bread for seven days.

Jesus mentions leaven four times. In Mark 8, he warns of the “leaven of the Pharisees and the leaven of Herod,” in Matthew 16, he says “Take heed and beware of the leaven of the Pharisees and Sad’ducees” and again in Luke 12 “Beware the leaven of the Pharisees.” In these passages, leaven stands in for hypocrisy, immorality, and false doctrine.

In the fourth instance, yeast is not just a passing figure of speech but is central to Jesus’ story; this is in the Parable of the Yeast which appears in Matthew and Luke.

It must be one of the shortest parables in the Bible. “And again, he said the kingdom of heaven is like leaven which a woman took and hid in three measures of flour, till it was all leavened.” [Matthew 13:33] Wait, what? The kingdom of heaven is *like* leaven?

As odd as this seems to us, this parable must have been even more disconcerting to his listeners in three ways.<sup>vi</sup>

First, as we have seen, yeast is linked with sin. Paul will later say to the Corinthians: “Let us, therefore, celebrate the festival, not with the old leaven, the leaven of malice and evil, but with the unleavened bread of sincerity and truth.” [1 Corinthians 5:8] And for Paul, it represents how corruption is liable to spread quickly through the church. He warns: “Do you not know that a little leaven leavens the whole lump?” (This is the identical imagery.)

So why would Jesus say yeast is *like* the Kingdom of Heaven? It seems Jesus means this to be an upside-down view of yeast and one way we know this is the fact that this parable comes directly after the Parable of the Mustard Seed. The two are meant to be read as a pair. This also happens with the Parable of the Lost Sheep which is paired with the Parable of the Lost Coin. In each case, the story is told twice, the first time in the male world of agriculture, then repeated immediately afterwards in a woman’s domain. So with the pairing of the tiny mustard seed and the yeast, we are to understand that the Kingdom of Heaven is something that starts small and grows immensely.

The second surprising aspect is that it takes place in a kitchen. Home baking was women’s work, and this woman might be a domestic servant or someone of modest means. Here, as elsewhere, Jesus treats women and women’s work with dignity. It is a

woman who is the agent of the Kingdom of Heaven, and she acts within her own humble sphere.

Those of you who are home bakers may know that making your own sourdough starter is now really popular. You mix flour and water in a jar, leave it on your counter and allow wild yeast to grow in it. You have to tend this starter day by day, feeding it with fresh flour and water, drawing off waste, nurturing it until it begins to bubble and expand, and finally becomes strong enough to leaven bread. (Apparently, it is not uncommon for people to name their starters, like a pet.) You can share it with your neighbours, and you can break off a portion to bake bread every week, but you always keep a lump of the dough in reserve; in this way, you can keep your leaven going for weeks, even years. So, far from being despised, yeast here is something that is nurtured and valued.

The third element that would have seemed surprising is the quantity of flour involved. When I first read “three measures,” I envisioned something along the lines of three scoops. Well, not exactly. The three “measures,” “sata” in the Greek, would actually come to about 160 cups of flour. Enough to make over 50 loaves of bread! Perhaps enough even for a TUMC potluck? So, this woman is not baking for household use. Something extraordinary is going on. A lot of people are going to be fed.

Lori has rightly warned us to be attentive in our use of metaphors of light and dark. Here, fungi remind us that the dark is daunting--and it makes things invisible--only to some of us; for fungi, bats, cats, and for countless other creatures in God’s good creation, the dark is the realm of rich ferment, teeming with life.

So it seems to me that the parable is not just about an increase in size. Something more is happening as the yeast stealthily devours its way through the mountain of flour, breaking down the glucose to release carbon dioxide, ethanol and heat, chemically altering the dough as its cells divide with wild abandon; perhaps here from the murky kingdom of fungi, comes a perspective that is meant to be unsettling, that shows the Kingdom of God to be subversive, disruptive, transformative.<sup>vii</sup>

### Yeast in the world

When our pastor Michele asked me to give the sermon for today on the theme of creation care, I have to admit I was surprised and more than a little hesitant. Not only is preaching something I’ve never done, I wondered why I was being called to preach on this particular topic. I mean, I try to recycle, but I’m clearly no David Suzuki. There are others here with far more wisdom and experience with environmental

issues who would be able to speak with greater knowledge and conviction. I wondered whether I could wait for another sermon topic more suited to my abilities?

