

WBP ACADEMIC/VOLUNTEER RESEARCH PROJECT PROPOSAL 6

Project title:	Ecological implications of <i>Sargassum muticum</i> for protected marine habitats in Wales and options for management		
Lead Organisation:	Natural Resources Wales	Project leader:	Lucy Kay
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Collaborating institutions:	Gwynedd County Council		
Location:			
Start date:		Completion required by:	
Project rational/ What is the specific question being asked?			
<p>This project proposes a review of existing knowledge about the implications of the brown alga <i>Sargassum muticum</i> (wireweed) on the ecological functioning of protected marine habitats in Wales and assessment of options to manage the spread of this species within protected marine habitats.</p> <p><i>Sargassum muticum</i> has become established in many locations around the coast of Wales over the past 10-15 years. In some locations it now forms a dense zone in the lower shore/shallow sublittoral (e.g. Menai Strait) whereas in others, its abundance is still relatively low. However, there is clear evidence that the presence of a low number of individuals can rapidly expand to a situation where the indigenous community is dominated by <i>Sargassum</i>.</p> <p>In terms of Marine Protected Areas (MPA) management there has been little agreement as to what, if anything, should be done to address invasions of this species into habitats that are part of the designated features of a protected site. Local attempts at removal in some locations have not been successful and this has led to a view that it is an unmanageable problem in all situations (although that has not been proven) and that we have to just accept the consequences of this species becoming established within native communities.</p> <p>Although studies have been undertaken to investigate the implications of <i>Sargassum</i> for some marine habitats, there is a need for a review of existing knowledge and assessment of the wider impact on ecological functioning of native marine communities – for MPA management this should focus on specific protected intertidal and marine habitats & communities where <i>Sargassum</i> has become/is becoming established.</p> <p>Further to this there is a need for objective consideration of possible options for management to address invasion of <i>Sargassum</i> in specific habitats and trialing of those options in selected locations.</p>			
Can this project be divided into more than one project? If yes, clarify above			
Aims: <ul style="list-style-type: none"> - Review of existing knowledge - Assessment of possible management options - Field trial of management options 			

whether *Sargassum muticum* is outcompeting *Laminaria hyperborea* in the shallow sublittoral, or *Laminaria digitata* on the sub fringe, of the Menai Strait (particularly between Church island to Brynsiencyn, especially around Nelsons column), and whether this is causing any wider impact?

Monitoring the Sargassum population in Porth Dinllaen and assessing whether its reported increase in recent years is threatening the seagrass bed there. As it settles on pebbles, it may be possible to trial an eradication by removing all infected cobbles or pebbles to give the seagrass a break.

Scale of project?	Site-specific? Name site & any designation.	Range of sites? Name sites & any/ designation.	Suggested site/s/locations?	
Review & practical fieldwork.	Suggest north Wales	Suggest Menai Strait & Conwy Bay SAC and Pen Llŷn a'r Sarnau SAC	Menai Strait Porth Dinllaen Llanbedrog Afon Wen	
Access to previous data/reports on site?		YES/NO	RA ¹ attached	YES/NO
Logistics managed by:	Lead Organization	YES/NO	Researcher	YES/NO
Opportunity for follow-on student placement with Lead Organisation?				YES/NO
Training element/skills required:				
Expected deliverables:				
Resources required:				
Any special considerations:				

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¹ RA: Risk Assessment