

Pacific oyster *Crassostrea gigas* control within the inter-tidal zone of the North East Kent European Marine Sites, UK

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In 1964 Pacific oysters were imported to the United Kingdom from British Columbia by the Ministry of Agriculture, Food and Fisheries. The aim was to assist the shellfish industry by identifying an alternative species following the decline of the native oyster *Ostrea edulis*. Field trials conducted around the UK confirmed that the Pacific oyster was commercially viable (Spencer, 1990). Pacific oysters were not considered capable of proliferation in northern European waters due to low sea temperatures. However in the 1990's wild populations were recorded in Devon (Couzens, 2006). Since then further settlement has been recorded in Essex and Kent. Similar settlement was seen in other European nations such as France, Ireland and The Netherlands (Fey *et al.*, 2010).

In 2007 Kent Wildlife Trust recorded Pacific oysters at levels not previously seen within the North East Kent European Marine Sites (NEKEMS). In response, Natural England commissioned a research project to establish a baseline record of inter-tidal distribution and density. This led to a monitoring programme and the identification of Western Undercliff, Ramsgate as a recruitment hotspot suitable for testing control work. The purpose of this work was to assess the effectiveness of control measures undertaken by volunteer labour to impede the spread of wild Pacific oysters and limit the damage to designated features within the inter-tidal zone of the NEKEMS. This was achieved by conducting a one-year field trial from July 2012 until July 2013 at a selected location during which a small group of volunteers physically reduced the number of oysters towards a pre-determined target. A similar trial had taken place in Strangford Lough, Northern Ireland (Guy, 2010). Control of non-native species within a protected area was seen as a specialist activity and was supervised directly by Natural England complying with the Department for Environment, Food and Rural Affairs three-stage hierarchical approach to non-native species policy (DEFRA, 2008). The effectiveness of the project was determined by data collected prior to and during the period of the trial. The location had been selected from the management scheme's monitoring programme because of the large number of oysters present, high levels of annual recruitment and the threat to native species and biotopes. It was considered that these factors would present a credible challenge to the volunteer workforce. Trial data indicated that oyster numbers were considerably reduced within the trial zone but had increased at each of three control sites in adjacent zones. The method used had minimal impact on native species and habitats but was labour intensive warranting the use of volunteers. No health and safety incidents were recorded. Natural England is currently assessing the trial in terms of effectiveness, sustainability and as a management option for controlling selected Pacific oyster populations.

References

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