But then I realized, perhaps that was the point. Whatever gifts we have, however homely our lump of dough, whatever we've got in our cupboard for the potluck, we've got to bring it. Bring it now.

In the weeks ahead, we'll be continuing the examination of our response as a church to the many pressing environmental concerns we are faced with, both in our sermon series and in On the Way Café. We will undoubtedly be made uncomfortable, pushed to see things we might rather not see, and do what we might rather not do. One of our great challenges will be to grasp the urgency of our situation without falling into despair, to acknowledge our responsibility for creating the problems without being paralyzed by guilt. To have hope. Not a naïve belief that everything will somehow work out, but a clear-eyed commitment to act despite our awareness of the obstacles ahead.<sup>viii</sup>

I have no easy answers this morning, no top ten tips for you to take home. I wish, however, to offer you some materials to create what Desmond Tutu calls a “narrative of hope” for climate justice, one that recognizes the crucial link between fighting climate change and securing justice for those on its front lines, those people who have contributed the least to the creation of these problems, yet suffer the most, who face rising sea levels and extreme weather conditions, drought, food shortages, and unsafe water. Mary Robinson, former President of Ireland and UN Special Envoy on Climate Change, sees what she calls an “irrepressible force for climate justice,” at the grassroots level.<sup>ix</sup> In her book, *Climate Justice*, she tells remarkable stories of resilience and tenacity from people around the globe, from villagers in drought-ridden Uganda to Pacific Islanders in Kiribati whose entire nation is in danger of being swallowed up by the sea. In these stories, hope is an animating force that blooms in even the most harrowing circumstances.

I'd like to share one of these stories with you; it's about Sharon Hanshaw, the owner of a hair salon in East Biloxi who loved to pleat cornrows, shape blow-outs, and trade gossip with her clients while rocking the frosted-blond and auburn wigs that were her trademark. Then, Hurricane Katrina struck. Hanshaw returned to find the streets piled high with broken cars, her home with its roof ripped off, and her salon knee-deep in putrefying mud. In coastal Mississippi, as in New Orleans, the areas most likely to be flooded belonged to poor and African-American communities. In the months that followed, Hanshaw watched as time and again, funds designated for survivors were re-directed towards casino developers or middle-class homeowners rather than renters like herself. In time, her home and salon were bulldozed and the land...paved to put

up a parking lot, in this case, the parking lot for a new casino. The local funeral parlor was the only building left standing, so meeting there with a small group, Hanshaw began to build a coalition of low-income women. These women made a distinct impact because they were able to come together across racial and ethnic lines. Black, white, Latino, and Vietnamese-Americans, they joined forces to set up a community garden, organize child-care, a home-repair fund, workshops and emergency kits. Knocking on doors, clipboard in hand, they collected the thousands of signatures that were crucial in launching a lawsuit against the government. Hanshaw had never thought herself as an activist and organizer. When she was later asked to Copenhagen to serve as a climate change witness before the UN she said, “who knew that being a cosmetologist would prepare me for a leadership role?” But then it seems to me, she was someone who understood that hope is not something that just happens to you; it needs to be cultivated, day by day. Her father, a Baptist minister and respected civil rights leader, had always taught her: “Pray and believe, and always believe in what you can do instead of what you can’t do.”

## Conclusion

Stephanie and Erika have woven so much beautiful poetry into today’s worship. You may know Samuel Taylor Coleridge as a great Romantic poet, but what you may not know is that he was also deeply learned in science. Among other things, he frequently attended public chemistry lectures. Asked why, Coleridge answered: “to improve my stock of metaphors.” “Science,” he said, “being necessarily performed with the passion of Hope, was poetical.”<sup>x</sup>

As poetic devices, metaphors can be powerful things, but in the end, they are only as good as the clarity they can bring and the actions they inspire.

