Rob Scott

The following is the first two chapters of “Scorcher” by Rob Scott

Chapter 1: Summer 2023

August 5, 2023 marks the fortieth day of outside temperatures exceeding 102 degrees, officially the hottest summer of all of recorded history. A massive high-pressure system has been stationary over all of Texas since June and it has been sixty days since any measurable amount of rain has fallen. No Jetstream or weather system has challenged the high-pressure bubble over Texas and none are predicted for anytime soon, they say it is likely to continue being hot and dry through September. Every lawn, regardless of running sprinkler systems or not are brown, dead and crispy. Tree limbs fall constantly from all trees; onto roadways, houses and cars, in the middle of the day or night.

A tree cannot survive long in temperatures above 94 degrees F because photosynthesis slows down and the tree runs out of energy. At 102 degrees F limbs start to droop and leaves wither and fall off. At about 112 degrees F trees die. Trees are the only protection from a sun's relentless beating on a house or car during summer. People often park under trees to keep their car cool during the day. When prolonged heat occurs and trees lose limbs or fall over due to weakened states of being, trees

become liabilities rather than protection. All established neighborhoods are full of large fully-grown trees. And some places in Texas, like Kingwood or The Woodlands, are nestled within forest. In Houston, we have many trees. An analysis of the urban forest in Houston, Texas, reveals that this area has an estimated 33.3 million trees with tree canopy that covers 18.4 percent of the area. Roughly 19.2 million of Houston trees are located on private lands. That is about eight trees per every house in Houston. That is a lot of liability in potential damage to home, cars, people and things, $1.2 trillion in Houston homeowner policies to be exact. And distressed trees have the potential to destroy most of it.

It is simply too hot and too dry for anything to continue living. Houses and the people who reside within them were somewhat protected from the heat while the electricity grid limped along. But today was the last time the grid worked anywhere in Texas for more than two consecutive hours. Surges are constant and most electrical powered items like air conditioners and refrigerators cannot handle the massive jolts of surging re-starts and they failed all together. Nights rarely cool below ninety degrees. Every evening parked cars hum while passengers try to sleep with air-conditioned relief.

Chapter 2: Gunpowder

“Grampa, the news says the summer heat is shutting down the power grid and all manufacturing is coming to an end. This is reported to be worse than the Covid shutdown, all supplies are expected to fail and people are going to riot and take what they want. Do we have enough bullets to survive the end times?” Tanner asked his grandfather in Kingwood, Texas the summer of 2023.

“Technology simply builds upon ancient ways of doing things. It makes us lazy and dependent upon the supply chain of the new product line rather than the knowledge of how. The government wants us dependent upon the product so that it can control the use of it. But Tanner, you don’t need bullets to shoot a gun.”

“Grampa, how do you shoot a gun without bullets?”

“Tanner, the first gun ever made was created around the year 800, it was a crude musket rifle called a fire lance. It was made in China of all places.” Grampa chuckled, “Seriously, it was a real

thing. It was a tube of bamboo filled with gunpowder with a stick in one end and shrapnel in the other end and they would light a fuse in the middle and pointed it at the direction they wanted to shoot. The shrapnel, little bits and pieces of porcelain shards, would shoot out about ten foot like a shotgun."

"But, Grampa, don't guns just shoot bullets?"

"Tanner, they didn't used to. Up until the mid 1800's they were still operating using flintlocks and muzzle-loaded musket balls. All you needed was gunpowder and you could shoot just about anything."

"But isn't gunpowder regulated?"

"Regulated? Tanner, you mean controlled, right? Does the government regulate and control the manufacture and distribution of gunpowder? Well, hell yes, it does! But not for the individual production and personal consumption of gunpowder which cannot be sold to another. As part of the Constitutional right to bear arms, we are allowed to make our own gunpowder for our own guns and personal use."

“But Grampa, what good is gunpowder if you still need percussion caps and casings to make bullets? Aren’t those parts regulated and controlled as well”

“Tanner, you are not thinking old enough, you have to go ancient, beyond the technology, before the bullets, to know what and how to use gunpowder for. The last military issued flintlock gun was given out in 1836. It did not need a bullet to work, the chamber was packed with a musket ball and gunpowder and the flintlock simply struck the fizzle covering a pan of primer powder and that lit the chamber and fired the musket ball. All you needed was gunpowder.”

“Ok, Grampa, but gunpowder is regulated. You have to buy it as a product, right?”

