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Sea Cucumbers Podcast and Scientist Interview

Holothuroidea

What reef animal comes in a rainbow of crazy colors, can throw out its innards to immobilize predators, then creep away and regrow a brand-new stomach? It's the sea cucumber, prized as a gastronomic delight by some cultures and beginning to yield some of its secrets to scientists.

Transcript

Ari: I'm Ari Daniel Shapiro. This is the One Species at a Time, the story of Earth's biodiversity, one organism at a time.

This time: sea cucumbers. They look like big juicy, leathery bananas, just more colorful. They come in neon purples, rusty oranges, aqua greens, and pitch blacks. Just to name a few. So we'll be talking about sea cucumber biology, literature and gastronomy. That is, eating them. In fact, let's start there...

Ari: I decided to go to a grocery store in Chinatown in Boston to see for myself. The seafood section was crammed with wall-to-wall tanks, each filled with a different type of crab, fish or clam. I turned and spotted the sea cucumbers immediately. A tray was perched on crushed ice. It held 4 black foot-long swollen banana-looking things. Sea cucumbers. But I still double checked with Sharon, one of the shoppers.

Ari: Do you know what this is?

Sharon: Sea cucumber!

Ari: Sharon says they're a special treat.

Sharon: You usually cook it when you try to celebrate something, you know, like a birthday or you know what: new years. You know, like Chinese New Years.

Mah: I always thought it was pretty tasty. <laughs>

Ari: Chris Mah researches sea urchins at the Smithsonian. He ate sea cucumbers as a kid in San Francisco. So I called him up and asked him what they tasted like.

Mah: It's like if you took some fat and melted it into jello and it was this sort of firm, gelatinous-ish material.

Ari: So sea cucumbers show up in our stomachs. Well, for some of us. And they also show up somewhere else. Alex Kerr is a professor at the University of Guam in the western Pacific. But check this out...He's also keeping track of all the sea cucumber that pop up in novels and poems.

Kerr: I wish I were a Holothuria, and could get on without my viscera. I should do splendidly then.

Ari: That's one of my favorites. "I wish I were a Holothuria." Which is another name for sea cucumbers. "And could get on without my viscera." Which means your guts! David Patterson—

Paddy: I'm Paddy.

Ari: — who goes by Paddy for short, and works on the Encyclopedia of Life, told me a story to explain that line about the viscera.

Paddy: I was taken out onto the fringing reef around Fiji by a guy. We jumped over onto the reef and trying to walk on the reef is really tough. And he warned me about the black sea urchins because if you get the spines of those in your foot, it's seriously dangerous. And he picked up this thing that was 18 inches long — black thing, 3 inches across and he said, "Do you know what this?" And I said, "Hmmm, that looks like a sea cucumber." And I said, "Well, I seem to remember that they can eviscerate — they can throw out their guts." And he grabbed the cucumber and he whirled it around at me. And out of the back end came this massive spaghetti that ended up splattering all over me. And he said, "Like this!" And I said, "Yes..." This massive spaghetti is really sticky and once it clings to you, it starts to contract. And so I stood there and this stuff is now kind of contracting. And now my arms get pinned to the side of my body. And then I can move less and less until I can just about move my fingers and that's it. And I'm kind of stuck, trying to pick each of these little bits of spaghetti off my body. Now the problem with that was not so much the sea cucumber, but trying to do all of this while standing on a coral reef. And I fell over. And what did I fall upon, but one of the black sea urchins.

Ari: Don't worry: Paddy was okay in the end. And so was the sea cucumber. Turns out it's one way they defend themselves. Once a sea cucumber shoots out its spaghetti-like guts and immobilizes the threat, it just inches away and slowly regrows what it lost.

Meet the Scientists

Meet the scientists you heard featured in the Sea Cucumber podcast:



From left to right: Alexander Kerr, Chris Mah and David "Paddy" Patterson.

Where do you work?

Alex: The Marine Laboratory, University of Guam.

Chris: National Museum of Natural History, Smithsonian Institution.

Paddy: School of Biological Sciences, University of Sydney, Sydney, Australia.

What do you study?

Alex: I search for new and little known species of coral-reef animals.

Chris: I study the biology, evolution, and biodiversity of sea stars, especially those in cold-water settings.

Paddy: I am a taxonomist who has been using his experience to build information management systems for biology.

What are three titles you would give yourself?

Alex: zoologist, father, husband.

Chris: "The Starfish Guy", "The guy that writes the Echinoblog", Collector of weird and strange things.

Paddy: Taxonomist microbiologist ignoramus.

What do you like to do when you are not working?

Alex: Hang out with my family, read philosophy, chew betel nut.

Chris: I am a big science fiction, comic book, and Saturday afternoon-monster fan.

Paddy: "What? When? Is that an option? Why did no-one tell me?"

What do you like most about science?

Alex: The chance to explore, discover and learn about nature, people and places the world over.

Chris: Exploration and discovery are the two most exciting things that I love about my science.

Paddy: Countering the forces for ignorance.

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