

## Terra 2200

William climbed out of his solar powered roto transport helping his daughter Abby get her children out for a swim. 150 years ago, the bay was so polluted fish even would not live there & the smog choked the lungs of all who stayed outside too long. Now with government mandated tree planting, elimination of fossil fuels, tight pollution control measures and the addition of flexible high-capacity solar panels to the surfaces of everything resulting in the air, the water, the world being clean again.

William had seen the gray smog filled 21<sup>st</sup> century pictures and could hardly believe how foolish mankind must have been to nearly destroy this beautiful place. He gazed at the incredible blue sky, felt the gentle refreshing breeze across his checks, the summer sun warmth on his back.

"You going to stand there all day looking at the sky or are you coming with us to swim," called Abby chasing after the little ones headed toward the shore.

"I'm coming," laughed William as he watched his daughter hurrying after his three grandchildren. Grabbing picnic basket, duffel bag, plus a beach umbrella he followed the happy hoard. Reaching the spot where shoes and shirts were piled taking it that was the location for umbrella, blanket, and picnic basket.

The grandchildren called out, "Come on Grandpa! Hurry up and join us in the water!" Timothy was already out past waist height, Lucas was a few feet behind him, Bethany was dragging her mother into the water. Leaving his shirt and shoes with the rest he walked down across the warm sand. He could feel in oozing up between his toes, clean sand, warm sand, nice sand, that had been filtered, refined and cleaned of decades of trash to become the inviting beach it was now. Large solar powered cleaners had scooped up sand, separated out trash, cleaned and sterilized the sand returning it back to the beach from which it came. Inch by inch the cleaners had worked down the beach, across the dunes, around the surrounding woods for years to get land back to pre-civilization destruction beauty. With years of educating each generation it was now unthinkable that anyone would throw out trash into the environment like they thoughtlessly had done centuries ago.

The water had a cool silky softness to it that invited all. Legislation banned dumping of anything into water ways - streams, rivers, lakes or oceans, that would harmfully affect wild life or water quality in way. The result was a safe and happy place for his grandchildren to swim that generations before never dreamed of. As William reach waist depth Bethany climbed upon his back begging, "Take me for a swim!" She tightly wrapped her little arms around his neck and he dove under the water to reveal a unique world of water creatures and plants the children had not seen. The crystal-clear water allowed him to point out the waving feathery steams of green underwater ferns and the colorful fish the darted between the plants. Upon surfacing for air Bethany pleaded, "Again," so after a big breath they descended back into the wonderful interesting water ecosystem with all the new things to see and learn.

As William and Bethany explored, they were joined by Timothy and Lucas who swam on each side. Timothy was able to catch a small crustacean much to the excitement and joy of his siblings who eagerly examined it in detail before releasing it back into its environment. With the cleaning up the air and water the wildlife had returned and things were as near as they could be before man had arrived upon the scene. Species that some had believed extinct had come back from wherever they had retreated to and now refilled the ecosystem with life, joy, and interest for all.

Upon returning to the beach William insisted they get sun block on before they spent any more time outdoors. Out came sun screen made from a natural plant base of aloe vera, coconut, shea butter, castor and sunflower seeds. All-natural organic ingredient products had long been the standard of most consumers and accepted as the norm in a society determined to leave the world a better place. While the boys did their arms, legs and front, William got their backs and

faces. Abby took care of Bethany to make sure she got good coverage, uv could still damage their skin in other ways than a sunburn.

They all settled down on the blanket under the umbrella, the picnic basket was opened and food emerged in a cornucopia of fresh home-grown vegetables and fruit. With hydroponic gardens, mini fruit orchards, and window greenhouse boxes in most homes now fresh food was only steps away. So, the three children had grown up as vegetarians and would think it cruel to kill animals to eat, much like the rest of society felt. Fresh avocado, lettuce and tomato sandwiches were a favorite with a large side helping of mixed dried fruits and nuts. William had put in a special treat today of dried carrots chips glazed with honey and roasted sesame seeds.

Looking at the company logo on the lid of the containers Lucas remarked, "Hey Grandpa they got the same design on the lid as you have on your shirt pocket."

"Well of course, that is what your grandpa does for a living," replied Abby, who was proud of what all her father had accomplished. William had worked with the team that had perfected the biodegradable plant-based resin that had replaced plastic. It was just as light weight, flexible, yet stronger than plastic with no lasting side effects to the environment. The goal was to remove all remaining plastics from the planet ecosystem.

"Grandpa makes containers?" questioned Lucas.

