

## 当雄性不被需要 When males are not needed

Hello. This is 6 Minute English from BBC Learning English. I'm Neil.

大家好。这里是 BBC 学习英语栏目的六分钟英语。我是内尔。

And I'm Rob.

我是罗伯。

Do you think there are big differences between men and women, Neil?

你认为男性和女性之间存在巨大的差异吗，内尔？

Apart from the old stereotypes we sometimes hear, like - that men can't express emotions.

除了我们经常听到的那些刻板印象，例如男性无法表达情绪。

I suppose biologically there are differences, Rob.

我想从生物学角度上来看是存在差异的，罗伯。

I mean, men and women's bodies are different.

我的意思是，男性和女性的身体不一样。

Right, and it takes both a man and a woman to make a baby.

是的，而且要生小孩既需要男性也需要女性。

Well, that's true - in humans, anyway.

嗯，没错，对于人类来说是这样的。

But in this programme we'll be hearing about creatures in the wild where the classic 'boy meets girl' love story doesn't apply.

但是在本期节目中，我们将听到关于一些野生动物的内容，它们之间不存在经典的“男孩遇到了女孩”的故事。

Yes, we'll be meeting some female animals who don't need a male to make babies.

是的，我们想了解一些不要需要雄性就可以产出后代的雌性动物。

These creatures reproduce by parthenogenesis - also called 'virgin birth', this is the process where the female can reproduce without a mate - the term used for an animal's sexual partner.

这些生物通过孤雌生殖繁殖——也叫做“单性生殖”，这是指雌性可以在没有配偶——这个名词被用来指代动物的性伴侣——的情况下繁殖的过程。

All animal species survive by making babies - reproducing to make copies of themselves.

所有的动物物种都通过产生后代来存活下来——产生它们的复制品来繁殖。

But amazingly, the female of some species can do it all by herself!

但是令人惊讶的是，有些物种的雌性可以独立完成这一过程！

But before that, it's time for my quiz question.

### 添加的词汇

#### Gardeners

英: /ˈɡɑːdn/ 美: /ˈɡɑːdn/

n. 菜园; 花园 vt. 栽培花木

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但是在那之前，要先说我的问题。

In Britain's Chester Zoo in 2006, 'Flora' laid eleven eggs that developed into healthy babies.

2006 年，在英国的切斯特动物园里，Flora 产下了十一个蛋，它们长成了健康的幼崽。

Her zookeepers were mystified because Flora had only been kept with other females and had never been near a male.

她的动物园管理员都很困惑，因为 Flora 一直跟其它的雌性动物在一起，从来没有靠近过雄性动物。

But what type of animal was Flora?

那么 Flora 是哪种动物呢？

Was she a) a python b) a zebra shark or c) a Komodo dragon?

是 A. 蟒蛇，B. 斑马鲨，还是 C. 科莫多龙？

Hmm, well, pythons are pretty unusual creatures, so I'll say Flora was a python.

嗯，蟒蛇是很不同寻常的生物，所以我觉得 Flora 是一条蟒蛇。

OK, Rob, we'll find out later if you're right.

好的，罗伯，我们稍后会揭晓你是否回答正确。

Actually, it's not only reptiles who behave this way - the females of many animal species are able to reproduce without sex.

事实上，不仅仅爬行动物会这样——很多动物物种的雌性都能够无性繁殖。

By doing this, they gain several advantages: they can rapidly spread, colonise and control large areas and they don't waste time and energy looking for a mate.

通过这样做，它们能够获得若干好处：它们可以快速传播，占领并控制大片区域，而且它们不用浪费时间和精力去找配偶。

But if a world without sex is so much better, why bother with males at all?

但是如果没有性的世界更美好，那还要雄性干什么？

Good question, Neil, and one which BBC World Service programme, Discovery, asked evolutionary biologist, Chris Wilson.

好问题，内尔，这也是 BBC 世界服务节目《探索》问演化生物学家克里斯·威尔逊的问题。

Well, absolutely!

嗯，当然了！

And there are other advantages.

还有其它好处。

I mean, if you're an all-female population, you don't have to waste time searching and competing for mates.

我的意思是，如果所有人口都是雌性，你就不用浪费时间去寻找并争取配偶了。

There are no more sexually-transmitted diseases and so it seems like the easiest decision.

也不再有性传播疾病了，而这似乎是最简单的决定。

And yet, less than one percent of all animal species are completely celibate - and that's a huge fundamental puzzle in evolutionary biology that we're still not entirely sure we understand - it's called sometimes the paradox of sex.

然而，所有物种中还有不到百分之一的是完全无性的 —— 而这是演化生物学中一个巨大的基础性疑问，我们还无法完全确信我们理解了 —— 这有时候叫做性的悖论。

Despite the advantages of going without sex, in reality fewer than one percent of all animals are celibate - live without having sex.

尽管无性有很多好处，但是在现实中，只有不到百分之一的动物是无性的 —— 没有性生活。

This begs the question, why is sex so common when it seems so inefficient?