My friends, the work you are already doing truly encourages me every day, but we know our work is cut out for us, and it is going to be messy, complicated, and hard. Let us fortify ourselves with stories that hearten us, and let us remind ourselves that real, lasting change does happen, because it is so easy to quickly take for granted what was only a distant dream just a few years before.

So, I wish us poetry and ‘the passion of hope’ to leaven our labours. And may we open to surprises in what God may ask of us.

So tell me, “What’s the *biggest* room in the world?” Yes, it’s a mushroom.

And perhaps there will be times when that great big mushroom will work as a metaphor for you. On those days when you see nothing but rotting leaves or feel

knee-deep in dung, remember the mushroom. You might think of the mycelium, stretched so thinly it is scarcely visible, but tenacious enough to bring down a forest. You might remember the rhizomorphs branching out underground, leaping gaps, forging connections and breaking through solid rock. Or, perhaps *you* will want to be the fruiting body that the world will wake up tomorrow morning to find has erupted in brilliant profusion across its lawn. Think of the mushroom. And know that you too are part of something greater than yourself, vast, unseen, and unyielding.

Take all that is dead, decaying, broken and lost, all that has hurt you and beaten you down, and transmute it into the rich, loamy soil on which the Sower will plant a seed.

### *Thanks be to God*

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<sup>i</sup> *Regnum Animale, Regnum Vegetabile and Regnum Lapideum a third kingdom for minerals* in his *Systema Naturae* (1735)

<sup>ii</sup> 1866 Ernst Haeckel described a third kingdom, Protista

<sup>iii</sup> 1938 Herbert Copeland described a fourth kingdom Monera, those with no nucleus

<sup>iv</sup> “The unexpected magic of mushrooms,” BBC, 5 March 2019, <http://www.bbc.com/future/story/20190314-the-unexpected-magic-of-mushrooms>

<sup>v</sup> Vince Patton, “Oregon Humungous Fungus sets record as largest single living organism on earth,” OPB, Oregon Field Guide, 12 February 2015, <https://www.opb.org/television/programs/ofg/segment/oregon-humongous-fungus/>; Craig L. Schmitt, Michael L. Tatum, “The Malheur National Forest, location of the world’s largest living organism (The Humongous Fungus)” United States Department of Agriculture, 2008, [https://www.fs.usda.gov/Internet/FSE\\_DOCUMENTS/fsbdev3\\_033146.pdf](https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fsbdev3_033146.pdf)

<sup>vi</sup> Ben Witherington, *Women in the Ministry of Jesus*, (Cambridge University Press, 1984); Dominic Garramone, “Three measures of flour,” The Bread Monk website, 2 April 2012, <http://breadmonk.com/my-bread-blog/three-measures-of-flour>

<sup>vii</sup> Susan Marie Praeder, “The Parable of the Leaven,” in *The Word in Women’s Worlds, Four Parables* (Wilmington, Delaware: Michael Galzler, 1988), <http://www.womenpriests.org/the-word-in-womens-worlds-the-parable-of-the-leaven/>

<sup>viii</sup> Rebecca Solnit, *Hope in the dark: untold histories, wild possibilities*, (Haymarket Books, 3<sup>rd</sup> edition, 2016). I am grateful to Solnit for her description of darkness as unknowability and hope as the embrace of the unknown, and for her use of the hidden body of the mushroom as analogy for the groundwork that lays the foundations for social change.

<sup>ix</sup> Mary Robinson, *Climate Justice: Hope, resilience, and the fight for a sustainable future* (Bloomsbury, 2018).

<sup>x</sup> Trevor Levere, *Poetry realized in nature: Samuel Taylor Coleridge and Early Nineteenth-Century Science* (Cambridge University Press, 2009).