



Ocean Genome Legacy Center

Exploring and Protecting the Biodiversity of the Sea

Today, the health of the sea is under increasing threat. Rising water temperatures, ocean acidification, pollution, habitat destruction, overfishing, and other human activities harm all marine species. Without intervention, the ocean's critical fisheries and ecosystems may soon collapse.

Saving this complex web of marine life is a challenge. **The Ocean Genome Legacy Center (OGL)** at Northeastern University is confronting this challenge through genomic DNA banking—a powerful new tool for preserving the sea's biodiversity and empowering research to drive its recovery and protection.

Humankind depends on the ocean for food, employment, commerce, recreation, and essential ecosystem services—but the vast biodiversity of the sea is also an extraordinary reservoir of knowledge. Increasingly, researchers turn to the genomes of marine species to improve our understanding of human biology, discover new medical treatments, and develop novel technologies that improve lives. OGL advances this critical research by preserving marine genomes and the wealth of information they hold.

A Snapshot of OGL's Collection



58,000+ DNA and tissue samples
from **5,200+** global locations

4 kingdoms and **30** phyla
represented



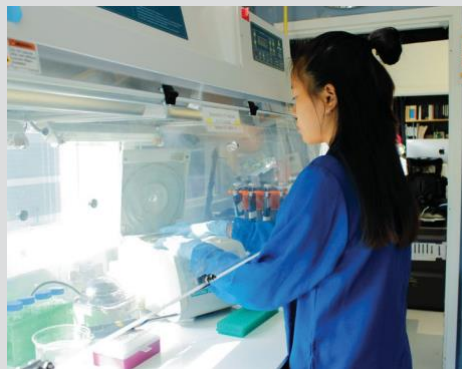
11 new marine species
discovered

Cited by **356+** scientific
publications



9,700+ samples provided
to researchers

139,000+ samples donated
to public research databases



Photos: Adam Glanzman (top); Jaxon Derow (bottom left and right); and Nell Solomon (bottom center)

Banking on the Future

The sea is home to more than 243,000 named species, and scientists estimate that 1–2 million more await discovery. Unless we act soon, many of these species may disappear before their existence is even known. To help save them, we need the vital information encoded in their genomes—the sum of an organism’s DNA—which describes its abilities, vulnerabilities, growth, interactions, identity, and history.

OGL is a nonprofit, open-access, public DNA bank dedicated to gathering and cataloging marine genomes and advancing groundbreaking research in conservation, medicine, food production, and biotechnology. OGL collaborates with scientists and research institutions worldwide to preserve and share valuable DNA and tissue samples, driving discoveries that would not otherwise be possible.

Samples from the OGL genome repository provide vital research tools to scientists, fueling discoveries that help protect marine ecosystems and improve the human condition. Researchers are using OGL’s samples to develop novel drugs, including a promising antibiotic that targets resistant pathogens and a new drug candidate to treat parasitic infections that sicken children worldwide.

The Ocean Genome Legacy Center is making vital progress, but we need your help to continue advancing research that protects our ocean and benefits humankind. Philanthropic gifts of all sizes fuel our work, enabling OGL to accelerate research, conservation, sustainability, and discovery.



Photos: Jaxon Derow (top) and Matthew Madoono/
Northeastern University (bottom)



“The legacy we leave to future generations depends on the decisions we make today to safeguard our diverse marine environments. Through philanthropic partnerships, OGL can continue to enable the world’s leading scientists to uncover the ocean’s deepest mysteries—and to support research that cures disease, protects the environment, and strengthens the stability of our planet.”

—Daniel L. Distel, Director, Ocean Genome Legacy Center

Contact Us

To learn more, visit ogl.northeastern.edu. To support OGL’s mission, contact Verónica Jorge-Curtis, Director of Development for the College of Science, at **617.373.5405** or v.jorge-curtis@northeastern.edu.