

WHAT & WHO:

Unlocking the oyster microbiome to improve aquaculture in a rapidly changing climate. Our research has focused in the past on the effects of climate change on oysters and how those effects can be mitigated. This year, thanks to funding from the FRDC and ABARES Science Awards I will be investigating a new line of research.

Elliot Scanes – I work at the University of Sydney; my colleagues are Prof Pauline Ross (Univ. Sydney) and Laura Parker (UNSW). We partner with Wayne O'Connor at NSW DPI Port Stephens.

BACKGROUND:

Oysters are an Australian seafood icon and form the backbone of valuable aquaculture industries; they're also teeming with microscopic organisms like bacteria called microbes. The community of microbes or microbiome within oysters is vital to wellbeing, yet the microbiome of oysters is likely to shift as the earth's oceans warm, acidify and become less saline; destabilising the balance of beneficial and harmful microbes. This year's research will focus on how the microbiome of oysters is affected by the warming and acidifying oceans to affect oyster health and food safety.

WHAT WAS FOUND:

Past research has shown that oysters can be bred to be more resilient to warmer and acidified conditions. We will build on these findings to determine if this resilience is linked to the microbiome. Furthermore, we will explore whether we can cause beneficial changes in the oyster microbiome to improve food safety and oyster health.

HOW WILL THIS HELP THE OYSTER INDUSTRY:

We know that disease in oysters is closely related to their environment, an environment that is rapidly changing and could reshape the oyster industry over the next 50-100 years. This research will help inform oyster farmers on best practice to avoid disease and improve food safety in the coming decades.

FURTHER INFORMATION:

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