

17. Crustaceologen-Tagung, 26. bis 29. März 2015, Bremerhaven, Deutschland

Lobster release at the offshore wind farm *Riffgat* German Bight (North Sea) – preliminary results

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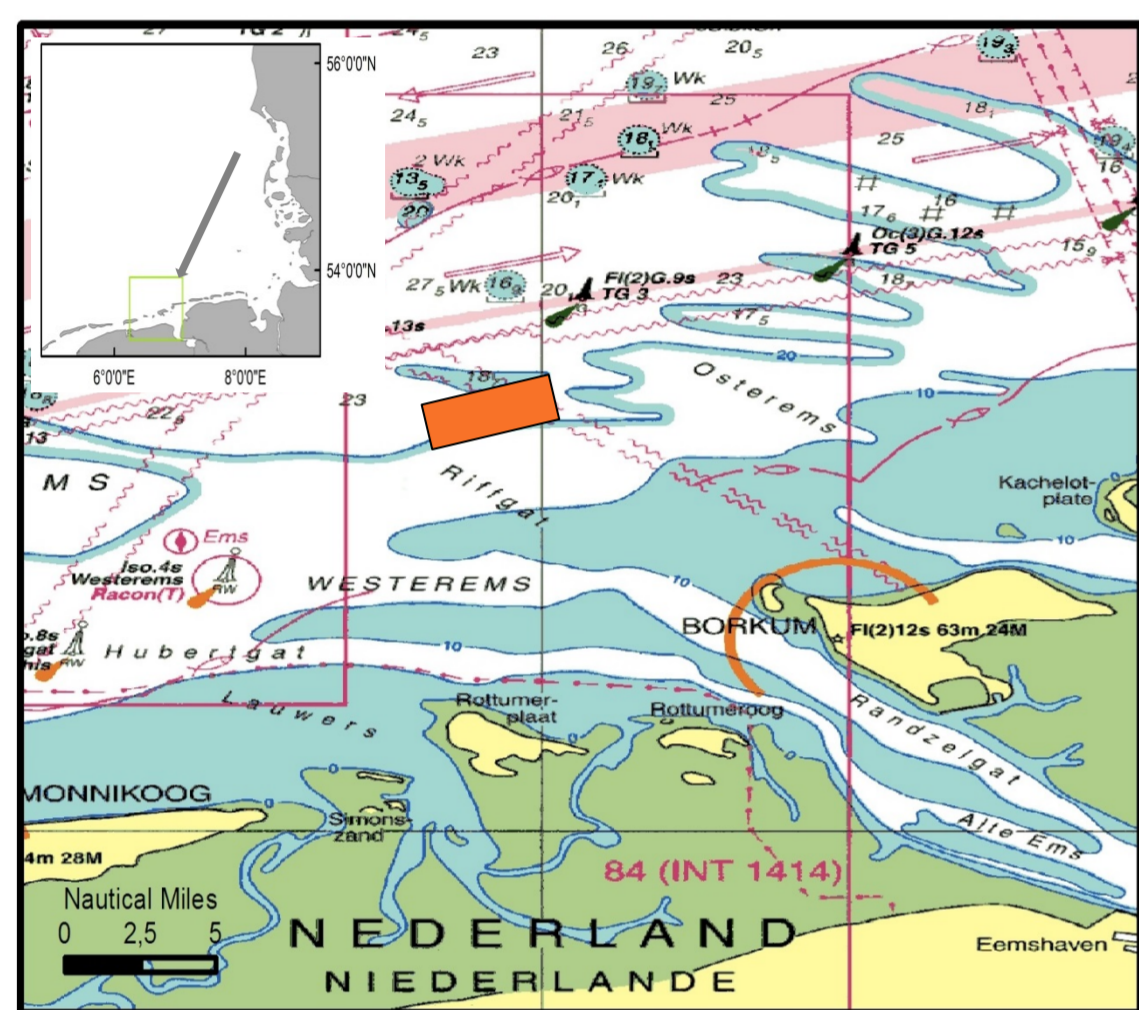


