



## Story 2: Tyrannosaurs were good parents

### How might *T-Rex* have laid and protected its eggs?

#### 故事二：暴龙是好家长

#### 霸王龙是如何饲养幼龙和保护恐龙蛋的？

So far, scientists have not been able to find any definite fossils of *T-Rex* eggs. They therefore infer how *T-Rex* reared and protected its eggs from what is known about other theropod dinosaurs. Use your knowledge of *T-Rex* to discuss and answer the questions below about how *T-Rex* reared and protected its eggs.

迄今为止，科学家一直没能找到任何确实的霸王龙蛋化石，因此，他们从其它兽脚类恐龙得到的已有知识，推断霸王龙饲养幼龙和保护恐龙蛋的方式。运用你对霸王龙的知识，讨论并回答以下关于霸王龙如何饲养幼龙和保护恐龙蛋的问题。

**1** How do we know that *T-Rex* laid eggs?

我们怎么知道霸王龙是下蛋的？

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**2** Most mammals can only give birth to a limited number of newborns, one at a time. *T-Rex* could potentially lay dozens of eggs in a single sitting. Why was this an advantage?

大多数哺乳动物一次只能生出有限数量的新生儿。霸王龙可能能够一次下几十个蛋。为什么这是一个优势？

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#### 1 How do we know that *T-Rex* laid eggs?

我们怎么知道霸王龙是下蛋的？

Thanks to some amazing dinosaur egg discoveries.

得益于一些令人惊叹的恐龙蛋发现。

#### 2 Most mammals can only give birth to a limited number of newborns, one at a time. *T-Rex* could potentially lay dozens of eggs in a single sitting. Why was this an advantage?

大多数哺乳动物一次只能生出有限数量的新生儿。霸王龙可能能够一次下几十个蛋。为什么这是一个优势？

A higher chance of survival for at least some of the eggs. Just as many modern reptiles leave their eggs unattended, dinosaurs may have done the same. Mammals like us have fewer babies but we spend a lot more time with them. Thus, even with fewer babies each one has a high chance of survival.

至少部分恐龙蛋的生存机会更高。正如许多现代爬行动物会离开自己的蛋，不加看管一样，恐龙也可能有相同举动。像我们这样的哺乳动物虽然孩子较少，但我们与他们在一起的时间多很多。因此，即使孩子数目较少，但每一个的生存机会都很高。

## How might T-Rex have laid and protected its eggs?

霸王龙是如何饲养幼龙和保护恐龙蛋的？

- 3** The babies of animals like zebras and gazelles are born with the ability to walk and run. Do you think T.Rex eggs produced babies that were 'ready-to-run'? What would have been the advantage of this?

如斑马和瞪羚等动物的婴儿，一出生时都已具备走路和奔跑能力。你认为从霸王龙蛋中孵化的婴孩，是不是「已可以奔跑」？这会是一项优势吗？

Possibly yes. The baby T. Rex's would have the ability to run away from predators at birth, if we base this on the abilities of newly born modern birds and crocodilians.

也许是的。根据现代鸟类和鳄鱼新生儿的能力，初生霸王龙天生必已具备逃避天敌的能力。

- 5** Evidence suggests that dinosaurs grew rapidly after hatching. Why do you think this was?

有证据表明，恐龙在孵化后生长迅速。你认为是什么原因？

They needed to develop quickly so that they had enough strength and speed to avoid predators and survive.

牠们需要快速地生长，方能有足够的力量和速度躲避天敌和生存。

- 4** How do you think T.Rex kept her eggs warm so that they could incubate properly?

您觉得霸王龙是如何替恐龙蛋保暖，使它们能够正常孵化？

Because T.Rex was such a huge animal, it is hard to imagine that they sat on their eggs to incubate them - they would have crushed them all! They probably got around this problem though by first covering their eggs with a protective and insulating layer of earth and foliage, as in some modern crocodilians.

因为霸王龙是一头庞然大物，很难想象牠们坐在恐龙蛋孵蛋的情景 - 牠们会把恐龙蛋坐碎！牠们的解决方法，可能是首先利用泥土和叶子做成保护和绝缘层覆盖在恐龙蛋上，就像部分现代的鳄鱼一样。

