Seagrass meadow found to be composed of extremely old, large organisms

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Mediterranean seagrass meadows contain genetically identical clones up to 15 kilometers apart, suggesting that these organisms must be thousands to tens of thousands of years old, as reported in the Feb. 1 issue of the online journal *PLoS ONE*.

The seagrass, *Posidonia oceanica*, reproduces asexually, which can result in single organisms that are very large and very old. To investigate the *P. oceanica* meadow, the researchers, led by Sophie Arnaud-Haond of the French Research Institute for Exploration of the Sea (IFREMER) and The University of the Algarve in Portugal and Carlos M. Duarte from the CSIC-IMEDEA in Spain, sampled populations across 3500 kilometers of the Mediterranean. Not all the seagrass they found was genetically identical, but those that were suggest both extreme size and age.

Seagrasses are the basis of essential coastal ecosystems but are waning worldwide, and *P. oceanica* meadows are declining at an estimated rate of about 5% per year. The results reported in PLoS ONE suggest that clones of that species have adapted to a broad range of environmental conditions, but the unprecedented rate of global climate change, together with the steep decline in seagrasses already observed for the past 20 years, are raising serious concerns about the continued survival of this long-lived species.

More information: Arnaud-Haond S, Duarte CM, Diaz-Almela E, Marba` N, Sintes T, et al. (2012) Implications of Extreme Life Span in

Clonal Organisms: Millenary Clones in Meadows of the Threatened Seagrass Posidonia oceanica. PLoS ONE 7(2): e30454. doi:10.1371/journal.pone.0030454