"Well not exactly, I work on the plant-based resin that is used to make the containers along with a host of other products," informed William. "The resin is plant base, biodegradable, and replaces the old plastic that once was common throughout the world. The vehicle we came in today is over 50% made of this resin, as well as the umbrella over our heads, the basket our food came, the sandals you're wearing."

"If it is made of plants can we eat the containers along with the rest of our food?" asked Lucas thinking it would be easier to carry everything back in their stomachs rather than hands.

"I'm afraid not, while your stomach could break down the resin, it would be tasteless, hard to chew, and very painful to swallow. Not a very good source of nutrition, but friendly on the environment," explained William.

"We learned in class how your company has led the fight to clean the world of plastics that have plagued our world for centuries," added Timothy. "But now there is still the large problem of getting rid of the accumulation of plastic. It just never breaks down, floating in big piles in the middle of the oceans, buried in landfills everywhere."

"With the development of large solar powered super ovens combined with microorganisms we can now break down the collected plastic refuse in days verses hundreds of years. Collecting plastic from around the world to remove it permanently from the environment had become an international UN project over the last twenty years. That has meant collecting from the oceans, digging into waste dumps long abandoned, banning the manufacturing of new plastic products, recycling old, and putting high tariffs on the use of plastics in any way," detailed William to his grandchildren. "So, pass me some more of those fresh cucumbers slices and cherry tomatoes."

"Don't eat them all grandpa, I want some too," teased Bethany.

"I'm not the one you need to worry about, those two brothers of yours will eat us out of house and home," joked William.

"Hey I resemble that remark," countered Timothy, "I've not had my share of plant fiber today, maybe the front porch will do when I get home." For it was common to only build with renewable resources, so plant-based structures were the only thing being built these days.

"I'll have you know I helped pick those tomatoes this morning," declared Bethany. The big corporate farms had by public demand and opinions shifted to complete organic farming while also providing plants and seeds for the home gardens to keep up with the demand for fresh vegetables and fruits. "Not to mention lettuce also," she added proud of helping in feeding the family. The two boys laughed knowing that she was into all things green, having her own window box green house in her bedroom.

After finishing up lunch they walked down the beach taking note of the high waving wild grasses along the edge from which wild bird flew up to greet them. "What was that yellow one that just missed our heads?" asked Lucas.

"That was a yellow back lark," answered William, "It is related to the family of sand piper birds and is now found along much of the shore line here, plus for miles north and south. They were once thought extinct, but once the environment returned to its natural state they returned much to the delight of ornithologists."

"Ornithologists?" asked Bethany.

"I see the word is not familiar to you," remarked Will, "Ornithologists are scientists who study birds. What they eat, where they live and migrate to. As a great many birds travel from one area, region, or continent to another with the seasons they provide a way for the transmission of plants and disease."

"Disease?" questioned Lucas.

"Oh yes, most all flues or influenzas in the world started with an avian source," informed William. "As great travelers, birds are indirectly in contact with most other forms of life on this planet. Being immune to many things that would kill us, they make great hosts."

"Not to worry," added Abby for reassurance, "All you children were inoculated at birth against most know diseases, so we are all safe."

After their nature walk and lunches settled the children were back in the water swimming, exploring and playing. Then back to the beach to lay in the sun to relax for a while.

"It is time we be getting back," proclaimed Abby, much to the disappointment of the children. "Boys go with grandpa and get cleaned up," instructed Abby. Off to the bath house they went, Abby taking Bethany to the women's side while Will chaperoned the boys into the men's side.

Washing salt off their bodies and out of swim wear, then three guys dried off under a warm air blower. Lucas wanted to know, "Is it wasteful to use so much water to wash the salt down the drain & won't the salt harm the soil?"

"All the water here is sent through a reverse osmoses system and then under ultra violet lights to clean it up to be recycled back to the showers again and again. The salt removed is collected and purified for industrial uses," informed William. "In today's world we try not to waste anything. One needs to think not just about one's needs, not just about the needs of others here now, but about the needs of those to come generations from now. If we pollute the land or use up all the natural resources, we leave a very bleak and barren future for all who are to come after us."

"Wow, I never thought about that what I use today may not be there for my great grandchildren's generation and those after," declared Lucas.

"Yeah, it kind of heavy to think that whatever you do can affect others not just now but for many years, if not generations to come," added Timothy.

"Well, what I think now is we are dry and need to get dress before the ladies start wondering if we fell asleep in the showers," instructed William.

"Are these clothes made of plant fiber too?" queried Lucas.

