

Memoirs of Evolution

I awoke Sunday morning to greet the vivid olive walls and the small wooden framed photo of Grandpa and my child self that sat soundly on my bedside table. With my eyes lethargic, I reached towards the frame containing the image that held a warm-hearted atmosphere. I steadily ran my fingers down the photo diagonally, closing my eyes only to sink into a memoir. Grandpa was a very astute man that viewed the world in a very neutral perspective. There was a time one afternoon in July where Grandpa took me out for a walk by the bay. I remember that afternoon extremely well because that was the day I had helped my mother hang the laundry in our back yard, and Grandpa promised to reward me a large sized waffle cone with Tiger Stripe and Mint Chocolate ice cream. We sat on the benches that had been inhabited by several barnacles and soon after Grandpa began to spark a beautiful conversation, one that I will never forget:

"Sally, isn't the world a very lovely place to live in?" Grandpa asked with an intellectual smile.

"Yes it is, Grandpa," I replied.

"I agree. Did you know that almost everything we see is a result of evolution?"

"What's evolution, Grandpa?"

"Well, Sally, it is when modern animals or plants have come from older and ancient animals and plants," he explained.

"Oh, you mean like how apes turned into humans," I stated, hoping to show the little knowledge I had.

"That's exactly right! Now, there was a young Englishman named Charles Robert Darwin who travelled around the world on his ship called the Beagle. On Darwin's journey, he saw many different types of animals, fossils, and landscapes. While he was observing his surroundings, he realised that organisms relied on fitness."

"Grandpa, what's an organism?" I asked.

"Sweetheart, that is just a term for living things such as animals and plants," Grandpa chortled. "So moving on, fitness is the physical traits and behaviors that allow organisms to survive and have children. Fitness also relies on certain adaptations, and let me tell you what that is before you ask. Adaptations are things that allow and help organisms to become better suited to live in their environment."

"Grandpa, it like how thick fur keeps the polar bears warm in the Arctic?"

"Yes very good! Now, let me tell you about inheritance. Let's say that a boy's mother has thin lips and his father has thick eyebrows, and the boy ends up with his mother's lips and his father's eyebrows; that is what we call inheritance."

"Wait a minute, was Darwin the only person who came up with evolution?" I interrupted.

"No sweetheart, there was another man named Jean Baptiste de Lamarck who thought that if an organism wanted to improve themselves to fit their environment, they would be able to do it right away! Lamarck also believed that organisms could change their bodies whenever they wanted, to satisfy their needs! What's more, if they had an organ that they barely used, they could make it shrink and disappear! Poor Lamarck, for his theories were all proven false."

"Grandpa, I think Lamarck is a very silly man."

"Sally, believe me, so do I. Anyways, how about we continue where we left off?"

"Oh, sorry Grandpa," I said, sheepishly.

"There are a variation of organisms in the world and even variations within one species. For example, on the Galapagos Islands, there are variations of finches. There are finches with large wide bills to peck seeds off from the ground and there are finches with small narrow bills to eat insects from trees. In this case, we can say that variation is the slow change of genetics or the changes within the same species," Grandpa trailed off with a yawn and I could tell our conversation was coming to an end.

"Grandpa, what is natural selection?" I asked, perhaps to elongate our time at the bay.

"Where did you hear that term from, Sally?" Grandpa seemed surprised.

"My teacher told me about it, but she said she would leave it for another time to explain it to the class because it wasn't very easy to understand."

"Is that so? Well, I guess we have a few more minutes to spare. Natural selection is when nature allows the more fit organisms to have children or in other words, produce offspring. In England, peppered moths rested during daytime on the bark of oak trees. In the beginning nineteenth century, the tree trunk of the oak tree was light brown and so was the peppered moths."

"Grandpa, isn't that called camouflage? The peppered moths camouflage on the oak tree," I said.

"That's exactly right! You are a very smart little girl, now aren't you?" Grandpa praised. "These peppered moths were very lucky back then, since all the dark colored moths would be spotted and eaten by predators. Soon the Industrial Revolution began and lots of pollution turned England's tree trunks dark brown. Now it was the dark colored moths' turn to camouflage and the peppered moths to become prey. Before we knew it, the population of peppered moths started to come down as it was prey for many birds."

"Poor peppered moths," I whispered, feeling guilty.

"Sally, how about we start walking home? We might be able to catch a glimpse of the sunset on our way," Grandpa suggested.

"Okay, Grandpa," I said.

I was reluctant to leave the bay that afternoon in July. I fully consumed the ice cream I so longed for, a conversation that widened my eight year old view of the world, and watched the tranquil sunset leisurely disperse into the sea. That memory was one that I would never forget in my entire lifetime. I truly miss Grandpa, but I know he's surely in a better place, perhaps more beautiful than this world.