



March 8, 2021

RE: H 5414 “Designating the Northern Star Coral as the Official State Coral”

Dear Speaker K. Joseph Shekarchi and Committee Members:

I am a marine biologist with a specialty in coral reef ecology and marine invertebrates, and I am writing to give my strong support of H 5415, celebrating the Northern Star Coral as a unique asset to the state of Rhode Island.

This coral is the only hard coral present in New England. Although the Northern Star Coral exists across an unusually large range in the US – from the Gulf of Mexico up to Buzzard’s Bay, the science of this coral is deeply rooted in the state of Rhode Island. In fact, the first known description of this species was in the mid 1800’s by the world-famous naturalist Louis Agassiz, at Castle Hill, Newport, RI. Since then, the majority of the science on Northern Star Coral has been done here in Rhode Island and by scientists at the University of Rhode Island and Roger Williams University. In the past ten years, my colleagues and I founded a large research collaborative centered on this species, and our group currently consists of over 125 active researchers, educators, and journalists who meet annually at RWU to discuss Northern Star Coral science. To date, there are over 70 published research articles on this particular species, and with our rapidly growing group, it continues to be a focus of researchers from Rhode Island and beyond.



The Northern Star Coral, *Astrangia poculata*, underwater in Fort Wetherill State Park, Jamestown, RI. This coral can live with (brown) and without (white) its algal partner.

Like tropical corals, this animal is a relative of the jellyfish. Most tropical corals harbor tiny symbiotic algae within their tissues, and they rely on these algal partners to photosynthesize (just like plants) to supply them with food. Tropical corals across the globe are in massive decline, because climate change-induced seawater warming is destroying the coral-algal partnerships. When temperatures get too hot, the corals evict their algal partners, leaving them colorless. This “coral bleaching” often kills corals, and it is currently the biggest threat to tropical corals on a global scale.

However, the Northern Star Coral is unlike most tropical corals. Northern Star Coral also has algal partners; however, unlike tropical corals, it does not need this partnership



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in order to survive. Because the partnership is flexible, the Northern Star Coral is a unique and powerful tool. Just as we use mice as research models to understand human disease, we can use this peculiar coral in the laboratory to pinpoint detailed mechanisms that cause coral bleaching and coral disease. And we are now in a critical moment – worldwide, reefs are being decimated by massive outbreaks of coral bleaching. Now, more than ever, scientists are looking to non-tropical corals as models so that we may learn all that we can to conserve and protect our quickly disappearing and treasured natural resources.

Naming the Northern Star Coral as the official State Coral of Rhode Island will help the development of new K-12 STEM curriculum modules that address global issues like climate literacy and encourage students to engage with local ecosystems.

On March 5, 2021, the Boston Globe published a story about the effort to create a state coral designation and the myriad research opportunities offered by our local coral:
<https://www.bostonglobe.com/2021/03/05/metro/making-push-rhode-island-state-coral/>.

In summary, the Northern Star Coral is well-positioned to serve the state of Rhode Island as an emblem for research, education, and conservation. Naming it the official Rhode Island State Coral will further enable and acknowledge innovative science, education, and outreach work that Rhode Islanders are doing with this wonderfully unique organism.

I support the passage of H 5415 and respectfully ask the committee to recommend approval.

Sincerely,

Koty Sharp, Ph.D.
Associate Professor
Biology & Marine Biology