

environment

Why Chili peppers are sooooo darned hot

Over time, plants and animals develop survival mechanisms that may alternately deter predators, improve reproductive success, protect against the elements or provide better sustenance.

Development of these adaptive traits is known as microevolution, and it helps ensure that species can adapt to new conditions and improve survival rates.

But we still have a lot to learn, and many microevolutionary traits have left scientists puzzled as to how they help species at all.

The reasons for many adaptive traits are readily apparent. Brightly-colored plumage to help attract a mate, some desert plants have developed thick, waxy coverings to help reduce precious moisture loss in the heat, and other plants have evolved tasty seed-bearing fruit, which animals eat and then spread the seed in their feces. But strangely, some plants have evolved traits that seem counterproductive.

Hot peppers like chilies and jalapeños, for example, are actually the fruits of plants, containing seeds that need to be dispersed. Yet anyone who has bitten into a chili would probably agree that the burning pain that follows is not likely to attract many takers. And unlike humans who can actually develop a taste for fiery foods, most other mam-



systems. On the other hand, both types of seeds flourished after being expelled in bird feces. In fact the digested hot chilies actually germinated three times more often than did a control group of seeds planted by hand. Clearly, something in the bird's diges-

tive system helped improve chili seed germination, and therefore reproduction. By developing a fiery flavor, chili plants had improved their odds of species survival by warding off mammals, whose digestive systems somehow hindered their growth, while encourag-

ing consumption by birds, whose systems greatly improved the success of seed germination. This is believed to be the first time that a plant has been documented to have developed a chemical mechanism which selectively targets some animals while excluding

others in order to improve reproductive success. It's also fascinating that humans would end up enjoying the taste of something meant to actually deter mammals. But then again, we too are animals, and we have developed adaptive measures of our own.

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QUESTION : So according to this article, "Why Are Chili Peppers Sooooo Darned Hot"? Explain
