

# The algae *Vaucheria sp.* spread due to successful adaption to different light environments

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## How *Vaucheria sp.* could adapt to varying light conditions on the lower shore?

Aquatic photosynthetic organisms face changes in light, temperature, and nutrient availability. The increasing occurrence of *Vaucheria* turfs in the highly dynamic shallow water environments of the Wadden Sea highlights the importance of understanding their adaptive capabilities in response to varying light conditions.

## We examine the photosynthetic characteristics and pigment dynamics

The research was conducted at two distinct sites at Sylt in the Wadden Sea, focusing on intertidal and subtidal environments during low tide in July, September, and November, using in vivo variable Chlorophyll a fluorescence and HPLC analysis to examine photosynthetic electron transport rates (ETR) and pigment concentrations.



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### References

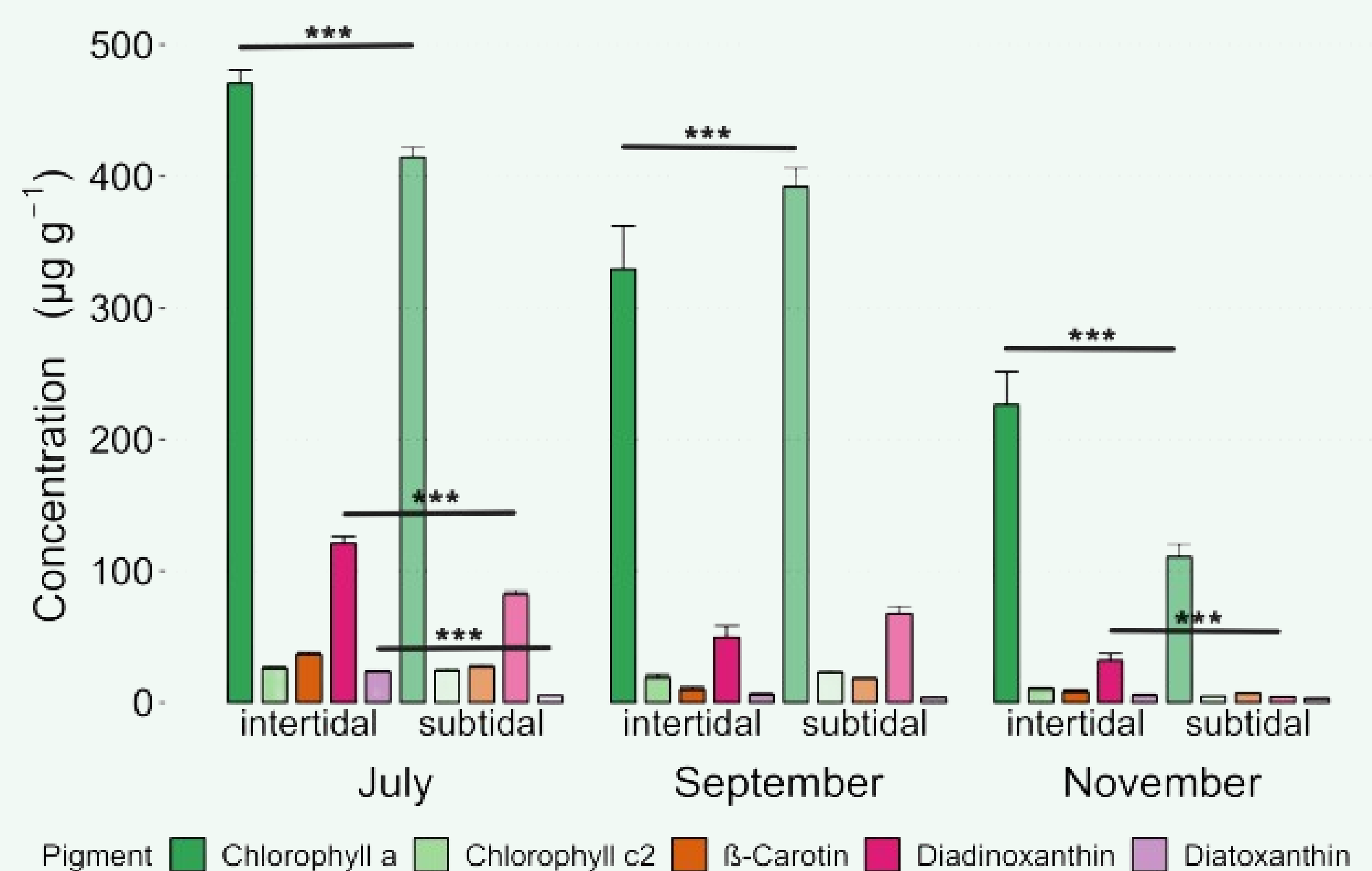
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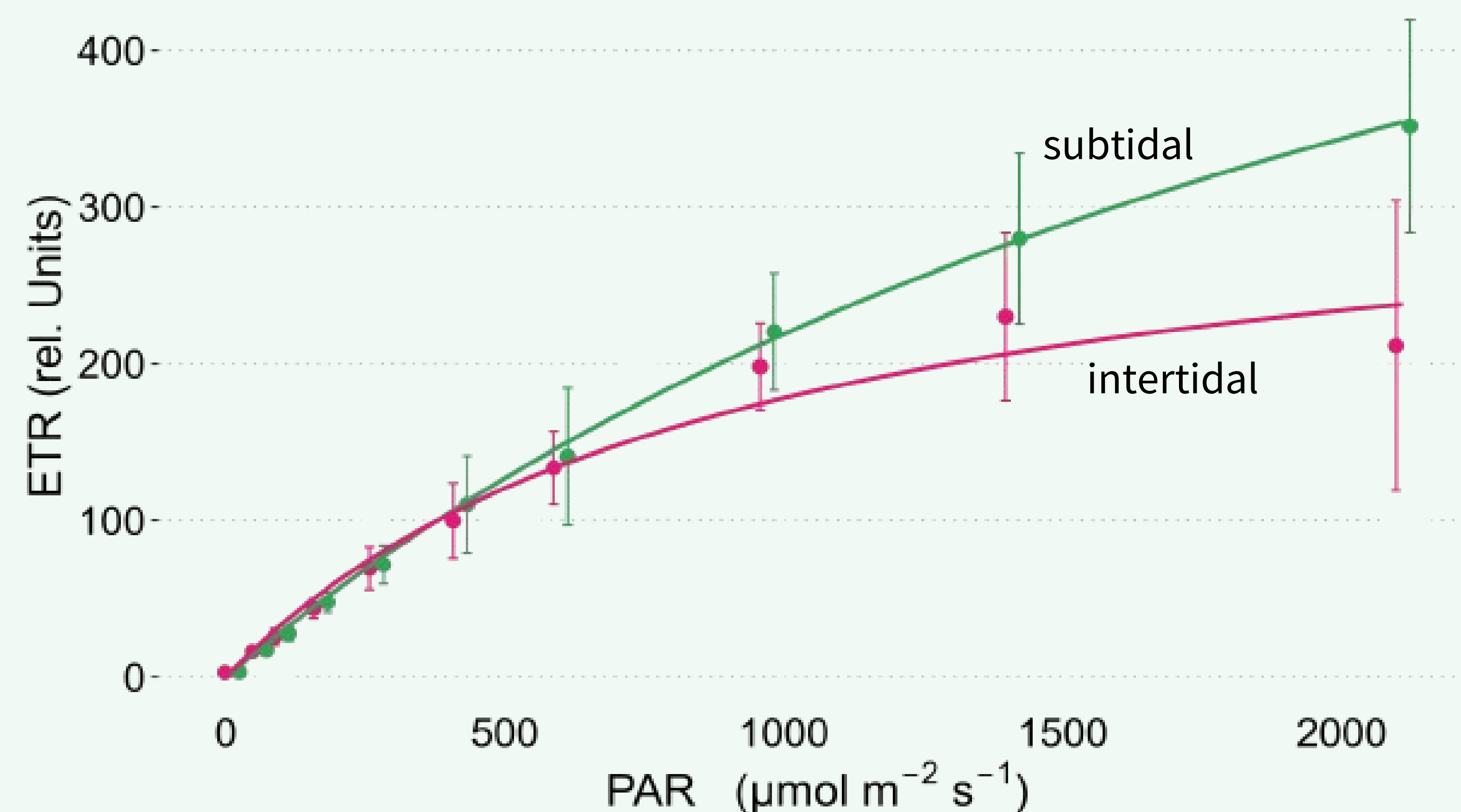
## Intertidal *Vaucheria sp.* has a higher pigment concentration

Pigment analyses reveal dynamic regulation of light harvesting and photoprotective mechanisms across temporal and spatial gradients



## Subtidal *Vaucheria sp.* demonstrates a higher photosynthetic capacity

Light curve measurements show a higher photosynthetic capacity by subtidal *Vaucheria* turfs, as indicated by a higher ETRmax and higher k values.



## GET IN TOUCH!

Are you also working with marine macroalgae? Let me know more about your research and what you think of this study.



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