“No, Tanner, you don’t. It can be made using simple, everyday plentiful materials and it is quick and easy to create using no technology.”

“Come on, Grampa! That can’t be true, can it?”

“Tanner, with enough shit, you can shoot guns for as long as you would like.”

“Wait, what does that even mean; are you saying gunpowder comes from poop?”

“Absolutely, it does! There are just three ingredients in gunpowder, also called black powder; they are nitrate, charcoal and elemental sulfur. Nitrate comes from poop. Specifically, saltpeter or potassium nitrate which serves as the oxidizing agent in gunpowder. When you take manure and mix it with wood ash or crushed limestone or other alkaline materials, it helps breakdown the poop into nitrogen compounds and soluble nitrates. Then you leach that mixture with rainwater, percolating the mixture to dissolve the nitrates and other soluble compounds. The mixture is now called lye.”

“So, it is what is used in soap, right Grampa?”

“Close, Tanner, the liquid is evaporated and the crystals that remain are potassium nitrate, otherwise known as saltpeter. You need to collect a lot of these crystals. When you go to make your gunpowder you will need 75% potassium nitrate, 15% charcoal and 10% elemental sulfur. Making charcoal involves a process called pyrolysis, where organic material is heated in a low-oxygen environment to remove moisture, volatile compounds, and leave behind carbon-rich charcoal.”

“Wait, Grampa, can’t you just use charcoal from the store in a big bag?”

“Not exactly, Tanner, it is best to use dry, untreated organic material, preferably hardwood, for better quality charcoal. Next, prepare the container, like a steel drum, by drilling holes near the bottom for ventilation and on the lid to allow gas to escape. The holes should be small enough to prevent excessive oxygen intake. Fill the container with pieces of hardwood, arranging it in a way that allows for proper airflow. You should stack the wood pieces inside the container. Then you should start the fire and place the container over the fire and gradually heat the organic material and initiate the pyrolysis process. If you control the oxygen as the material heats up, then the volatile compounds will start to release. You will

need to limit oxygen intake to prevent the material from burning completely. Adjust the ventilation to control the process; this might involve partially covering the lid or adjusting the bottom holes. Closely monitor the process: Watch for smoke and gas coming out of the container. The smoke should turn from white to a bluish color, indicating that the volatile compounds are being released and burned off. The process might take several hours. Then cool it all down. Once the smoke changes color and there's less gas escaping, it's a sign that the charcoal-making process is nearing completion. Allow the container to cool down naturally. Test the charcoal by carefully opening the container. You should find black, brittle charcoal inside. Break a piece and examine its texture; it should be lightweight, hard, and have a metallic ring when struck. Keep it in an airtight container and away from any moisture until you want to use it. Charcoal acts as the fuel for the gunpowder. And then there is the elemental sulfur, which helps to lower the ignition temperature and improve the overall combustion process. The materials need to be ground down as fine as you can make them. Then you combine the materials in 75% nitrate and 25% charcoal and 10% sulfur. If you sift the gunpowder through some pantyhose, the fine silt is called primer powder and you use that to ignite the gunpowder packed within the chamber. You do not need a lot of primer, just some."

“Grampa, how do you get the elemental sulfur?”

“Tanner, it is easily available from any farmer, it is part of fertilizer. You only need a little bit of it, it is easy to find in salt domes or in caves and caverns. But it is always made available in elemental form through fertilizer applications.”

“Grampa, how do you convert a bullet-shooting gun to a flintlock gun?”

“Well, Tanner, you see, technology without the history, just makes lazy, dumbass citizens unable to fend for themselves in the absence of the technology. I mean, just look at these idiots with their cellphones, when the battery goes dead they lose their ever-loving minds. They don’t know how to function without them. The technology of a flintlock ignition system muzzle-loaded gun was superior in 1630 and stayed superior for 200 years with virtually no alteration. Frenchman Marin le Bourgeoys created the first true flintlock, also called the French lock. Bourgeoys was in the service of King Louis XIII of France for whom he created the

flintlock mechanism. The French lock simplified the Snaphaunce design by creating a one-piece, L-shaped frizzen. The flintlock mechanism was designed to push back the lid and spark a flint at the same time. It is the spark of the flint that lights the primer in the pan and then burns through the notch in the barrel igniting the powder charge within the chamber. The expanding gases propel the musket ball down the barrel and out of the firearm. Works great for a single shot, but to make a repeating action, the rifle needs a revolving mechanism. Adding a revolver to the barrel is good for six shots. Adding six revolver cartridges in a mechanism of a continuous revolving manner allows thirty-six shots before reloading. And having multiple cartridges all loaded and standing by allows for an unlimited firepower without any bullets."

