

UC San Diego

# UC San Diego News Center

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## Neither Myth Nor Legend, Seadragon Mysteries Are Still to be Solved

*New exhibition at Birch Aquarium aims to understand and breed these unusual fish*



*With its new exhibition *Seadragons & Seahorses*, Birch Aquarium at Scripps aims to be the first to breed Leafy Seadragons, above, in captivity. Photos by Erik Jepsen/UC San Diego Publications*

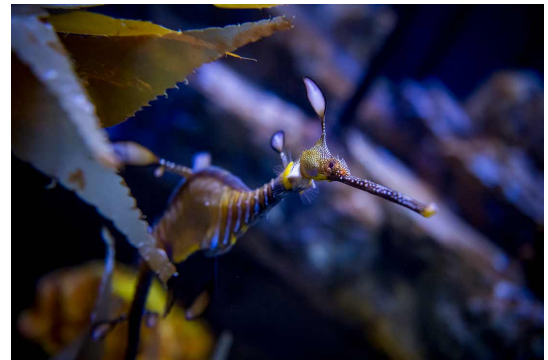
**T**he opening of *Seahorses & Seadragons*, the newest exhibition at Birch Aquarium at Scripps Institution of Oceanography, celebrates more than a family friendly attraction; it also marks the opening of a state-of-the-art research laboratory for scientists and husbandry teams to gain a better understanding of some very unusual fish.

The exhibition aims to breed seadragons in captivity and help scientists answer basic questions about the species. Currently, the most common answer to complex seadragon questions is: “We just don’t know.”

Leafy and Weedy Seadragons are the highlight of the exhibition, and their new space has been designed with input from Scripps Oceanography researchers along with decades of experience from Birch Aquarium’s renowned husbandry team. Both have studied seadragons in the wild, and contributed that knowledge to inform everything from the artificial seaweed habitat to the depth of the exhibit to ensure room for mating behaviors.

Both Leafy and Weedy Seadragons perform elaborate mating displays, where partners spin together snout-to-snout and move up and down in the water column. This “dance” is essential for the successful transfer of eggs from the female onto the male’s specialized tail, where he fertilizes the eggs. If mating is successful and eggs are deposited, the male will protect the eggs until they hatch about six weeks later.

Weedy Seadragons have been bred successfully in captivity just a handful of times with limited success in the last 30 years. The more ornate Leafy Seadragons have never been bred in captivity, and aquarium staff hope the new 9-foot-tall, 5,375-gallon habitat gives these ethereal creatures the space they need to ensure mating success. It is believed there are only 11 Leafy Seadragons on public display globally, and three live at Birch Aquarium.



*Like a game of “I Spy” aquarium guests search the exhibition for all 11 expertly camouflaged Weedy Seadragons, above, who blend in perfectly with their habitat.*

“Birch Aquarium’s husbandry team has been committed to breeding seahorses and seadragons for 25 years,” said Jennifer Nero Moffatt, the aquarium’s senior director of animal care, science and conservation. “Seahorses and seadragons alike are threatened by human impact in the wild, and our conservation program aims to relieve pressures, provide sanctuary and promote research of wild and captive animals to help conserve these charismatic creatures.”

Once listed as “near threatened” by the ICUN, International Union for the Conservation of Nature, the conservation statuses of both Leafy and Weedy Seadragons have been downgraded to “least concern” because of the lack of population data. Their remote habitat

along Australia's rugged and underpopulated South Coast makes observation difficult. This isolation, combined with their expert camouflage, makes population counts challenging even for the most experienced seadragon-spotters.

The lack of seadragon population data highlights the important research done by Scripps Oceanography's Greg Rouse and his team of genetic scientists, who work hand-in-hand with Birch Aquarium. Not only did their genetic research result in the discovery of the rarely seen Ruby Seadragon, it also gives researchers the opportunity to better understand seadragon populations as a whole.

Genetic research has become essential to seadragon conservation in the wild and captivity. Genetic studies of wild Leafy Seadragons show there are two genetically distinct populations that are geographically separated by the sea between Tasmania and mainland Australia. This knowledge informs both wild population management and breeding practices in captivity around the world. There is still much to learn about how the population is changing in the wild, and Scripps Oceanography scientists are working on long-term studies to find answers.



*More than 460,000 guests visit Birch Aquarium each year to learn about unique marine species, ocean conservation, and UC San Diego research.*

“People come in and are blown away; they didn’t even know creatures like seadragons existed,” said Lesslee Matsushige, associate curator at Birch Aquarium “That first impression inspires excitement and wonder, which doesn’t happen all the time with ocean animals. We

hope that feeling inspires guests to protect seadragons and the ocean. That's why exhibitions like this matter; they provide invaluable conservation research opportunities and inspire ocean advocates."

Seadragons and seahorses face challenges in the wild: climate change, warming ocean, compromised habitats, destructive fishing practices like bottom trawling, and unsustainable collection practices for home aquariums and traditional medicine. Since 1995, Birch Aquarium has bred 13 different seahorse species, sharing more than 5,000 juvenile seahorses with other aquariums around the world. This alleviates pressure on wild populations and contributes to Species Survival Plans, as outlined by The Association of Zoos and Aquariums.

"People love ocean animals, especially seadragons and seahorses. We invite our guests to draw closer to these wondrous fish, to appreciate their amazing qualities and their value as part of our natural world," said Nan Renner, the aquarium's senior director of learning design and innovation.

The exhibition launches with inspiration and conservation at the forefront. Those who visit *Seadragons & Seahorses* will be inspired to understand and protect these unusual species, ensuring their survival for generations to come.

*Seadragons & Seahorses* opened at Birch Aquarium on May 17 and is designed to immerse guests in the underwater worlds of seahorses and seadragons. Rich colors, large-format photos, lighting, and the use of multimedia unify the gallery space with tropical and temperate aquarium habitats.



*Potbellied Seahorses are also featured in the exhibition, and are one of the 13 species of seahorses in Birch Aquarium's breeding program.*

The design elements draw guests closer to the animals, allowing them to feel connected with nature as the aquarium strives to drive compassion and empathy for life on our planet.

*Seadragons & Seahorses* is included in the cost of Birch Aquarium admission, which is \$19.50 for adults, \$15 for children (3-17). General admission discounts are available for UC San Diego Students; and discounted memberships are available for UC San Diego faculty and staff. For more information, visit the [Birch Aquarium website](#).