

do zebras earn from their stripes?

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The function of zebra stripes have been debated for quite some time. The different hypotheses include:

Camouflage — However, predators seemed to find them just fine in all tested settings.

Temperature regulation — That didn't hold up to testing either, and seemed to make little to no difference compared to all white or all black bodies.

Identification — The idea was that the stripes are like our fingerprint, and were used to tell one another apart. Scientific testing found no evidence to support this.

So what is the function of the stripes? All animal species evolved over millions of years, and the features each species has are a result of many generations of natural selection.

Natural selection simply means the traits that favor a greater chance of survival are passed down more than the traits that decrease chances of survival. Remember, though, the animal or evolution does not select what is best. The best traits get passed down more because that animal lived long enough to reproduce. Therefore, the stripes most certainly evolved because of some benefit they gave the zebra.

Built-in bug repellent

It turns out that blood-sucking insects, particularly the horse-fly, become completely confused by the patterns on the zebra. They are still very attracted to the zebra but, when they get close, they tend to lose control or crash into the zebra instead of safely landing for a bite.

Scientists tested this idea by using very high-powered video cameras to monitor flies in a field with both horses and zebra. From a distance, flies started advancing to the horse and zebra at the same rate. The stripes had no impact on keeping flies away. However, as the flies approached the zebra, their flight became erratic — and they either flew right past the zebra or bumped into and off the zebra. At the same time, flies safely landed and started biting the horses.

In another study, scientists put a striped coat on a horse and monitored the flies. Sure enough, the flies were attracted to the horse but, when some got close, they became so confused that they could not safely land.

What about striped humans?

Historians note that some ancient human populations in Africa, Australia and Asia had consistent body painting traditions. It was unclear the exact purpose of the body painting. Could it have been to keep biting insects away? To test this idea, scientists bought mannequins and left some alone while painting others with markings similar to the tribal paintings.

The results were clear: there were 10 times fewer horse-fly bites on the painted mannequins compared to the unpainted ones. It appears that ancient humans were already well aware of the benefits of striped skin.

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