"Grampa, do you have such a gun?"

"I do, Tanner, an 1850 Elisha Haden Collier prototype. The Boston, Massachusetts engineer and inventor revolver represents the first significant stage in the evolution of the revolver. Patented in 1818, the original conception for the Collier called for the automatic revolution of the cylinder when cocking the hammer. The frizzen opens when the hammer is cocked, revealing the pan and 3.5 grains

of FFFFG primer powder automatically drops into the pan upon cocking. Every 36-shot magazine has a musket ball pressed into every cartridge protruding out of the chamber and a pressing cover over the gunpowder packed end of the cartridge. Every cartridge is manufactured with a slightly narrower aperture than the lead musket ball so that the musket ball remains tightly in place while the gunpowder gasses build behind it. This ensures both the cartridge remains packed and that the musket ball reach maximum velocity upon firing. The lead musket ball will squeeze out through the narrow aperture upon firing."

"Grampa, do you have enough gunpowder?"

"Well, Tanner, we shouldn't need to worry much about that. In my closet I have a small arsenal with about 10,000 rounds of 9mm ammunition and as many rounds of .30-06 for the rifles. We're going to have to endure a lot more trouble before we will need to worry much about making gunpowder."

Every year the United States ammunition manufacturers make ten billion rounds of small caliber bullets. 9mm is the most popular caliber made, similar in size to a .38 caliber bullet. Texas

makes the most ammunition in the United States. Russia makes twelve billion rounds of small caliber bullets and China produces fifteen billion rounds of small caliber bullets. Until very recently, Russia and China were large suppliers of ammunition to the United States. The United States manufacture small caliber cartridges with brass. Russian ammo uses steel casings and are prone to rust quickly; they mostly make a 7.62mm bullet, similar in size to a .30 caliber bullet. China makes their bullet casings with stainless steel and produce a 5.8mm bullet mostly, similar in size to .22 caliber bullet. Most Kevlar and ballistic vests or bullet resistant protective gear are unable to stop high-velocity .22 caliber or 5.8mm bullets as they are too small to be stopped by the weave of the gear. To protect a person from Chinese bullets requires Carbon Nanotube, an allotrope material that is comprised of cylindrical carbon molecules. Each single-walled nanotube is made up of a hexagonal network of covalently bonded atoms. When knit together, the material is strong, light-weight, flexible and elastic, with the look and feel of pantyhose it has over 100 times the strength of steel but a single vest of it will cost $30,000.00 today. Presently, Carbon Nanotube vests are only made in and offered for sale by China.

Carbon Nanotube works best when stretched out over a carbon-fiber exoskeleton. When worn

properly, the soldier looks like a modern-day Batman or Superman, with rippled exoskeleton features covered in tights. While the flexible and elastic carbon nanotube prevents a bullet or shrapnel from penetrating the woven material, the light-weight but extremely strong carbon fiber plates and panels between the soldier and the carbon nanotube keep the impact of the bullet, shrapnel or explosive force from hurting the soldier. To make such a full-body armor suit costs $250,000.00 per soldier. To outfit the four million United States armed forces and post-war contractors will cost a trillion dollars. If money is an answer, this is one simple way to keep parity in combat against the Chinese. Without full-body protection, the 5.8mm bullets will not be stopped by traditional body armor, Kevlar, ballistic or bullet-resistant gear. If every armed force soldier and post-war contractor had such a flexible exoskeleton, the protection against bullets of all sizes, explosive forces from bombs and traditional trajectory weapons over the past twenty years would have kept 80,000 people alive and would have prevented 40 million injuries incurred by 800,000 wounded veterans over the past 20 years and could have prevented 9,000 suicides among discharged military personnel since 2001.

The cost to care for US veterans is a staggering $350 billion per year. We as a nation have spent seven trillion dollars since 2001 just to

care for our veterans through the VA health system alone. The technology for Carbon Nanotube exoskeletons can prevent all of these costs and spending.

I hope you did enjoy reading the first two chapters of “Scorcher” by Rob Scott. Please note all books can be located for sampling and purchase at:

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