Restaurants plan DNA-certified premium seafood

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(AP) -- Restaurants around the world will soon use new DNA technology to assure patrons they are being served the genuine fish fillet or caviar they ordered, rather than inferior substitutes, an expert in genetic identification says.

In October, the U.S. Food and Drug Administration officially approved so-called DNA barcoding - a standardized fingerprint that can identify a species like a supermarket scanner reads a barcode - to prevent the mislabeling of both locally produced and imported seafood in the United States. Other national regulators around the world are also considering adopting DNA barcoding as a fast, reliable and cost-effective tool for identifying organic matter.

David Schindel, a Smithsonian Institution paleontologist and executive secretary of the Washington-based Consortium for the Barcode of Life, said he has started discussions with the restaurant industry and seafood suppliers about utilizing the technology as a means of certifying the authenticity of delicacies.

"When they sell something that's really expensive, they want the consumer to believe that they're getting what they're paying for," Schindel told The Associated Press.

"We're going to start seeing a self-regulating movement by the high-end trade embracing barcoding as a mark of quality," he said.

While it would never be economically viable to DNA test every fish, it would be possible to test a sample of several fish from a trawler load, he said.

Schindel is organizer of the biennial International Barcode of Life Conference, which is being held Monday in the southern Australian city of Adelaide. The fourth in the conference series brings together 450 experts in the field to discuss new and increasingly diverse applications for the science.

Applications range from discovering what Australia's herd of 1 million feral camels feeds on in the Outback to uncovering fraud in Malaysia's herbal drug industry.

Schindel leads a consortium of scientists from almost 50 nations in overseeing the compilation of a global reference library for the Earth's 1.8 million known species.

The Barcode of Life Database so far includes more than 167,000 species.

Mislabeling is widespread in the seafood industry and usually involves cheaper types of fish being sold as more expensive varieties. A pair of New York high school students using DNA barcoding of food stocked in their own kitchens found in a 2009 study that caviar labeled as sturgeon was actually Mississippi paddlefish.

In a published study a year earlier, another pair of students from the high school found that one-fourth of fish samples they had collected around New York were incorrectly labeled as higher-priced fish.

Mislabeling of fish - which account for almost half the world's vertebrate species - also poses risks to human health and the

environment.

In 2007, several people became seriously ill from eating illegally imported toxic pufferfish from China that had been mislabeled as monkfish to circumvent U.S. import restrictions. Endangered species are also sold as more common fish varieties.