

Shark researcher names new species of deepsea shark after daughter

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The Etmopterus spinax, a Lantern shark species closely related to the Etmpterus lailae, is shown in this photo. Credit: Chris Bird

University of Rhode Island shark researcher Bradley Wetherbee is best known for his studies of make sharks, the fastest swimming sharks in the world. But when it came to identifying and describing a new species of shark, the process was anything but fast.



It took Wetherbee and his colleagues nearly 30 years to reveal that a group of lantern sharks inadvertently captured in the Northwestern Hawaiian Islands were a new <u>species</u>.

Wetherbee named the shark Laila's lantern shark (Etmopterus lailae) after his 17-year-old daughter, Laila Mostello-Wetherbee. They live in Lincoln.

"It's not uncommon for it to take many years for a new species to be recognized as new to science and then properly described and named," said Wetherbee, a professor in the URI Department of Biological Sciences. "This one just took a little longer than usual."

Laila's lantern shark grows up to three feet long, has a dark brown back with a black T-shaped flank marking, spines coming from its dorsal fin, and a longer snout than other lantern sharks. Like most lantern sharks, they are bioluminescent. The new species is found in waters approximately 1,000 feet deep.

Why it took Wetherbee so long to identify it as a new species is a long story.

While studying deep-sea sharks as part of his doctoral research at the University of Hawaii in the early 1990s, he was offered two large boxes of frozen sharks – about 150 individuals – that had been captured in 1988 by scientists from the National Marine Fisheries Service. The scientists were studying armorhead fish and were uninterested in the sharks.

About a year later, Wetherbee examined the specimens and sorted them according to what species he believed they were – smooth lantern sharks and rough lantern sharks. Little was known about either species, so he planned to give the specimens to the Bishop Museum in Honolulu for



inclusion in its natural history collection. But before he could do so, the freezer where they were being stored broke down while Wetherbee was away on a research cruise. One box of sharks was salvaged, including specimens that would later be named Laila's lantern shark, but the rest had thawed so much that they had to be thrown out. Just 15 survived intact.

"I had gone through every individual in the boxes and measured many body parts so we had enough information to write a paper about their biology, because hardly anything was known about them," explained Wetherbee. "But then I ran into someone that was working on the classification of lantern shark species in the genus Etmopterus. He wanted to look at the specimens before we wrote our paper, so we had the sharks shipped to his lab in California."

It took that man, David Ebert at the Moss Landing Marine Laboratory, about five years, but he eventually examined the specimens in great detail and compared them with other species of lantern shark and determined that Wetherbee's sharks did not belong to any of the other already-described smooth nor rough lantern shark species but was a species new to science.

"Since the sharks were essentially mine to begin with, Dave and the others involved agreed to let me name it after my daughter," Wetherbee said.

It then took several more years for them to write the definitive paper describing the new species, which was finally published in the journal *Zootaxa* in 2017.

According to Wetherbee, the only specimens of the new species ever seen are those individuals he and his colleagues had studied.



"It likely has a very small distribution only around the seamounts northwest of the Hawaiian Islands. That's the nature of lantern sharks. There are <u>different species</u> in different areas, and they tend to be isolated," he said. "If you went to that spot and fished for them, you'd probably catch them. But it's so remote, there's not much of a reason for anyone to go there."

Wetherbee's daughter wasn't especially impressed at first that her father named a shark after her, but she has grown to appreciate it.

"At first it didn't really register with me as anything special, but then when my friends Googled me and saw that I had this shark named after me, they thought it was cool," said Mostello-Wetherbee, a senior at Lincoln High School. "Now I appreciate it a lot more, not because of my friends' reaction, but because as I've gotten older, I understand it more and think it's really neat."

The URI shark expert said that naming the shark after his daughter may have rekindled his interest in the animal nearly 30 years after he first laid eyes on it.

"There are only 500 species of sharks and only a handful of people in the world have a shark named after them," Wetherbee said. "Now that it's called Laila's lantern shark, it certainly gives me motivation to go back to Hawaii to study it.

"People often ask me what my favorite shark is, and I used to say the <u>tiger shark</u>," he concluded. "But now I say it's Laila's lantern shark."

More information: David A. Ebert et al. Etmopterus marshae sp. nov, a new lanternshark (Squaliformes: Etmopteridae) from the Philippine Islands, with a revised key to the Etmopterus lucifer clade, *Zootaxa* (2018). DOI: 10.11646/zootaxa.4508.2.3



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