SHARK TALE

RESEARCHERS STUDY ENDANGERED SHARKS

By Max Esterhuizen

Virginia Tech researchers tagged a young shortfin mako shark in the Mediterranean, the first time that this has been done in the region. Mako sharks are critically endangered not only in the Mediterranean, but also globally.

The research team tagged the shark while on an expedition through the White Shark Chase initiative led by Francesco Ferretti, assistant professor in the College of Natural Resources and Environment, during the summer of 2023.

"During that research trip, we encountered a young shortfin mako shark by happenstance," said Brendan Shea, a doctoral student. "We placed an electronic tag on it, which provides valuable information about its movements, helping us understand how to better conserve the population."

The tag the team used is called a pop-off archival tag. It collects and stores data on water temperature, depth, and ambient light levels. This data helps the researchers estimate the shark's location and understand its movements. The tag detaches after a set period or if the shark dives too deep—more than 1,800 meters—and then transmits the data back to a satellite.

The research was published in Frontiers in Marine Science in December 2024.

The young mako shark, which was likely 1 or 2 years old, traveled more than 750 miles in 54 days. This means that protecting nursery areas might not be enough because these young sharks travel so far.

"Sharks play a crucial role in the health of our oceans," Shea said. "A healthy ocean supports various human activities, so understanding and conserving shark populations benefits everyone. Understanding the three-dimensional movement of sharks helps us know how they connect different habitats and their role in the ecosystem. This data also informs us about the depths they occupy, which is vital for conservation efforts."

The collaborative effort included national and international researchers as well as Jeremy Jenrette of Virginia Tech's Department of Fish and Wildlife Conservation.

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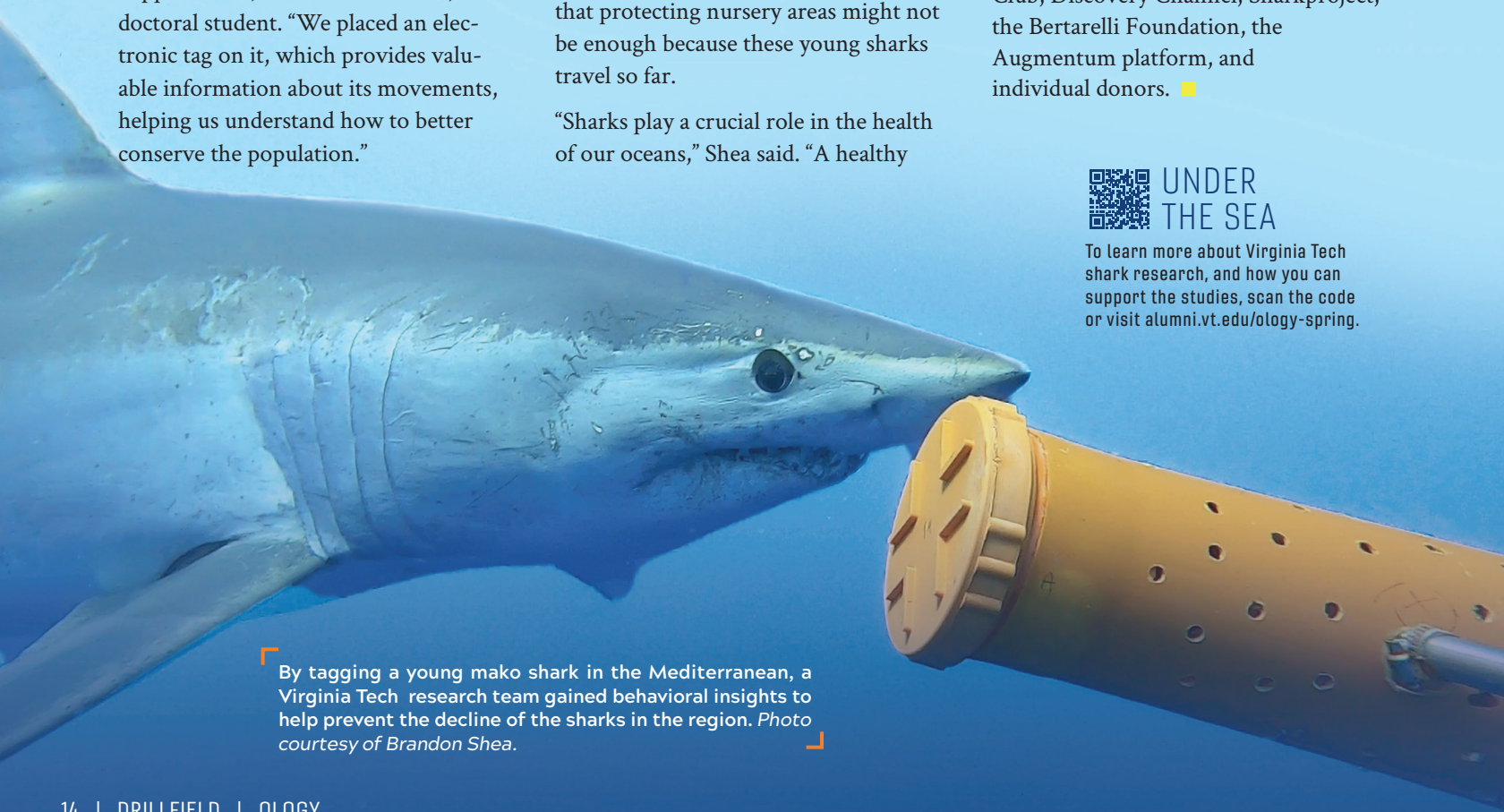
UNDER THE SEA

To learn more about Virginia Tech shark research, and how you can support the studies, scan the code or visit alumni.vt.edu/ology-spring.



By tagging a young mako shark in the Mediterranean, a Virginia Tech research team gained behavioral insights to help prevent the decline of the sharks in the region. *Photo courtesy of Brandon Shea.*