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HIS BURNING LOVE Part 1

And my God will supply every need of yours according to His riches in glory in Christ Jesus. Philippians 4:19

We find an older married couple snuggled together before a cozy, crackling campfire in the Australian outback. We also hear the hymn of a distant dingo rising into the cool night air. As strangers to this foreign land, the Seismos¹ have been eagerly exploring its unique ecosystem during their waking hours.

Professor Seismo: "Isn't Jesus wonderful. Heidi?" Mrs. Seismo eagerly nods her head. "He's so kind and good to us. Through His Word and His Creation (2 Timothy 3:16; Hebrews 1:10), God sweetly reveals the wonderful ways He thinks and works." The Sun begins to fade behind the broad, flat horizon and the Seismos are awash with the radiance of their campfire. Contented smiles fill their faces as they look intently into the amber hearth. "From the beginning of time, our Lord has lovingly provided this mysterious form of energy to light and heat our homes, and cook our meals. Fire is such marvelous thing-far more complex than any of us realize." Mrs. Seismo: "Hmm, I've always considered fire one of the simpler things Jesus made."

1 Professor & Mrs. Seismo (pronounced SIZE - mo) are fictitious characters.

Professor Seismo: "Well, it certainly possesses a simple beauty, yet fire is anything but simple. Sweetheart, did you know that the energy stored in these logs originally came from a star? Who other than our infinitely great Creator could convert something so ethereal as sunshine into something so tangible as the wood of our campfire?" Mrs. Seismo takes a deep breath for she knows what's coming. She's in for an intellectual challenge. Her husband, Hans, enjoys sharing with her the mysteries of Christ's handiwork, and she loves him for that. "Vacations" for the Seismos are in name only-they're more like college field trips. She's glad though ... she would have it no other way!





Professor Seismo: "Our Lord Jesus has stored an unbelievable amount of energy in this wood. And if He allowed it to be released all at once, we'd be utterly consumed." **Mrs Seismo:** "Oh, no!"

Professor Seismo: "When something is burned, heat and light are usually produced. Scientists call this *combustion*.² Combustion is just another name for burning. The burning, or combustion, of wood involves an extremely complex series of chemical reactions. Our Lord irreversibly rearranges (or chemically changes) the atoms in these logs to produce heat energy and light.

"The wood of our fire is composed of extremely long molecules called cellulose.³

A small fragment of cellulose molecule (highly magnified)



Each of these molecules possesses thousands of hydrogen, carbon, and oxygen atoms. A great deal of heat is needed to start wood burning—usually temperatures of 500° F (260° C) or greater. But once the fire gets going, wood molecules begin to spontaneously break down into smaller and smaller particles." Mrs Seismo: "Then what happens, Hans?" Professor Seismo: "The Lord Jesus transforms wood into a whole host of complex chemicals, which are released as a swirling cauldron of hot gases. These gases eventually react with oxygen (O_{a}) in the air to form carbon dioxide (CO_2) and water (H_2O) . Surprisingly, it is the chemicals in these gases that burn, not the solid part of the wood."

Mrs Seismo: "How do the different chemicals produce heat?"

2 From the Latin word comburere "to burn up"

3 Though largely cellulose, wood is also composed of hemicellulose & lignin.

FOR THE EXTRA CURIOUS

The French chemist Antoine Lavoisier (la vwuh zay) discovered in 1777 that oxygen is necessary for something to burn. Eliminate oxygen, and combustion ceases. This is what happens when a snuffer puts out a candle flame.

Professor Seismo: "The chief gas released when a log burns is carbon dioxide (CO_{2}) , the same gas we exhale from our lungs. When we eat a meal, the Lord converts our food into energy and carbon dioxide (CO_a)." Mrs Seismo: "So Jesus causes food to 'burn' within us that energy may be released?" Professor Seismo: "Yes, Heidi." Mrs Seismo: "How come it doesn't cause us to become really hot and glow?" **Professor Seismo:** "Because the temperature in our bodies normally doesn't go higher than 100° F (38° C). Remember, it takes 500° F (260° C) to get wood to burn. Jesus lovingly keeps tight control over our bodies and does not allow this special kind of combustion to get out of control.

"It might be better to think of digestion as *very slow* combustion. Yet like a fire, it is this slow combustion of food that keeps our bodies warm and at a constant temperature." **Mrs Seismo:** "Hans?"

Professor Seismo: "Yes, Heidi?" **Mrs Seismo:** "My heart is aglow for you!" *Professor Seismo gives his wife the tenderest smile.*

Professor Seismo: "Our Lord Jesus releases numerous gases from burning wood, and these chemicals are what create the beautiful flames we enjoy so much. Carbon dioxide does not burn but the next most plentiful gas, carbon monoxide (CO) does."

Mrs Seismo: "Carbon monoxide! Isn't that dangerous?"

Professor Seismo: "Very. But if we have a



well-ventilated fire, most of it is converted into carbon dioxide. The other major flammable gases include hydrogen, methane, and methanol. When these burn, a lot of heat is produced."

Mrs Seismo: "But what about the light a fire gives off? How is it made?"

