

## Podcast link

<https://clipchamp.com/watch/EsexbM8CYNo>

## What I Referenced for the podcast

### Introduction

Hello, my name is Ram and the project that I would be presenting is about natural selection in animals.

So let's go to the basics. We know that predators hunt prey and prey try to escape from the predator but we do not know why these animals are crucial for the ecosystem.

I am pretty sure when you occasionally watch animal planet or BBC earth where most of this info is from you would really want to prey to escape the predator take for instance when a lion hunts a zebra you yell at the lion to stop trying to kill the beautiful zebra but I have never heard anyone want to lion to win since the only thing it can eat is meat so it has to consume something to survive also it needs to feed its cubs, we as people talk lots of negatives to these animals and plus we are worse than them since we eat animals to even though we could be vegetarian and not kill animals but there are double standards for this predator, (poor things).

**So anyways a predator's role in the ecosystem is to consume prey so there is not an excessive amount of prey which would lead to a shortage of food because the prey will eat all the food which will wipe the entire ecosystem out. So please do not think predators are necessarily evil, they just want to survive to save the ecosystem.**

**But the bigger topic today which is the central topic of this project is natural selection.**

**What is natural selection?**

**Natural selection is the process whereby organisms better adapted to their environment tend to survive and produce more offspring. . The theory of its action was first fully expounded by Charles Darwin and is now believed to be the main process that brings about evolution. It is all like a see-saw in which they want the number of predator and prey success rates to be equal, not too much on one side or the other.**

**An example of Natural selection**

**Camouflage. There are animals like the chameleon that were hunted over a long period of time making their populations go down, they were hunted by birds and snakes. Chameleons were an easy source of prey for these two and this was before they could camouflage. Because their numbers went down by a lot they**

did have a defense mechanism. This defense was the source of camouflage which made them hidden in their environment by changing their scales to the color of what they are in. This made them not be eaten by snakes but the birds revolutionized a bit to spot them being hidden this evolution allowed the chameleon population to thrive. This is one example of evolution in how prey and predators interact in the wild. (BBC Earth)

Another example of natural selection is mimicry which goes on to lions and cheetahs. You might be wondering if lions and cheetahs are both predators and indeed they are but lions are the main predator and cheetahs are secondary predators. Secondary predators are less dominant than the main predator and they do get preyed on occasionally by the top predators. This means lions do eat cheetahs in the food chain. This food chain in Africa is held by lion clans who can take out almost anything in the wild savannas. So lions are known for their brutality and they commonly even resort to eating cheetah cubs. This almost made the cheetahs extinct since the survival of cheetah cubs was about 8% because of the lions and other predators, since they were an easy target, usually, hyenas and leopards also go for them too .. Because of this Cheetahs cubs have revolutionized mimicry. Mimicry is when an animal decides to copy the traits of another animal on top of the food chain. The evolution decided for the cheetah's cubs to be in the same fur as a honey badger, which is a very aggressive animal even known for scaring a clan of lions away. Because of this new trait lions and other animals like hyenas and leopards did not try to hunt cheetah cubs since

when laying down they look exactly like honey badgers which are not worth preying on. Because of this, the cheetah cubs' survival rate has gone up to 29%. This is an example of how predators and prey revolutionized to make them a better defense mechanism.

There is also another animal that uses mimicry to confuse its predator. There is a butterfly called the viceroy butterfly that mimics the orange and black coloration of the distasteful monarch butterfly. Birds that have learned to avoid eating monarchs will avoid eating viceroys as well. This makes them immune to birds trying to hunt for the yummy butterflies which makes birds going for viceroy butterflies rare cause it is kind of like a comparison of chips and Brussels sprouts. The viceroy is yummy as the chips while the monarch is as distasteful as Brussel sprouts which are the birds trying to choose what to eat, depending on how you like your vegetables I would guess you would pick the chips. So this butterfly has suffered our mass loss of population over the years so it revolutionized mimicking monarch butterflies to survive in which right now the butterfly population species is rapidly growing.

Giraffes also over a period of time had short necks but have evolved over time to get long necks because other animals who were more dominant consumers ate the plants below the trees which giraffes were almost wiped out until the long neck trait was passed down enabled giraffes to feed on leaves that

others can't reach, giving them a competitive advantage. Thanks to a better food source, those with longer necks were able to survive to reproduce and so pass on the characteristic to the succeeding generation.

### **Conclusion**

If the predator or prey keeps on winning the hunt mother balances out before the side getting stressed out goes to extinction, natural selection pressures will lead up to adoption in the prey or predator species,

**Thank you for listening**

### **Sources cited**

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