

Oyster ecosystems a huge loss for South Australia

February 19 2015, by David Ellis



An oyster fleet at Port Pirie in 1910. Credit: State Library of South Australia

Researchers at the University of Adelaide have discovered the loss of one of the State's most significant marine ecosystems, which may have disappeared some 70 years ago.

For her PhD in the University's School of Biological Sciences, Heidi Alleway and supervisor Professor Sean Connell identified the loss of oyster reefs, formed by the native oyster *Ostrea angasi*, from across more than 1500km of the South Australian coastline.

The findings of their research are published online ahead of print in the journal *Conservation Biology*.

"The implications of this loss are huge," Ms Alleway says.

"Ecologically these reefs would have supported diverse species of marine life, including commercial and recreational fish species, as well as provided stabilisation for soft sediments. These reefs have also deteriorated in Western Australia, Victoria and Tasmania, reflecting an issue that has been widespread," she says.

Professor Sean Connell suggests it is possible the loss of oyster reefs from South Australia's coastline has compounded issues associated with coastal water quality.

"Oyster reefs are the kidneys of coastal ecosystems," Professor Connell says. "These reefs played an extremely large role in filtering and maintaining good clean water."

The once abundant oyster reefs were overexploited in South Australia by commercial dredge fishing from the 1800s to the early 1900s. Legislation and management was introduced in the late 1800s to protect the reefs, which included minimum size limits, licensing and closed areas and seasons.



South Australian oyster workers in 1909. Credit: State Library of South Australia

Despite these efforts, no living native reefs are known to exist in South Australia today.

Ms Alleway says this research provides a foundation for the beginning of the recovery of *Ostrea angasi* and oyster reefs.

"The restoration of oyster reefs across South Australia is the next step," she says. "By recovering the historical baseline of oyster reef abundance we now have the opportunity to recover the ecological baseline."

Professor Connell says the lack of consideration for this species today is in striking contrast to the attention it was paid historically. "We attribute this to 'collective amnesia', whereby the past distribution and abundance

of [oyster reefs](#) has been forgotten," he says.

More information: "Loss of an ecological baseline through the eradication of oyster reefs from coastal ecosystems and human memory" *Conservation Biology*. doi: 10.1111/cobi.12452

Provided by University of Adelaide

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