Professor Seismo: "Great question, Sweetheart, but hard to explain. As our fire blazes, electrons in the atoms of the wood vapor get very excited."

Mrs Seismo: "Oh, like our grandchildren?!" **Professor Seismo:** "Yes, Heidi, just like our grandchildren. But Christ then causes the electrons to 'relax' again. When this happens, the atoms give off light. It's a principle of quantum physics."



Mrs Seismo: "Quantum physics? You know, Hans, I think our grandkids also possess that principle." *Professor Seismo gives his wife a quizzical look.* "When they're done playing outside and finally relax, their cheeks glow red." *Heidi smiles.* "But why does a campfire produce different colors then?" **Professor Seismo:** "Another excellent question! Take a candle—the blue hue at the base of its flame comes from the excited electrons of the gases as they return to rest. But the yellow and orange of a candle flame are due to tiny particles of glowing carbon." **Mrs Seismo:** "Glowing cabon?" **Professor Seismo:** "Yes. If you remember, I said that wood was composed of large molecules containing hydrogen, carbon, and oxygen atoms." *Heidi nods.* "We scientists call these carbon-rich molecules carbohydrates or hydrocarbons. Not all the carbon that God locks into wood is converted to carbon dioxide

or carbon monoxide though. Much of it is released as soot." *Professor Seismo carefully picks up the aluminum coffee pot from the campfire and shows Mrs. Seismo the bottom.*

"The black soot coating the bottom of our coffee pot is a collection of extremely small carbon particles. Creator Jesus heats up this carbon—released by a fire—to $2,500^{\circ}$ F (1,400° C) as it rises up from the wood. At this temperature, it incandesces or glows orange and yellow.⁴ It's the same principle behind glowing embers as a fire dies down. This glowing doesn't produce much light, but a lot of heat.

"The burning of wood is an extremely complex phenomenon involving *organic chemistry*. It is truly a bright beacon of our Lord's incomparable creative genius! Heidi, let me summarize it so that you might understand better:

 The first thing that must happen is that much of a log's moisture be driven out of it. It's nearly impossible to burn wet wood.
 Next, our Lord Jesus begins to decompose cellulose into ever smaller molecules. These form flammable gases that evaporate from the surface of the hot wood.⁵ Remember, it is the chemicals in these gases that burn, not the solid part of the wood itself.

4 This glowing of carbon particles is called "black box radiation," which is fundamentally different than the light produced by burning wood vapors
5 Scientists call this process *pyrolysis* (from Greek) "fire decomposition." 3) Gases then begin to glow, producing heat and blue light. At this point, the fire has become 'self-sustaining.' In other words, given enough fuel and oxygen, it will continue to burn indefinitely without adding any additional heat to the system from the outside.

4) Since the air surrounding a campfire contains only 21% oxygen, it often experiences 'incomplete combustion.' This means that the carbon released from wood forms soot and smoke. As these bits of carbon

Incomplete Combustion



become superheated, God causes them to glow orange and yellow, like the elements of our toaster."

Mrs. Seismo: "Oh, I see, I think." Professor Seismo: "The study of organic chemistry is fascinating but quite challenging. There are, for instance, about 60 different organic chemicals released from wood as it combusts: ten different acids, five types of alcohol, aldehydes, aromatic ethers, acetone and other ketones, phenols, and nitrogencontaining compounds." (Mrs. Seismo doesn't understand what the Professor is saving but senses a quiet peace entering her heart as she praises God for the wisdom He has liberally bestowed upon her precious husband.) Mrs. Seismo: "What about the ash left behind in the fire: what is that made of?" **Professor Seismo:** "Ashes are the leftover minerals that cannot burn-minerals like potassium and calcium, which are normally found in plants.'



Mrs. Seismo: "I'm still a little fuzzy about how breaking apart all those atoms in the wood produces flames."

Professor Seismo: "Well, the Lord Jesus is not breaking apart the atoms, just the molecules composed of atoms." Mrs. Seismo scrunches up her face. "Think of the logs in our fire as the soil in your garden at home. In spring, much of the dirt contains the seeds of flowers from the year before, just waiting to grow again. For these seeds to germinate, our Lord Jesus applies the heat of the Sun to warm the soil. This is akin to our applying heat to the wood in the form of a lit match." Mrs. Seismo: "Hans, you mean many lit matches, don't you?" Mrs. Seismo lovingly pokes her husband in the side with her index finger, then snuggles up next to him again. **Professor Seismo:** "Umm, yes, well, I never was very good at lighting campfires.

"This is not a perfect analogy, but when the wood heats up, it releases several combustible chemicals buried inside it and these ignite into blue flame . . . like grape hyacinths bursting forth with color on a warm spring day. As the logs heat up even more, Jesus breaks up the wood molecules like you might break up stubborn dirt clogs in your garden. This gives the seeds in the soil a better opportunity to bloom. The further breakdown of wood molecules releases additional carbon hidden in the wood, producing beautiful yellow and orange flames."