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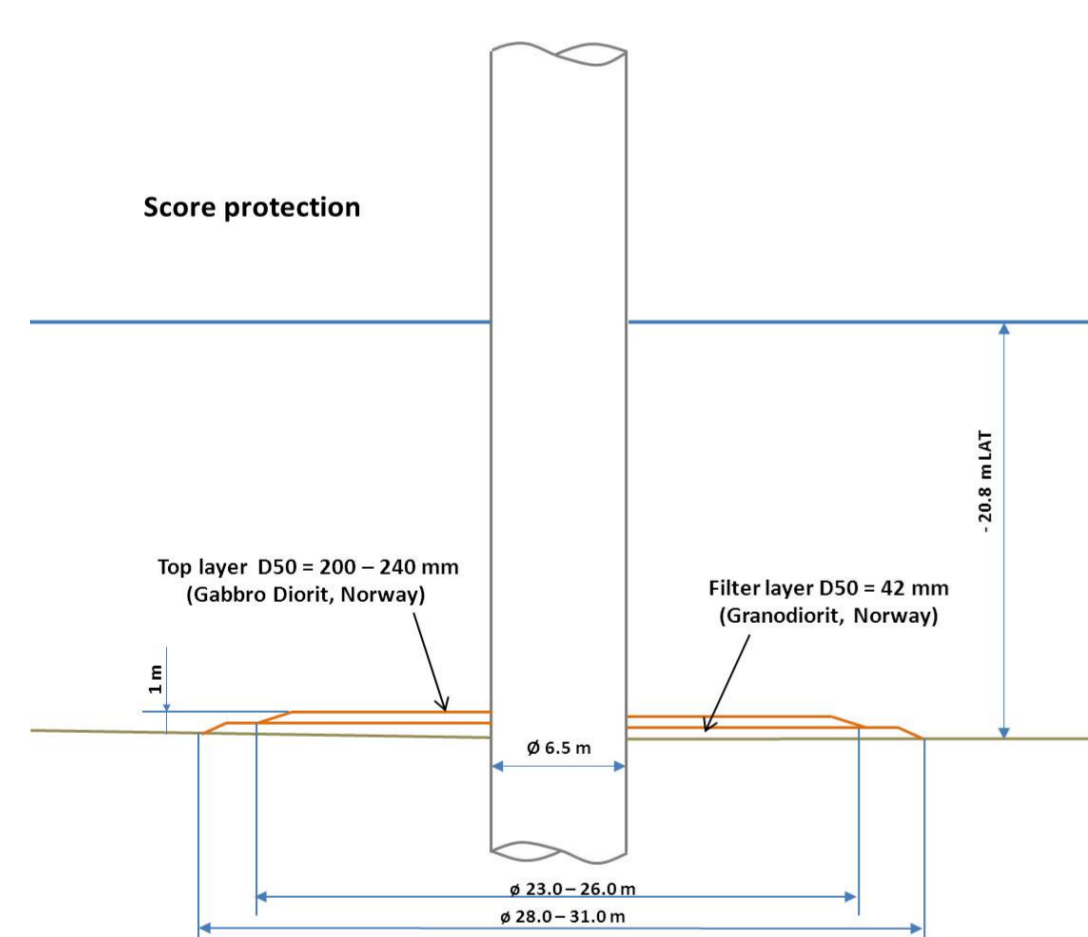
Background The European lobster (*Homarus gammarus*) population around the island of Helgoland has been stagnating on a very low level for many decades. A mark-recapture study of hatchery-reared juvenile lobsters at the rocky island of Helgoland has shown that released lobsters are strong fidelity to their release sites. The present pilot project aims to test an offshore wind farm as a suitable habitat for lobsters. A successful settlement of lobsters at the underwater structures of wind farms would clearly contribute to ensure the persistence of this endangered species along the German coast. In summer 2014, 2,400 hatchery-reared and marked juvenile individuals of the Helgoland lobster stock had been released at the scour protections of the wind farm *Riffgat*. Subjects of investigation predominantly concern a) the density of released individuals necessary for a successful settlement at offshore structures and b) the development of the native mobile demersal megafauna at the release sites. The poster presents the lobster hatchery, the fauna inhabiting the scour protections and the successful release of lobsters.

