

# A mission in seaweed

Laura Marcos Widmer joins the pioneering Seaweed Team at SAMS for an 8-week summer science internship funded through the generous contributions made by B Corp and business management experts Mission Performance, and their clients.

The donations have been received via their 'Mission Investment' programme - an innovative new approach which offers a more connected and transparent approach to their carbon offset ambitions, via direct investment in global and local community projects.



Laura is a UHI SAMS undergraduate about to go into her final year, and this internship has been designed to give her hands on practical experience, bridging the important transition from academia to the workplace. Laura will be undertaking everything from field sampling this year's seaweed from the SAMS seaweed farm, through to environmental monitoring and lab-based biomass analysis.

This internship will feed into a larger research project, the International Bioeconomy and Macroalgae Centre (IBMC), which is led by UC Berkeley and SAMS are partner of (funded by UKRI BBSRC). The results Laura is generating will feed directly into a publication on a new species we have started to grow as part of the project. She will be one of the authors for this publication.

The seaweed species SAMS are growing, and that Laura will work on, is *Saccorhiza polyschides* or Furbelow – although Prof Michele Stanley (Associate Director Science Enterprise and Innovation at SAMS) much prefers to call it "The Beast" - is the largest seaweed species found in Europe. It is seen as a "warm" water species, and historically it was harvested at the same time as other brown seaweed species for potash and alginate.



As seawater temperature continues to increase due to climate change, we will potentially see more Saccorhiza growing in areas like the South Coast of the UK, despite it having its own temperature limits. At the moment it is starting to

move northward, being seen less frequently in the most southernly geographically coastal areas it usually grows in, the coasts of Portugal.

We are trying to understand how it deals with temperature and how resilient it in will

be in terms of growth and composition. Saccorhiza has potential as a commercially grown species because of the sheer amount of biomass it can produce. This outstrips the two main kelp species that everyone currently grows.

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**This is where Laura steps in, helping us to find answers to the following questions:**



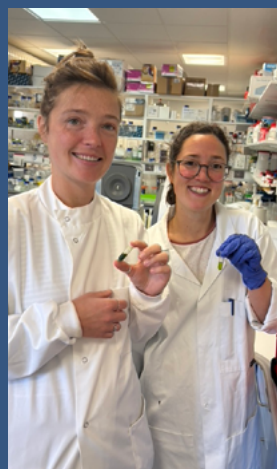
### **Restoration of seaweed beds**

As seawater temperature increases and Saccorhiza polyschides starts to be one of the domain species, how resilient will it be to further increases in temperature and does it have other implications?



### **Commercial & restorative aquaculture**

Is there a role for Saccorhiza? At the moment we think yes, especially when looking at markets which will need large amounts of biomass. But again, in cultivation areas where seawater temperatures are rising, might it offer farms in these areas an alternative crop?



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The internship will form part of a 2-year cultivation experiment with *S. polyschides*, which has seen different environmental conditions in terms of temperature, including a temperature spike this year. Laura will help to generate the data which starts to paint a picture of how Saccorhiza polyschides copes under everchanging environmental conditions, in the UK and across the globe.

**Huge thanks to Mission Performance and their clients for making this important research internship happen!**

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