The Chinese developed gunpowder as far back as 750 A.D. The first match was invented in 1827 by an English pharmacist named John Walker. And Alfred Nobel, the Swedish man who inaugurated the Nobel Prize, invented dynamite in 1867. Today, we use combustion to heat our homes, blast through mountains, and send rockets into space. Mrs. Seismo: "So you're saying that the beauty of the flames of our campfire is like the beauty of my flower garden?" **Professor Seismo:** "In a way, Heidi, yes. God adds 'fertilizer'—that is, oxygen—to our campfire, causing it to grow. Like a well-kept garden, if a fire is given enough fuel and oxygen, it continues to grow!" Mrs. Seismo: "So Jesus rearranges the



The chemistry of combustion runs in the exact opposite direction as photosynthesis.

atoms of wood molecules to *cultivate* fire?" **Professor Seismo:** "Precisely! By rearranging your flowers, you create more beauty. Our Lord Almighty rearranges the atoms in a fire, breaking chemical bonds between atoms and releasing stored energy. The energy released by the burning wood is like the beauty of your garden after you have worked so hard to make it grow.

"Though I only intended to use your garden flowers as an illustration of Christ's creation of fire, it's fascinating to realize that combustion and photosynthesis possess the exact same chemistry. Fire takes carbohydrates like cellulose and, together with oxygen, converts them into water and carbon dioxide. Photosynthesis does the exact opposite—it converts water and carbon dioxide into sugar (carbohydrates) and oxygen." **Mrs. Seismo:** "Oh, I think I see, but what's a chemical bond?" **Professor Seismo:** "It's what glues or holds two atoms together in a molecule.

"Combustion usually takes the form of fire, as with our burning logs, or an explosion, depending on how fast the fuel burns. A detonation of dynamite represents *very rapid* combustion. On the other hand, extremely slow combustion produces no flames at all, like the rusting of steel."



Mrs. Seismo: "Wait . . . so exploding dynamite, a burning log, and a rusting car are all considered combustion even when no flames are present?"

Professor Seismo: "Yes, Heidi, that's right! The basic properties of combustion have been known for many centuries now. And our incredibly loving God has supplied people fire since the beginning of time." *Suddenly, Mrs. Seismo turns her head and gazes intently into Professor Seismo's blue eyes.* "Fortunately, God has not demanded that people understand the physics and chemistry of fire to enjoy its benefits. At the same time, the science of fire has opened a great vista into the heart and mind of our beautiful and loving Creator, Jesus Christ!"

"Let us know; let us press on to know the LORD;



HEARTS AFLAME FOR CHRIST

They said to each other, "Did not our hearts burn within us while He talked to us on the road, while He opened to us the Scriptures?" Luke 24:32

The heart aflame with the love of Christ has been converted and made alive by the holy fire of God's Word. Yet true Christian conversion doesn't end at the beginning. In the Redeemed, Christ Jesus tirelessly applies Truth to the heart. Slowly, it yields to His Spirit—broken down and built up again forever changed.

A young Christian may initially produce more "smoke than fire." He or she may appear to the world as nothing more than a "smoldering wick" (Matthew 12:20). Yet as the heart further relinquishes its life to Christ's Spirit—allowing a lifetime of selfishness, pride, and rebellion to be broken down and burned away—the Lord ignites and purifies all parts of it. These changes may seem dim at first. But day by day, piece by piece, a heart fully relinquished to Christ will be transformed and carried heavenward in holy flames of love toward God.

And soon, Jesus will use this transformed person to set other dead, "wooden hearts" ablaze. Christ's body was broken upon the Cross for the sins of the ungodly; His blood was spilt to set our hearts aflame. Do you believe this?

The glories of Christ are shared through genuine Christian love—one life fervently warming another (1 Peter 1:22). The true Church is like a great hearth—shining with the excellencies of Christ (1 Peter 2:9)—so that all can be warmed and lighted.

Our Heavenly Father is the One who kindles holy fire (see Leviticus 9:24); a dry hunk of wood cannot light itself! He can take the most hardened heart, break it down, and ignite every part of it with the glory of His Son. A regenerated heart will then see its own remaining depravity (Jeremiah 17:9) and repent of its sins (Romans 2:4). More than that, its eyes will be opened (Ephesians 1:18) to the sanctifyinging beauty of our Lord Jesus Christ (Psalm 27:4).

Our God is a Consuming Fire (Hebrews 12:29). How can anyone stand in the presence of such an Infinite Blaze and not be utterly destroyed? We must become as holy fire ourselves. There are two choices before us: 1) Allow God to break our hearts by His Word and set them ablaze with His Spirit, or 2) continue as we are and watch our dead hearts rot away forevermore. We must not put it off; once wood begins to decay, it becomes impossible to set on fire. God is patient but not forever. Now is the day of our salvation (2 Corinthians 6:2). Repent and believe in Christ!

Has your heart been set aflame for Christ (1 Corinthians 2:2)? "Yes, but my love for Him is so slight," you may answer. Be encouraged here is the promise: "the smoking flax shall He not quench" (Isaiah 42:3 KJV). May our Lord be pleased to set a great conflagration ablaze in your life and may He irreversibly change you into an everlasting flame of joyful praise!

