

Where I'm from, if someone finds a dead animal in the road or in the woods, they call me.

My name is Honomi Tsuchiya, and I want to talk about how studying animals can advance the human species. I'll talk about improvements in healthcare, medicine, and even robotics.

But first, let's rewind.

My interest in animals and science began when I was three years old. Back then, I was only interested in princesses, dolls, and teddy bears. I was quite cute. Well one day I went to the zoo, and saw a shocking sight: at lunch time, the zookeepers were feeding the eagles. I couldn't see what they were eating, so I looked closer. Then, I saw it. Right before my eyes, a great big eagle killed and ate a baby chicken! I know! But here's the strange thing: Many little girls like me would have been shocked. But I wasn't. Instead, in that moment, I reached for my camera, and took a picture.

This event kickstarted something in me. From then on, I started buying books about animals. I was reading every night, and craving more knowledge. I couldn't get enough! When I was in fourth grade, my neighbor asked me to help him with a problem. He had captured a wild boar, and needed to dissect the body. I was overjoyed! I'll spare you the details, but from then on I began dissecting animals, making illustrations, and even got into taxidermy, or stuffing animals.

Before I knew it, people were calling me whenever they found a Tanuki carcass. I would dissect it and send the muscles, bones, and blood samples to universities around Japan. At first, it was just a professor in Ehime studying tanuki, but eventually professors from an array of different fields were thanking me for my work! Professors studying parasites, reproduction, and microplastics were using my materials for their research. This is when I realized how important animal anatomy was.

We owe a lot of advancements in human healthcare to animals already. Did you know that we use horseshoe crab blood to run blood tests on humans? Or that human skin is close enough to the skin of a pig, that doctors use it to treat burn victims? And of course, a big topic these days, microplastics. Scientists are studying the microplastics in the bodies of animals, because it can help us learn what will happen to our bodies too.

Animal anatomy is also very important for robotics. Factory robots are modeled after many animals, and some prosthetic legs are made in the shape of grasshopper legs. Robots of the future will probably look like a diverse set of strange animals, not a human like the Terminator.

I still have much research to do, and a long road ahead of me, and to be honest, I don't know exactly where it will take me. But there is one thing that I want everyone to understand:

As humans, we face many problems. But whether they are problems with our health, or the environment, one thing is certain - we do not and cannot face these problems alone. Throughout our history we have improved humanity with the help of animals, insects, and nature. And as we look to math, science, politics, and other fields to help solve difficult problems, we must remember to also look to animals and nature. They still have so much to teach us.

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Animals: The Key to Our Future