Scientists Freeze Great Barrier Reef Coral

科学家冻结大堡礁珊瑚

Scientists working on Australia's Great Barrier Reef have successfully tested a new method for freezing and storing coral larvae. Larvae are the very young form of the small ocean animal.

在澳大利亚大堡礁工作的科学家们成功地测试了一种冷冻和储存珊瑚幼虫的新方法。幼虫是小型海洋动物的幼体。

Coral creates reefs, structures in the ocean that support entire ecosystems. However, climate change is threatening the existence of such reefs.

珊瑚在海洋中形成珊瑚礁和结构，支持整个生态系统。然而，气候变化正在威胁着这些珊瑚礁的存在。

The science project in Australia involves freezing and storing coral larvae to use later for rewilding. A new material called "cryomesh" is helping the scientists in the effort.

澳大利亚的科学项目涉及冷冻和储存珊瑚幼虫，以备日后用于野化。一种名为“cryomesh”的新材料正在帮助科学家们进行这项工作。

Coral is frozen using a special method called cryogenics. This permits the young animals to be stored until they can be unfrozen and placed in the wild.

使用称为低温学的特殊方法冷冻珊瑚。这使得幼小的动物可以被储存起来，直到它们被解冻并放回野外。

The process currently requires high-tech equipment including lasers and is costly. But, the team in Australia says cryomesh can do a better job of saving the coral and for much less money.

该过程目前需要包括​​激光在内的高科技设备，而且成本高昂。但是，澳大利亚的团队表示，cryomesh 可以更好地拯救珊瑚，而且花费更少。

The scientists used the cryomesh to freeze Great Barrier Reef coral larvae at the Australian Institute of Marine Sciences, or AIMS. Workers collected the coral during the animal's brief yearly reproductive period.

科学家们在澳大利亚海洋科学研究所 (AIMS) 使用冷冻网冷冻大堡礁珊瑚幼虫。工人们在动物每年短暂的繁殖期收集珊瑚。

Mary Hagedorn is Senior Research Scientist at Smithsonian National Zoo and Conservation Biology Institute. She spoke with Reuters from the AIMS laboratory.

Mary Hagedorn 是史密森尼国家动物园和保护生物学研究所的高级研究科学家。她在 AIMS 实验室接受路透社采访。

She explained, "If we can secure the biodiversity of coral … then we'll have tools for the future to really help restore the reefs." She added, "…this technology for coral reefs in the future is a real game-changer."

她解释说，“如果我们能够确保珊瑚的生物多样性......那么我们将拥有未来真正帮助恢复珊瑚礁的工具。”她补充说，“......未来珊瑚礁的这项技术是一个真正的游戏规则改变者。”

The cryomesh had been tested earlier on smaller and larger kinds of Hawaiian corals. A test on the larger failed.

cryomesh 已经在更小和更大种类的夏威夷珊瑚上进行了测试。对较大的测试失败。

Tests are continuing with larger-size Great Barrier Reef coral.

对更大尺寸的大堡礁珊瑚的测试仍在继续。

The tests involved scientists from several organizations, including AIMS, the Smithsonian National Zoo and Conservation Biology Institute, the Great Barrier Reef Foundation, and the Taronga Conservation Society Australia. Together they are part of the Reef Restoration and Adaptation Program.

这些测试涉及来自多个组织的科学家，包括 AIMS、史密森尼国家动物园和保护生物学研究所、大堡礁基金会和澳大利亚塔龙加保护协会。它们一起是珊瑚礁恢复和适应计划的一部分。

The mesh technology helps to store coral larvae at -196 degrees Celsius. The University of Minnesota College of Science and Engineering developed the material.

网状技术有助于在 -196 摄氏度下储存珊瑚幼虫。明尼苏达大学科学与工程学院开发了该材料。

The Great Barrier Reef has suffered four bleaching events in the last seven years. This includes the first ever bleach during a La Nina weather event, which usually bring cooler temperatures.

大堡礁在过去七年中经历了四次白化事件。这包括拉尼娜天气事件期间的首次漂白，通常会带来较低的温度。

Coral bleaching happens when extreme temperatures and sunlight force corals to release algae living in their tissue. This causes them to lose their color and turn white. The experience greatly weakens the coral and can kill them.

当极端温度和阳光迫使珊瑚释放生活在其组织中的藻类时，就会发生珊瑚白化。这导致它们失去颜色并变成白色。这种经历会极大地削弱珊瑚并杀死它们。