The Diversity and Resilience of Kelp Ecosystems in Ireland (KelpRes)
Dr. Kathryn Schoenrock
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Ireland

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Ireland

Description of Project

1. Gain a better understanding of population distributions and the technology required to keep track of distribution shifts in the future.

2. Evolutionary aspects: The capacity of heritable material to foster adaptation of populations under selective pressure.

3. Ecological aspects: Ability (via 'spore banks') of a system to respond to disturbance through resistance or recovery.

4. Our work will lead to tools that can be used by everyone to help monitor kelp forest distribution and health, and report back to sources like the National Biodiversity Data Centre

	Month Description		2019			2020	
		Jan-Apr	May-Aug	Sep-Dec	Jan-Apr	May-Aug	Sep-Dec
WP1	**Historical kelp forest distribution**						
WP1-1	Map historical distribution of *L. hyperborea*	�					
WP1-2	ID 'indicator species' using meta-analysis		▓				
WP2	**Seascape genetics**						
WP2-1	Kelp collections throughout Ireland (Fig.1)		▓	▓			
WP2-2	Molecular work at UAB			▓			
WP2-3	Data analysis			▓			
WP3	**Spore' bank quantification**						
WP3-1	Seasonal collections of biofilms		▓	▓	▓	▓	
WP3-2	Microscopy		▓	▓	▓	▓	
WP3-3	Molecular lab work						
WP4	**Monitoring tools for future kelp forests**						
WP4-1	Data synthesis					▓	▓
WP4-2	Develop monitoring tools					▓	▓
WP4-3	Platform for data transfer to NBDC					▓	▓

Water JPI

Project Team

Dr. Kathryn Schoenrock
Dr. Anne Marie Power
Dr. Aaron Golden
Dr. Stacy Krueger-Hadfield
RA, Kenan Chan
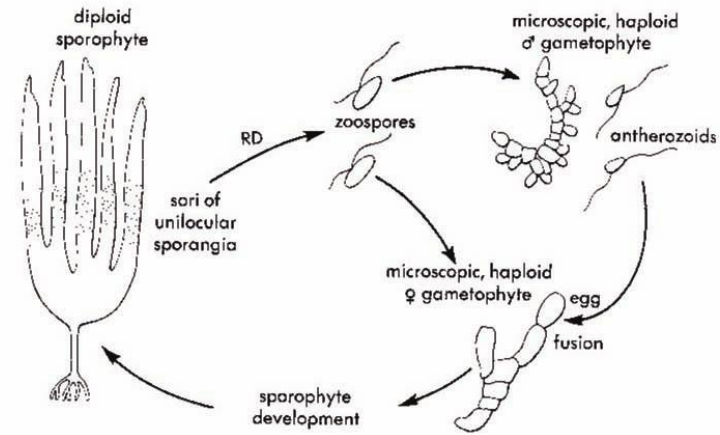Seasearch Ireland (Tony and Rory O'Callaghan)
National Biodiversity Data Centre

➢ Researchers, Citizen Science Coordinators and a National Data Repository for Biological Information

Expected Outcomes

Collection of bedrock with biofilms will allow us to enumerate presence/absence of spores and gametophytes in N and S, year round.

Molecular ID can help decipher species ID of cryptic propagules and in lab cultures can help ID maturation and growth of different stages.

More kelp tissue collections to better understand dispersal and highlight diverse regions.

Identify Possible Synergies with the other TAP projects

Comparison proposed methodologies testing ecosystem resilience in terrestrial and freshwater systems.

Public communication outlets for novel and applied projects

Infrastructure for cross-discipline research

What would we would like to gain from today

Communicate our research plans and find connections across countries and disciplines

Better understand the type and pace of research within the JPI

Foster new ideas for integrating our research with the public view of marine ecosystems and sustainability under climate change influences.