

GIANT PANDA SERIES | 01

CONSERVATION

The Daily Life of Giant Pandas

The world-renowned "superstar" giant panda, an endemic species of China, is known by many names: the cat bear, the bamboo bear, the iron eater... With fluffy, rounded bodies, naive behaviors, and captivating "dark eye circles", coupled with the fact that they often appear slow, sitting or lying down while enjoying bamboo or fruits, giant pandas are loved by people all over the world.



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But the truth is, **pandas are definitely not "naive"**. After all, they have been inhabiting Earth for at least 8 million years. If they weren't "smart and capable," how could they have survived until now? **So let's learn more about giant pandas and explore the daily life of this ancient species.**

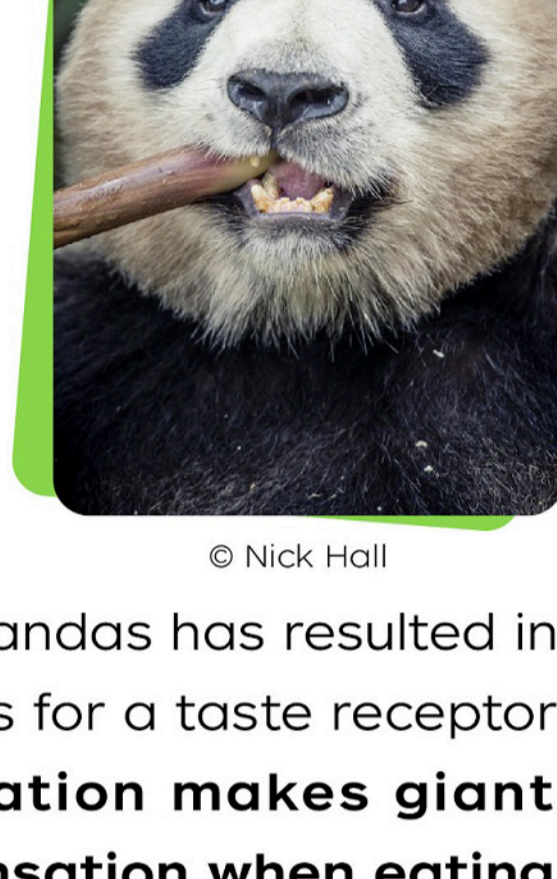
01 Why don't giant pandas eat meat, is it because they don't like it?

Let's start from the beginning.

The fact is that giant pandas belong to the order Carnivora. They haven't really evolved the long intestines and complex stomachs that herbivores have, so they have very little digestion of bamboo. However, they are not strict vegetarians and won't turn down meat if it's readily available.

So, why do pandas primarily choose bamboo as their main food source?

The answer is simple: convenience. Bamboo is not the most nutritious food, but it is abundant and widely available. Additionally, since fewer animals feed on bamboo, giant pandas have fewer conflicts with animals over food. This significant shift in their feeding behavior has greatly contributed to their survival.



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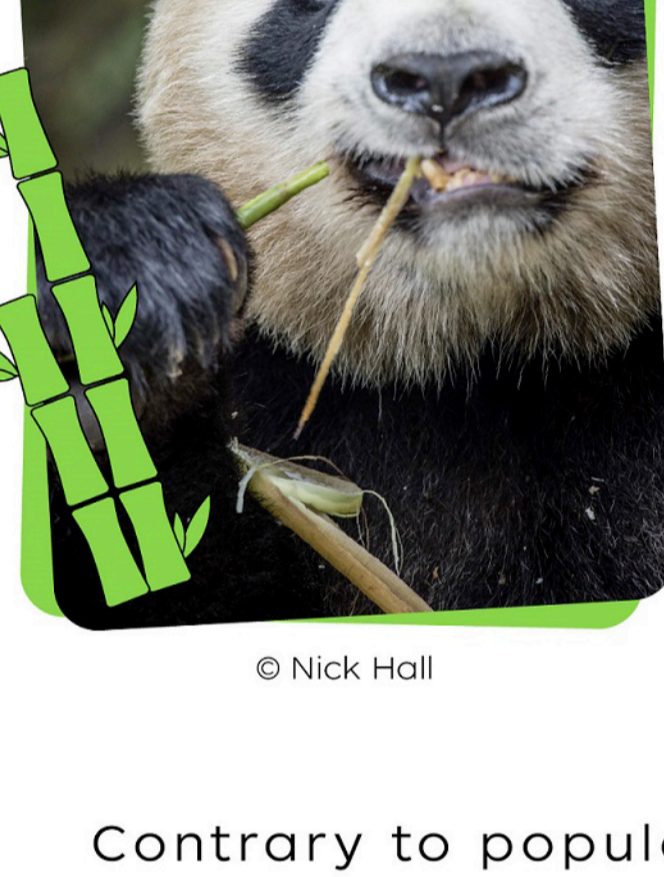
In addition, a genetic mutation in pandas has resulted in the inactivation of the gene that codes for a taste receptor protein called **TAS-1-R1**. **This mutation makes giant pandas experience a "tasteless" sensation when eating meat.** While the mutation and dietary changes occurred simultaneously, **it is still unclear whether the "not liking meat" and "not being able to obtain meat" are cause and effect.**

Regardless, bamboo now constitutes 99% of the pandas' diet, and they probably do prefer vegetarian food over meat.

