**Scientists Discover Earth’s Oldest Green Plant Fossil in China**

**科学家在中国发现地球上最古老的绿色植物化石**

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科学家发现了疑似为迄今为止发现的最古老的绿色植物化石。

The fossils were found in rocks from northern China. The plant is thought to be a piece of seaweed that grew on Earth’s seafloor about 1 billion years ago. That would make this seaweed an ancestor of all green plants alive today.

这些化石是在中国北方的岩石中发现的。这种植物被认为是大约十亿年前生长在地球海底的一块海藻。而这意味着它或成为当今所有绿色植物的祖先。

Researchers in the United States reported on the discovery in the publication Nature Ecology & Evolution. The researchers are with the Virginia Polytechnic Institute and State University in Blacksburg, Virginia.

美国研究人员将此报告发表于出版物《自然生态与进化》。此报告的研究人员均在弗吉尼亚州布莱克斯堡的弗吉尼亚理工学院和州立大学任职。

The seaweed is a form of green algae called Proterocladus antiquus. It was very small, about the size of a single piece of rice. Researchers say the plant was connected to the seafloor with a root-like structure. At the time, the plant was one of the largest life forms in the sea, which contained mostly bacteria and other microorganisms.

这块海藻是一种绿藻类被称为“古董变形藻”。它很小，大约只有一粒米粒那么大。研究人员表示，这种植物通过一种类似根茎的结构长在海底。当时，这种植物是海洋中最大的生命形式之一，它主要含有细菌和其他微生物。

The researchers say Proterocladus was able to perform photosynthesis, taking energy from the sun to produce life-supporting carbon and oxygen. They believe the plant also provided food and shelter for many different kinds of sea life.

研究人员称，“古董变形藻”能够进行光合作用，吸收太阳能量来产生维持生命的碳和氧。他们认为这种植物还为许多不同种类的海洋生物提供食物和庇护所。

Shuhai Xiao serves as a Professor of Geobiology at Virginia Tech. He said the fossils were found in rock taken from an area of dry land - formerly ocean - near the city of Dalian in China’s Liaoning Province. Qing Tang, another Virginia Tech researcher, discovered the micro-fossils in the rock using an electronic microscope in a laboratory.

肖树海是弗吉尼亚理工大学地球生物学教授。他说，这些化石是在辽宁省大连市附近的一块干旱地区(原为海洋)的岩石中发现的。弗吉尼亚理工大学的另一位研究人员青棠（音译）在实验室中使用电子显微镜发现了岩石中的微小化石。

Xiao said the fossils represent the oldest green seaweed ever found. The next oldest fossil of green seaweed was found in rock thought to be about 800 million years old.

肖教授说，这些化石是有史以来发现的最古老的绿色海藻。它之后的下一块最古老的绿色海藻化石是在据信约有8亿年历史的岩石中发现的。

The scientists say the seaweed once lived in an ocean that was not very deep. Once the plants died, they became “cooked” under thick sediment, which created fossils in the shape of the seaweed. Many millions of years later, the dirt was lifted out of the ocean and became the dry land where the examples were collected.

科学家说，海藻曾经生活在不是很深的海洋中。一旦这种植物死亡，它们就在厚厚的沉积物下被“煮熟”，从而形成了海藻形状的化石。数百万年后，泥土被从海洋中带出来，形成了收集这些化石的干旱土地。

“These new fossils suggest that green seaweeds were important players in the ocean long before their land-plant descendants moved and took control of dry land,” Xiao said.

肖教授说：“这些新的化石表明，远在其陆地植物后代迁徙并占领干旱地区之前，这些绿色海藻就早已是海洋生物的重要物种。”

He added that Earth’s biosphere depends heavily on plants for food and oxygen. But the first land plants, believed to be ancestors of green seaweeds, did not appear until about 450 million years ago.

他补充道，地球的生物圈严重依赖植物获取食物和氧气。但是人们一直认为最早的陆地植物是绿色海藻类的祖先，而且它直到大约4.5亿年前才出现。

The Virginia Tech researchers believe that land plants – including trees, grasses food crops and others – all developed from green seaweeds that lived in the ocean. Then, over millions of years, the seaweed plants moved out of the water and adapted to life on land.

弗吉尼亚理工大学的研究人员认为，陆地植物——包括树木、草类粮食作物和其他植物都是从生活在海洋中的绿色海藻发育而来的。然后，海藻植物历经数百万年从水中迁徙出来并适应了陆地上的生活。

The history of how green plants developed is a subject of debate. “Some scientists think that green plants started in rivers and lakes, and then conquered the ocean and land later,” Xiao said.

绿色植物的发展史一直是一个具有争论的课题。肖教授说：“一些科学家认为绿色植物始于河流和湖泊，然后才征服了海洋和陆地。”

Proterocladus is believed to be closely related to a modern seaweed, widely eaten by humans today. It is called sea lettuce.

据信，“古董变形藻”与现代海藻密切相关。现代海藻已被当今人类广泛食用——它被称为海白菜。

I’m Bryan Lynn.

布莱恩·林恩报道。

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