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Australian Sea Plant

by Margaret Osborne

1 Scientists have discovered the world's largest plant – a seagrass in Australia that grew more than 70 square miles by repeatedly cloning itself. The plant, called Poseidon's ribbon weed or *Posidonia australis*, is about 4,500 years old, according to a study published in *Proceedings of the Royal Society B*.

2 "It's the largest known example of a clone in any environment on Earth," co-author Elizabeth Sinclair from the University of Western Australia tells *New Scientist*'s Alice Klein. It is "arguably the world's largest living organism," writes Kate Golembiewski for the *New York Times*.

3 As part of a survey, researchers collected samples from ten seagrass meadows across Western Australia's Shark Bay, about 500 miles north of Perth, and studied 18,000 genetic markers to test how many different plants grew in the area.

4 **[…]**

5 "Polyploid plants often reside in places with extreme environmental conditions, are often sterile, but can continue to grow if left undisturbed, and this giant seagrass has done just that," Sinclair says. "Even without successful flowering and seed production, it appears to be really resilient, experiencing a wide range of temperatures and saltiness plus extreme

high light conditions, which together would typically be highly stressful for most plants."

6 In 2010 and 2011, a heatwave hit Western Australia, damaging Shark Bay's seagrass meadows. Though the ribbon weed was impacted, it has already begun to recover, the study shows. "This is somewhat surprising, as this seagrass does not appear to reproduce sexually – which would normally be the best way to adapt to changing conditions," write the researchers in *The Conversation*. The scientists suspect that the seagrass is extremely well-adapted to its local environment, on the edge of its species' range. In places like these, species that reproduce by cloning themselves rapidly and repeatedly may adapt better and more quickly than species that reproduce sexually, which can be a slower process.

7 Seagrasses help purify water, are carbon sinks and host a large number of other species, which is why they are important to protect, Marlene Jahnke, a biologist at the University of Gothenburg in Sweden who was not involved in the research, tells *The Times*.

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