**[The Vampire Squid](http://www.sciencefriday.com/video/06/20/2014/the-vampire-squid-from-hell.html)**

**Science Friday, June 20th, 2014**

***(Unedited Transcript)***

**Description:**

Its Latin name translates as "the vampire squid from hell."  And while crimson skin and glowing eyes support its title, deep sea ecologists like Bruce Robinson of the Monterey Bay Aquarium Research Institute have come to see the vampire squid as the antithesis of a bloodsucking predator. In fact, researchers have discovered that *Vampyroteuthis infernalis*is actually a gentle steward of the ocean's depths, gracefully foraging on marine detritus.

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CHRISTIAN BAKER: Deep in the ocean, in the cold darkness, lurks a mysterious ancient creature.

The vampire squid.

Before you reach for the garlic and a wooden stake, there are two things you should know about this mystery of the deep.

BRUCE ROBISON: The vampire, squid, first, isn't a vampire, and second, isn't a squid.

CHRISTIAN BAKER: Bruce Robison is the Monterey Bay Aquarium Research Institute's resident authority on the vampire squid.

BRUCE ROBISON: Its scientific name is *Vampyroteuthis infernalis*, which is really a cool-sounding name. It makes them sound pretty spooky and special. And, indeed, they are. Their fundamental structure is very similar to octopuses and squids, but what they really represent is the line of cephalopods before they split into 10-limbed squid and 8-limbed octopuses. They're a very ancient form-- really, a living fossil-- that tells us quite a lot about what cephalopods were like hundreds of millions of years ago. There are fossils more than 200 million years old that are virtually indistinguishable from modern-day *Vampyroteuthis*.

CHRISTIAN BAKER: This creature is the only known survivor of the order Vampyromorphida and has remained relatively unchanged for a long, long time-- mostly because it is extremely well adapted to its environment.

BRUCE ROBISON: *Vampyroteuthis* lives at depths below about 600 meters-- a depth range where oxygen tends to be more or less depleted. We refer to those areas as "oxygen minimum zones."

CHRISTIAN BAKER: While most life can't survive in this harsh, oxygen-depleted environment, *Vampyroteuthis* lives here quite comfortably.

BRUCE ROBISON: It has a relatively low metabolic rate. Whereas we have hemoglobin in our blood to hold oxygen, cephalopods have a comparable blood pigment called hemocyanin, which is very capable of holding lots and lots of oxygen.

CHRISTIAN BAKER: *Vampyroteuthis* is naturally buoyant and doesn't have to extend a lot of energy to stay afloat. This footage is actually shot in real time. And as you can see, the vampire squid isn't in much of a hurry. Few other animals live in this habitat, which means there aren't a lot of predators to run away from. But it raises an interesting question. What does a vampire squid eat?

BRUCE ROBISON: While most squids and octopus feed on living prey and are predators, *Vampyroteuthis* is very different in that it feeds on particulate matter-- detritus, aggregated marine snow particles. Marine snow consists stuff from life processes up in the surface layers. The bodies of dead animals, dead phytoplankton cells, poop, sinks slowly down to the deep sea floor.

CHRISTIAN BAKER: While it's not very appetizing, the fact that *Vampyroteuthis* eats marine snow isn't as strange as how it eats it.

BRUCE ROBISON: It has a pair of long slender filaments that come up between the first and second pair of arms.

CHRISTIAN BAKER: This element has a long array of sticky, short hairs, which collect particles of marine snow. Once it has collected a good portion, it pulls the filament in, using its arms to scrape the food into the cavity formed by its web so it can ingest it.

BRUCE ROBISON: Everything we learn about them suggests that they are ideally suited to live where they live. It's a serendipitous combination of a particular habitat that is restricted to many species, and a habitat to which *Vampyroteuthis* is beautifully adapted.

CHRISTIAN BAKER: For Science Friday, I'm Christian Baker.

If you like this video, check out these other stories on cephalopods.