参考译文

This is Scientific American's 60-second Science, I'm Adam Levy.

这里是科学美国人——60秒科学系列，我是亚当·利维。

Open up a clam, and you might see the making of a tasty snack. You probably wouldn't expect to find the history of our planet. But that's what researchers have been deducing from a 70-million-year-old fossil clam. They opened up this mollusk's secrets by drilling a small hole in its shell with a laser and analyzing the pattern of the growth.

打开蛤蜊，你可能会看到美味小吃的原料。你可能不会指望发现我们星球的历史。但研究人员正是从7000万年前的蛤蜊化石中推断出了历史。他们用激光在贝壳上钻了个小洞并分析其生长模式，从而揭开了这种软体动物的秘密。

"So we make a cross section through this shell. You see the layers' growth in the shell a bit like the layers in a tree. And that allowed us to really count the number of days in the year that far back in time."

“我们做了贝壳横截面。你可以看到贝壳层次的生长有点像树的年轮。这使我们得以计算出远古时代一年有多少天。”

Niels de Winter, paleoclimatologist at the Free University of Brussels in Belgium. Using a laser to carefully count the number of growth rings in a 70-million-year-old fossil might seem like quite a laborious way to find out the number of days in a year. After all, we all know the answer is 365—and 366 in leap years—right?

比利时布鲁塞尔自由大学的古气候学家尼尔斯·德温特说到。为了确定一天有多少天，用激光细数7000万年前化石的年轮，似乎是相当费劲的方法。毕竟，我们都知道答案是365天，而闰年是366天，对吧?

"That's interesting, because what we found is that there were actually not 365 days in the year; there were a few more."

“这很有趣，因为我们发现一年实际上不是365天，而是要比这个数多。”

You see, Earth's spin on its axis gradually slows down over time. The reduction is due to the friction from Earth's tides, which are driven by the moon's orbit.

你看，地球沿地轴自转的速度随时间而逐渐减慢。减慢的原因是月球轨道驱动的地球潮汐摩擦。

Back to that ancient clam. By measuring the rings on this mollusk's shell, the team was able to put a precise number on the history of this process. Seventy million years ago, the faster rotation of the Earth meant that there were just 23 and a half hours in a day.

说回古代蛤蜊。通过数这个软体动物壳上的年轮，研究团队能对这一过程的历史长度给出一个精确的数字。7000万年前，地球自转速度较快，这意味着一天只有23.5小时。

And measuring more shells might reveal more information about our planet's past.

测量的贝壳越多，可能越能揭示有关地球历史的更多信息。

"It would also be very interesting to apply this on other shells—maybe also of the same time but also of different times so that we can map much better how this evolution took place."

“将这一方法应用于同时代或不同时代的贝壳，可能也会非常有趣，这样我们就可以更好地描绘这种进化的发生过程。”

Scientists already use fossilized shells to reveal details of the Earth's ancient climate. And now de Winter is hoping that he can read this preserved weather record in extra fine detail. This work could teach us about the climate of the distant past and maybe even help scientists better understand the climate change happening today.

科学家已用化石贝壳揭示了古代地球气候的细节。现在，德温特希望他能更详细地阅读这一保存下来的天气记录。这项工作可以教授我们更多有关远古气候的知识，甚至还能帮助科学家更好地了解现在发生的气候变化。

"We might actually be able to extract things at a very, very high resolution about climate that far back in time. The prospect of being able to get the information at this scale is very exciting for a climate scientist like myself."

“我们也许能提取到有关远古气候的极为详细的信息。对于我这样的气候科学家来说，能够获得如此规模的信息是非常令人兴奋的事情。”

Thanks for listening for Scientific American — 60-Second Science. I'm Adam Levy.

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听力原文

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