Wind farm *Riffgat*

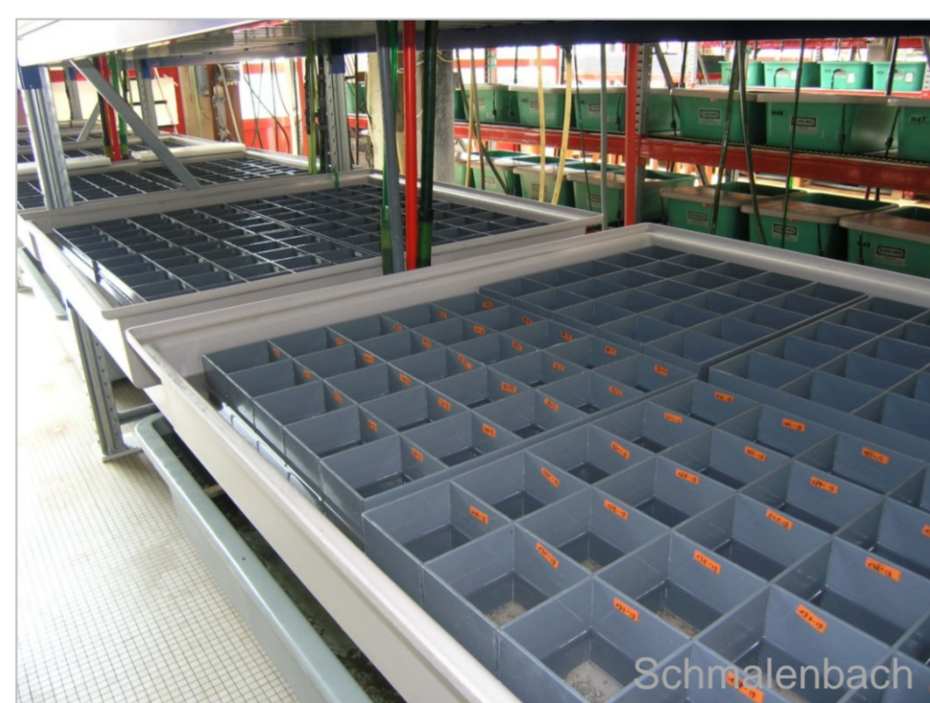


30 monopiles completed in 2013.

Scour protection



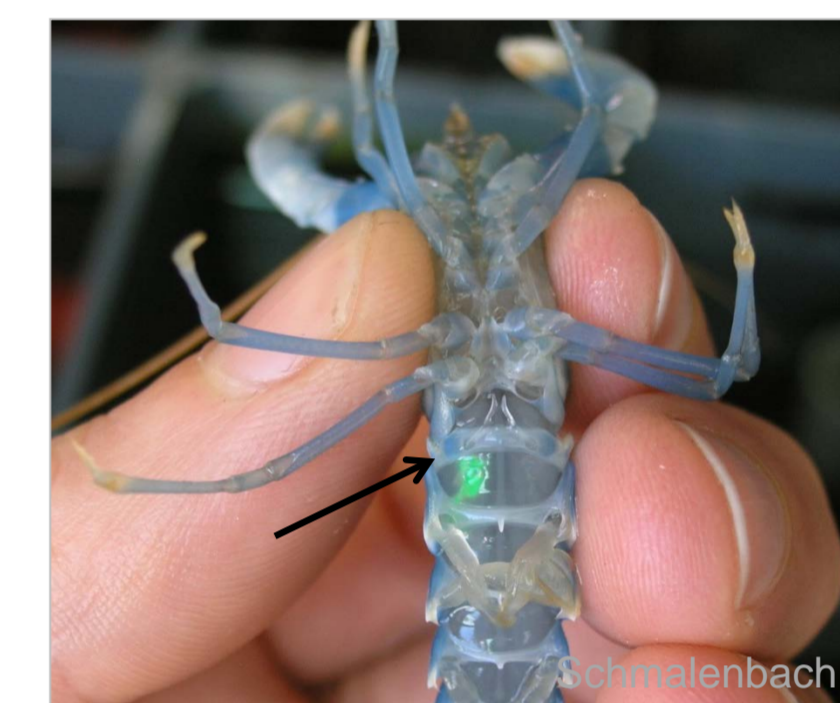
Lobster hatchery and tagging (spring 2013- 2014)



For the lobster hatchery a patented tide simulating system was applied (poster Schmalenbach et al.).

