



## Research News

# Scientists discover four new species of deep-sea scale worms

Researchers describe new species of unique scale worms in the eastern Pacific Ocean



Scientists have discovered new species of scale worms from deep in the eastern Pacific Ocean.

[Credit and Larger Version \(/discoveries/disc\\_images.jsp?cntn\\_id=300599&org=NSF\)](#)

May 15, 2020

National Science Foundation <[https://www.nsf.gov/awardsearch/showAward?AWD\\_ID=1634172&HistoricalAwards=false](https://www.nsf.gov/awardsearch/showAward?AWD_ID=1634172&HistoricalAwards=false)> -funded researchers at the [Scripps Institution of Oceanography](#) ([/cgi-bin/good-bye?https://scripps.ucsd.edu/news/hungry-hungry-scale-worms-scientists-discover-four-new-species-deep-sea-dwellers?utm\\_source=homepage&utm\\_medium=slideshow&utm\\_campaign=spring2019](#)) have discovered four new species of scale worms from deep-sea habitats in the eastern Pacific Ocean. The findings were published in the scientific journal [ZooKeys](#) ([/cgi-bin/good-bye?https://zookeys.pensoft.net/article/48532/](#)).

The deep-sea worms, known for their iridescent, overlapping scales, have for many years been nicknamed "Elvis worms."

The researchers collected the worms from deep areas of the Monterey Canyon, the Gulf of Mexico and Costa Rica.

The scale worms have evolved to tolerate low oxygen levels by having elaborate gills under their scales. Although one of the new species was found at a hydrothermal vent in the Gulf of California, the species are usually found around whale falls -- the carcasses of whales that have sunk to the bottom of the ocean -- and

other organic remains.

The largest group of scale worms is the Polynoidae and the genus for the new species is *Peinaleopolynoe* -- from "*peina*," the Greek word for "hungry," because the first species was found on an experimental food fall deployed in the deep Atlantic Ocean.

The worms were all observed alive and were collected by scientists using remotely operated vehicles and the NSF-supported deep-sea submersible *Alvin*.

While the worms share many anatomical features, there were subtle differences among the species. DNA sequencing and analyses clearly indicate that they are distinctly different.

"This study is a great example of the tremendous diversity of animals waiting to be discovered in the deep ocean," says Daniel Thornhill, a program director in NSF's Division of Ocean Sciences.

-- NSF Public Affairs, [researchnews@nsf.gov](mailto:researchnews@nsf.gov) (<mailto:researchnews@nsf.gov>)