参考译文

Squid Glowing Skin Patterns May Be Code

鱿鱼发光的皮肤模式可能是代码

More than 1.500 feet below the surface of the ocean it’s darker than a moonless night. But even in this murky world there’s constant activity. Including groups of Humboldt squid—each the size of a small adult human—darting around in search of fish.

在海平面以下1500英尺的地方，比没有月亮的夜晚还要黑暗。但即使在这个黑暗的世界里也有持续不断的活动。包括成群的洪堡鱿鱼——每一个都有一个成年人类的大小——在四处寻找鱼。

“You can think of them as little rocket ships. They jet through the water. And they engage in these feeding frenzies. They're always looking out for an opportunity to eat.”

“你可以把它们想象成小火箭船。它们在水里喷射，在疯狂进食。它们总是在寻找吃东西的机会。”

Stanford University biologist Ben Burford. He says feeding in a group requires careful navigation.

斯坦福大学生物学家本·伯福德说道。他说，在群体中进食需要谨慎前行。

“These animals are cannibalistic, they're pretty aggressive. So there's probably some risk to group living. We think a lot of the communication they do in these groups helps with that. Like, imagine driving in heavy traffic with a bunch of aggressive drivers, say down in Los Angeles. Thank goodness you have turn signals and brake lights and horns on your cars because that prevents a lot of catastrophe from happening.”

“因为这些动物是同类相食的，它们非常好斗。所以集体生活可能有风险。我们认为它们在一起所做的许多交流有助于解决这个问题。比如，想象一下在拥挤的交通中开车，有一群好斗的司机，比如在洛杉矶，但是车上有转向灯、刹车灯和喇叭，因为这样可以避免很多灾难的发生。”

Burford thinks Humboldt squid communicate in the dark ocean by using their own form of signalling. They do it by turning their bodies into animated message boards. How? Like other cephalopods, they can rapidly change the pigmentation patterns on their skin by contracting and relaxing their muscles. What’s more, their bodies can glow.

伯福德认为洪堡乌贼在黑暗的海洋中通过自己的信号方式进行交流。它们把自己的身体变成动态的留言板。如何做到?像其他头足类动物一样，它们可以通过收缩和放松肌肉来迅速改变皮肤上的色素沉着模式。更重要的是，它们的身体可以发光。

“They're creating a bioluminescent backlighting for their pigmentation patterns. So it becomes somewhat like an e-reader, something you can actually read in the dark. They're essentially just, you know, selectively revealing and concealing different parts of a glowing body, producing these patterns on top of a glowing body.”

“它们正在为自己的色素沉着模式创造一种生物荧光背光。所以这时变得有点像电子阅读器，你可以在黑暗中阅读。但是本质上它们只是选择性地揭示和隐藏发光身体的不同部分，在发光身体上产生这些图案。”

Burford suspected that the squids could be combining different pigmentation patterns to create complex signals.“So each of those elements could mean something and they might have the potential to combine them to generate more meanings.”To find out, his team attached cameras to remotely operated vehicles in order to study the squids’ behaviour.

伯福德怀疑这些乌贼可能结合了不同的色素沉着模式来产生复杂的信号。因此，这些元素中的每一个都可能意味着什么，它们可能有潜力将元素进行组合进而产生更多的意义。为了找到答案，他的团队将摄像机安装到远程操作的飞行器上，以研究乌贼的行为。

“We looked at how they arranged their patterns in sequence during prey capture events.”The researchers found preliminary evidence that the sequence of patterns varies consistently in specific contexts. For example, the squid tended to flicker when many other squid were around or darken when pursuing prey, only to change their pattern just before striking.The study is in the Proceedings of the National Academy of Sciences.

“我们观察了它们在捕获猎物时是如何安排自己的模式的。研究人员发现，初步的证据表明，在特定的环境中，这些模式的顺序是不断变化的。例如，当周围有很多乌贼时，乌贼就会闪烁，或者在追逐猎物时，就会会变暗，但在攻击前，它们会改变图案。这项研究发表在《美国国家科学院院刊》上。

Burford eventually hopes to do underwater experiments in which the squid are shown playbacks of their visual signalling—virtual glowing squid, if you will. Their reactions should be illuminating.

伯福德最终希望做一个水下实验，在实验中向乌贼展示它们的视觉信号回放——如果你愿意的话，也可以说是虚拟的发光乌贼。它们的反应是有启发性的。

听力原文

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