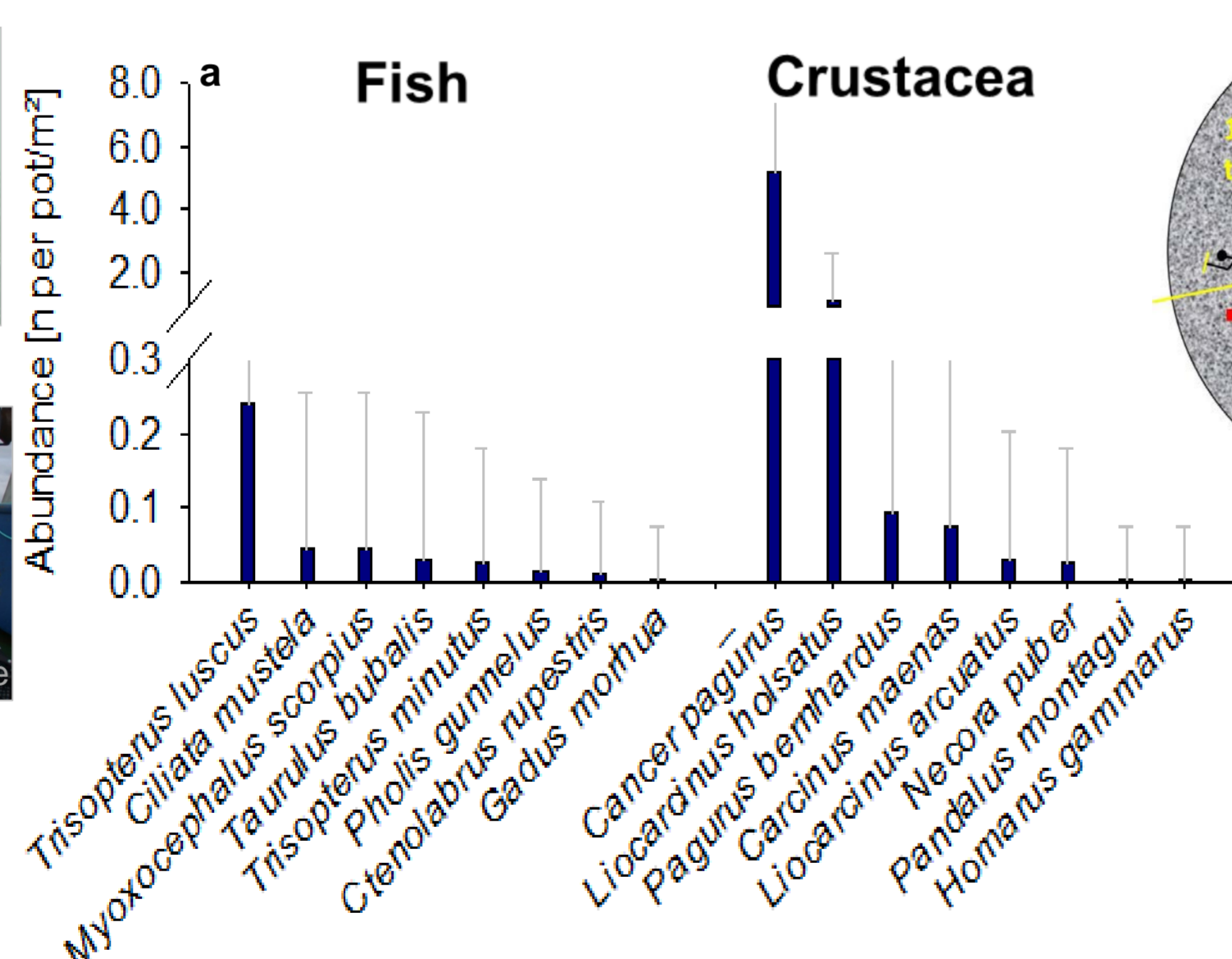
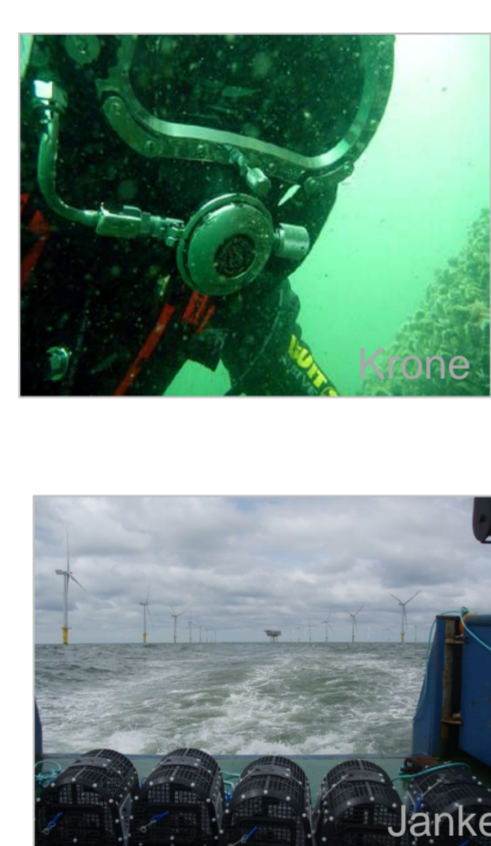


Each lobster lives in its own compartment to prevent cannibalism.