这就引出了这个问题，为什么看似如此低效的性会如此常见呢？

Chris calls this the paradox of sex.

克里斯把这叫做性的悖论。

A paradox is a situation which seems contradictory because it contains two opposite facts, for example, the existence of males if we can reproduce without them.

悖论指的是看似矛盾的情况，因为它包含两个对立的事实，例如如果我們可以在没有雄性的情况下繁殖，雄性仍然存在。

As a male myself, I have to say I'm feeling a little underappreciated right now, Rob!

作为一名男性本身，我要说我现在觉得有一点被鄙视了，罗伯！

Well, don't worry, Neil, because it turns out there might be a use for males after all!

嗯，别担心，内尔，因为事实证明男性还是有用的！

It seems the sex paradox has been solved by one of nature's most ingenious insects - aphids.

似乎性悖论已经被大自然最精妙的昆虫 —— 蚜虫 —— 解决了。

Here's ecologist, Amber Wright, explaining how to the BBC World Service's Discovery programme.

以下是生态学家安柏·怀特向 BBC 的世界服务节目《探索》解释原理。

See if you can hear the strategy American aphids use to reproduce.

看看那你能否听到美国蚜虫用来繁殖的策略的。

The aphids we have in the US - when spring comes around, the eggs hatch and they'll be all female for several generations, and then at the end of the summer they will hatch out males and females and mate, and then create eggs that wait for next year - kind of the best of both worlds.

我们美国的蚜虫 —— 当春天来到时，卵孵化，而它们好几代都是雌性，然后在夏天结束的时候它们会孵化出雄性和雌性然后交尾，然后产出卵等到下一年 —— 基本上是两全其美。

Hedging their bets basically - using cloning to rapidly colonise and then using sex to mix up the genes.

基本上就是两边下注 —— 利用克隆来快速殖民，然后利用性来混合基因。

In the spring, female aphids lay eggs which hatch - break open allowing the young to come out.

在春天，雌性蚜虫会产卵，卵会孵化 —— 破壳让幼虫出来。

The young aphids that hatch are all female.

孵化的小蚜虫都是雌性的。

But later, at the end of summer, both female and male aphids hatch out and start to reproduce by mating.

但是之后，在夏天结束的时候，雌性和雄性的蚜虫都会孵化出来，然后通过交尾来繁殖。

So the aphids have the best of both worlds -they enjoy the advantages of very different things at the same time.

所以蚜虫各取所长 —— 它们同时享受到了不同事物带来的好处。

Or to put it another way, the aphids hedge their bets - they follow two courses of action instead of choosing between them.

或者换种说法，蚜虫两边下注 —— 它们同时进行两种方法而不是在其中选一种。

By cloning themselves with 'virgin births' and reproducing sexually, aphids maximise their chances of survival.

通过利用“单性繁殖”自我克隆和有性繁殖，蚜虫将它们存活概率最大化了。

**Gardeners** around the world will be upset to hear that - those young aphids just love eating tomato plants!

全世界的园艺者们听到这个会很郁闷的 —— 那些小蚜虫喜欢吃番茄植物。

But on the plus side, it seems being male can be useful after all.

但是从好的方面来看，似乎雄性还是有作用的。

But not if you're Flora, the female you asked about in your quiz question.

但是如果是 Flora 的话就不是这样的，你刚刚在问题中提到的雌性动物。

So, what type of animal was she?

所以她是哪种动物呢？

Right, I asked whether the-virgin-Flora was a) a python, b) a shark or c) a Komodo dragon.

好的，我之前问处女 Flora 是 A. 蟒蛇，B. 鲨鱼还是 C. 科莫多龙。

I guessed a python.

我猜的是蟒蛇。

Well, Rob, you're right that some female pythons can reproduce by themselves - and sharks too - but the correct answer is that Flora was, c) a Komodo dragon.

嗯，罗伯，有些雌性蟒蛇确实可以独立繁殖 —— 鲨鱼也是 —— 但是正确答案是 Flora 是 C. 科莫多龙。

OK, let's recap the vocabulary, starting with mate - an animal's sexual partner; something you don't have if you're celibate - living without sex.

好的，我们来回顾词汇吧，从配偶开始 —— 动物的性伴侣；如果你是无性生活的，那么就不会有配偶。

Animal eggs hatch - or break open to let the young out.

动物的卵孵化 —— 或者破壳让幼虫出来。

And a paradox is a situation which seems contradictory because it contains two opposite facts.

而悖论指的是看起来矛盾的处境，因为它包含两个对立的事实。

Species which reproduce parthenogenetically and sexually have the best of both worlds - enjoy the advantages of very different things at the same time.

能够无性繁殖和有性繁殖的物种各取所长 —— 同时享受不同事物带来的好处。

And if you hedge your bets, you follow two courses of action instead of choosing between them so you don't miss out.

如果你两头下注，那么你会进行两种方法，而不是从中选择一种，这样你就不会错过了。

Well, that's all there's time for.

好的，今天的节目就到这里。

Bye for now!

再见！

Goodbye!

再见！

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