"Yes, they are cotton, 100% plant fibers which has been used for millennium to make clothes out of," answered William. "But don't get any ideas that you can eat them either, you would just end up choking on them," teased William.

"Oh grandpa, don't be so silly I'm not that hungry," protested Lucas.

"Don't let him fool you, if it is eatable and not under lock and key, he will eat it. That little guy can nearly out eat me," declared Timothy. Quickly dressing each collected up their swim wear and stuff they met the girls out front near the car.

"Will the car have enough power to get us home?" asked Bethany, "We don't have any wind turbine here to recharge it with." Large wind turbine farms generating electric into a big grid were a thing of the past, now each home had its own small, bird friendly screened wind turbine

that supplemented the home's solar skin that powered everything. Fossil fuels were also a thing of the past, along with big pipe lines, power grids, plus associated gas, nuclear and coal fire power plants.

"Not to worry," assured William, "The roto transport has a solar photic skin, like your home and can provide us enough power to drive all day. And not just when the sun shines, it also has rechargeable batteries so we can drive for hours in the dark. While we have been swimming and having fun the batteries have fully recharged."

As they climbed in a dark bank of clouds was moving fast in from the west. As the clouds moved over them, the sun disappeared and the temperature started to drop. By the time they reached home it was chilly. The warm sunny afternoon was becoming a cool stormy evening and rain came down hard. They were going forced to make a mad dash for the door.

No matter how fast they were all were soaked by the time they reached the door. As they stood dripping in the front hall Timothy proclaimed, "For as wet as we all are now, we might as well have stayed in our swim suits."

"Before you or grandpa catch a chill, get to the bathroom take off those wet clothes, wring them out, and warm yourselves up," instructed Abby.

Lucas led the way with William and Timothy right behind. Upon reaching the bathroom the first thing was to turn on the radiant heat. All the surfaces - walls, ceiling and floor soon gave off a nice warmth as the three climbed in to the large shower area. Removing the wet garments, they helped each other wring them out, hang them across towel racks, and settled down on a ceramic bench that ran along one side to get warm. "Let's warm this place up good," declared Timothy who jumped up and turned on the steam heat filling the shower enclosure with a foggy mist of warmth engulfing all three of them. The therapeutic and health benefits of a good steam bath were an accepted norm and no modern home was complete without them. Now warm with pores cleaned out with a good sweat Timothy turned off the steam and the three took a long warm shower together talking over the events of the day.

"You need to take us to the beach more often grandpa," proposed Lucas, "It was the most fun I have had in weeks!"

"Yes, it was truly interesting and educational," added Timothy, "I will have much to write about for school."

"I'm glad you enjoyed it and learned something at the same time," replied William. "It is good to have fun while learning, each place you go, each new activity you engage in can be a learning experience, but you must keep you eyes, ears, and minds attuned to what is all about and what is going on."

Dried and dressed they found Abby and Bethany in the kitchen already started on fixing a healthy dinner. Abby instructed, "Now boys set the table for dinner, then pick some fresh fruits from out back."

With the table set William followed the two boys out to the mini orchard with four kinds of apple trees, two each of pears, plums, apricots, peaches, oranges, and cherry all set in large planters along each side of the yard. Mixed in between were blueberry and raspberry bushes along with strawberry plants then a collection of raised garden boxes at the back with lettuce, cabbage, pumpkins, watermelons, carrots, onions, squash, cucumbers, zucchini, tomatoes, cantaloupe, honeydew melons, celery, eggplant, broccoli and cauliflower. Add all this to the amount of plants, herbs and spices grown inside in window boxes and mini gardens there was a constant supply of fresh food.

Soon a basket was full for the table and washed. Before they had finished washing Lucas had popped a hand full of raspberries in his mouth, smiling with delight.

"Don't spoil your dinner by eating too much there young man," cautioned William.

"I would not worry about that," interjected Timothy, "Just wait and see how much he eats at dinner tonight!" Lucas just shrugged his shoulders, smiled and continued to chew.

William thought about his family, children, grandchildren, those yet to come. It was a good family in a good place, yet there was only one Earth, one planet to live on, if they had destroyed it there was no place to go. Terra, the good solid ground lived, terra firma was whole again and he would do all he could to keep it that way. To return to the natural was of their ancestors with a respect for the land and wildlife, living in turn with nature not subduing and destroying it like generations before. Now that the native councils had say over land usage and development outside the cities much of the country had turned back to pre-Columbian era of landscape of plants, trees, fields, and prairie grasses. It truly was good time to be alive.