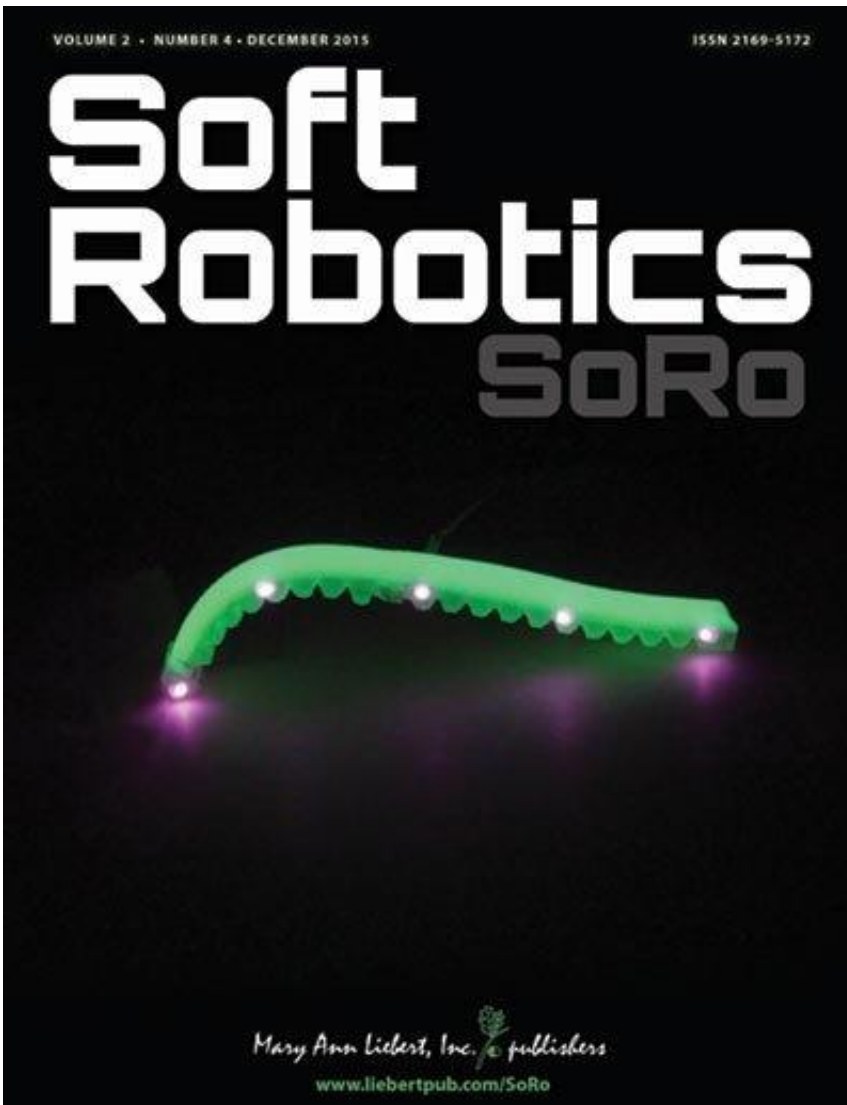


Soft robotic grippers non-destructively manipulate deep sea coral reef organisms

January 27 2016



Credit: Mary Ann Liebert, Inc., publishers

The first use of soft robotics in the deep sea describes the non-destructive interaction and sampling of fragile organisms in their natural environments. The design and grasping capabilities of these innovative soft robotic grippers and their successful use at deep sea depths are described in an article in *Soft Robotics*.

In "[Soft Robotic Grippers for Biological Sampling on Deep Reefs](#)," Kevin Gallaway and colleagues, Harvard University, Cambridge, MA, University of Rhode Island, Narragansett, Haifa University, Israel, City University of New York, and American Museum of Natural History, NY, examine the potential for applying soft robotic technology to explore [deep sea](#) coral reefs, where diverse organisms with unique genetic adaptations reside. The researchers describe the ability to use compliant materials matched to [natural environments](#) to construct the robot's gripper arms, enabling the robot to interact with the soft, fragile organisms without harming or altering them.

"This paper is a milestone for soft robotic manipulation because it is one of the first to show the advantages of this approach in a real world application," says Editor-in-Chief Barry A. Trimmer, PhD, who directs the Neuromechanics and Biomimetic Devices Laboratory at Tufts University (Medford, MA). "We know there is a lot more to do before [soft robots](#) are commonplace but this paper is certainly leading the way."

More information: The article is available free for download on the [Soft Robotics](#) website until Feb. 27, 2016.

Provided by Mary Ann Liebert, Inc

Citation: Soft robotic grippers non-destructively manipulate deep sea coral reef organisms (2016, January 27) retrieved 27 April 2024 from <https://phys.org/news/2016-01-soft-robotic-grippers->

[non-destructively-deep.html](#)

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.