02 "Eat more and poop more" than many species could ever hope to.

Because bamboo provides low nutritional value for giant pandas, they have adopted a **straightforward response:**

EAT, EAT, EAT!

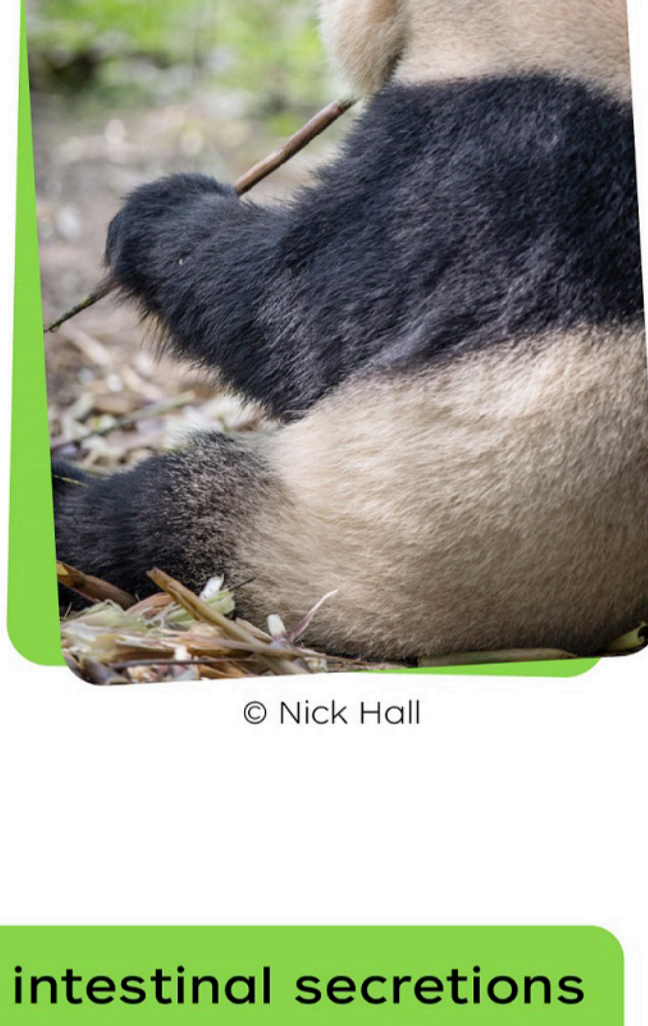


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In general, pandas employ a strategy of "massive feeding and rapid defecation" to obtain sufficient energy from food. They consume an average of up to **20 kilograms** or more of bamboo a day and can defecate up to an astonishing **40 times!** To conserve energy, pandas have low activity intensity, covering an average daily distance of only **400-500 meters.**

Contrary to popular belief, pandas are not always round. During bamboo shoot season, they **change their intestinal flora** to make themselves even fatter and rounder. Therefore, the concepts of "vegetarianism" and "slimming" may not necessarily be linked. And we probably don't need to be too hard on ourselves either.

At the same time, pandas have evolved to increase the number and length of intestinal villi, which enhances the surface area for absorption.

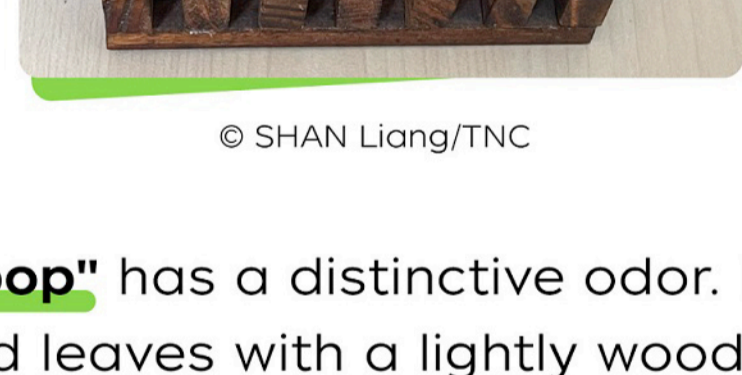


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In addition, they increase their intestinal secretions to protect their intestines from being punctured by the silica-rich bamboo. These secretions are also coat the panda's poop to help it pass smoothly.



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PS. Giant pandas **"bamboo poop"** has a distinctive odor. It consists of bamboo sticks and leaves with a lightly woody scent. When fresh, panda poop has a greenish color. But as time passes and moisture evaporates, they turn yellow, dry, crunchy, and lightweight to hold.

