

Seagrass hitches a ride on ocean currents, marine life

October 29 2014, by Narelle Towie



Posidonia australis seagrass. Credit: Kathryn McMahon

WA scientists have unlocked the travel secrets of seagrass, including migration patterns which they say are key to safeguarding the plant's future.

For more than a year, Edith Cowan University, University of WA, University of Adelaide and Murdoch University researchers collated studies from around the world on seagrass movement.

The work revealed the coastal plant is novel for its ability to travel across the globe at such wildly differing speeds.

ECU researcher Dr Kathryn McMahon says while seagrass fruit and [flowers](#) float hundreds of kilometres in just a few weeks, [plants](#) growing on the ocean floor can take thousands of years to spread over a similar distance.

"This is the first time we have looked at seagrass within a movement ecology framework to understand the significance of its movement," she says.

Seagrasses, like land grasses, produce flowers and seeds and grow into vast meadows that support thousands of animals and store carbon.

But different species are under threat from coastal development, pollution and [climate change](#).

The researchers say the plant's ability to spread over such vast distances could protect the species against the effects of climate change and allow it to migrate to recover from disturbance.

Scientists have found that seagrasses move through the ocean in five ways.



Buoyant fruits of *P. australis*. Credit: Michelle Waycott

Despite being rooted in sediment, the plant's flowers and seeds can hitch a ride on currents on the ocean's surface or through water columns.

The plant can also spread through animal faeces after being consumed by sea creatures such as dugongs or turtles; through sediment movement along the seafloor; or by individual plants growing like lawn over thousands of years.

Dr McMahon says this spread is possible because of the longevity of some seagrass species, including the Australian *Posidonia* family, which lives for more than 100,000 years.

"If areas get degraded, then there is the potential for new populations to come in and recover that area, because they have that ability to move," Dr McMahon says.

Spreading by seeds is the best way for seagrasses to survive global

threats and for humans to improve degraded seagrass habitat, but it was the least understood, the researchers found.

"There are about 60 species of [seagrasses](#) around the world, about 14 genera and out of those genera we could only really look at three where we had enough information to understand how their pollen or fruit would move," Dr McMahon says.

Provided by Science Network WA

Citation: Seagrass hitches a ride on ocean currents, marine life (2014, October 29) retrieved 9 April 2024 from <https://phys.org/news/2014-10-seagrass-hitches-ocean-currents-marine.html>

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