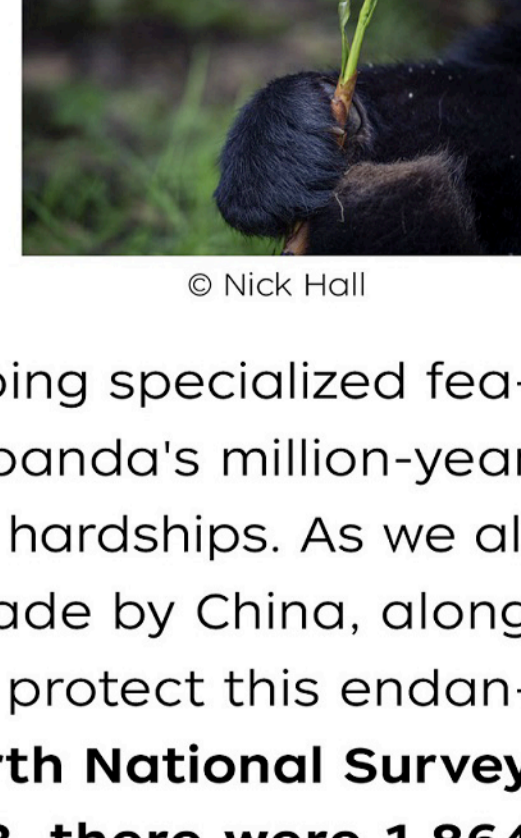
03 To eat bamboo well, a few tricks are needed.

Avoiding hunting ~~✗~~ **Do nothing at all**

pandas are trying really hard to eat bamboo.

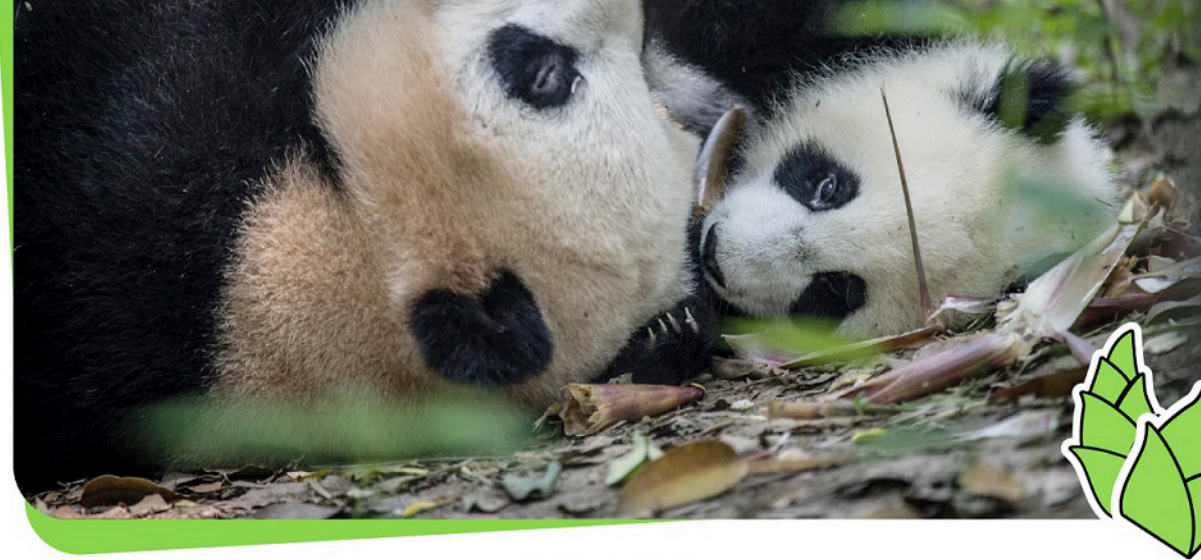
First of all, we know that bamboo is strong enough to be used as building materials, and even the hardness of fresh bamboo cannot be underestimated. As a panda, being an everyday bamboo "blender" is not easy. **Fortunately, as members of the bear family, giant pandas have adapted to eating bamboo by developing solid canines suitable for biting and slicing bamboo, as well as wide molar teeth suitable for chewing and grinding.** In fact, some studies suggest that the molars of giant pandas may be among the most powerful chewing teeth in the animal kingdom.

Furthermore, pandas possess a specialized carpal sesamoid bone known as the **"false thumb"**, which gives the pandas a unique grip that other bears do not have. The presence of this "false thumb" is extremely important as it greatly improves the pandas' dexterity in holding slippery bamboo.



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From adapting their diet to developing specialized features like the "false thumb", the giant panda's million-year journey of survival has been filled with hardships. As we all know, significant efforts have been made by China, along with global partners, to conserve and protect this endangered species. **According to The Fourth National Survey on Giant Pandas, by the end of 2013, there were 1,864 wild pandas in the country,** marking a successful outcome of long-term conservation work. **However, this does not mean that pandas have completely overcome their survival challenges.**



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In reality, wild pandas continue to face significant pressures, and their situation remains critical. Our conservation efforts must continue.