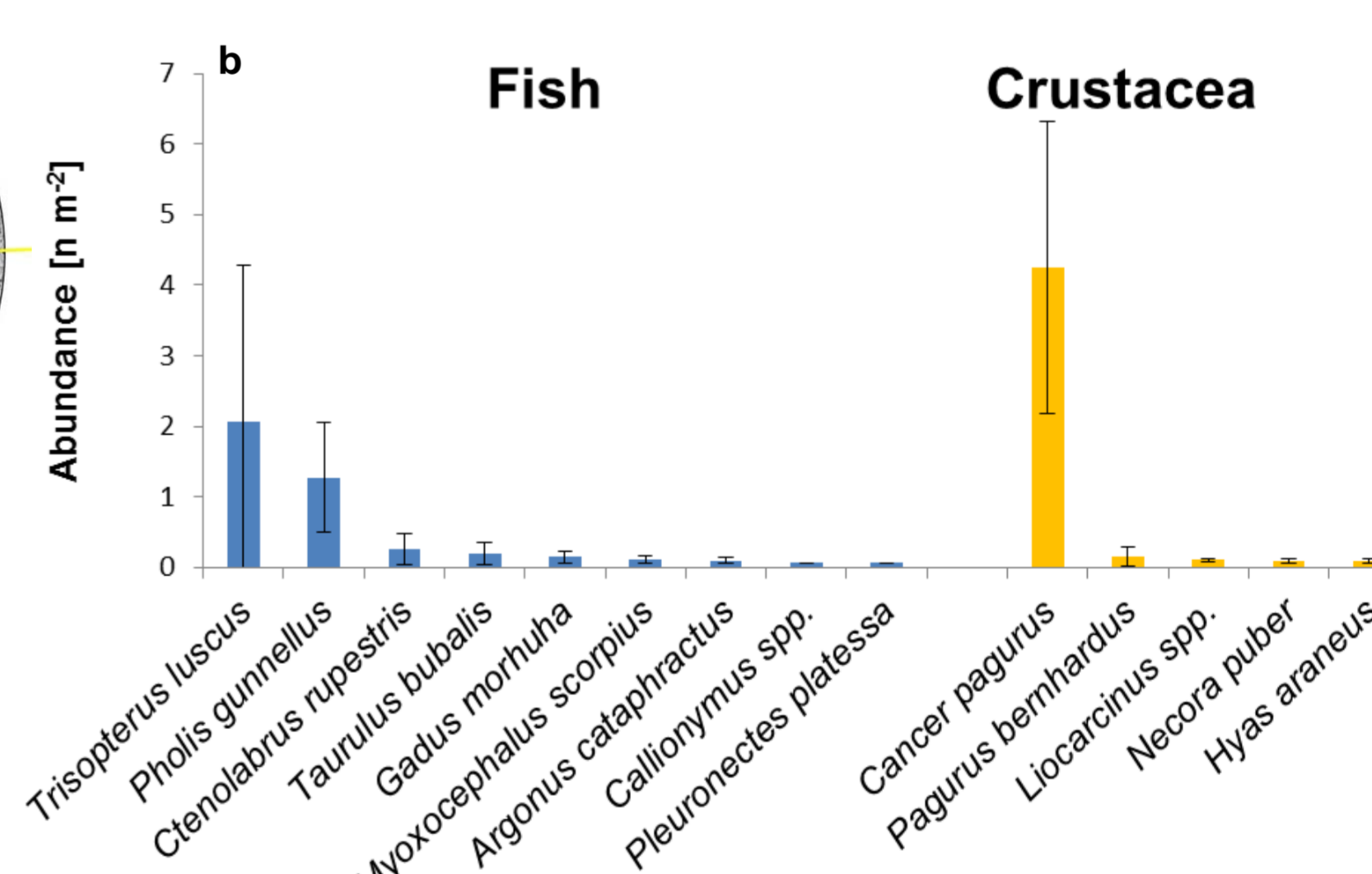
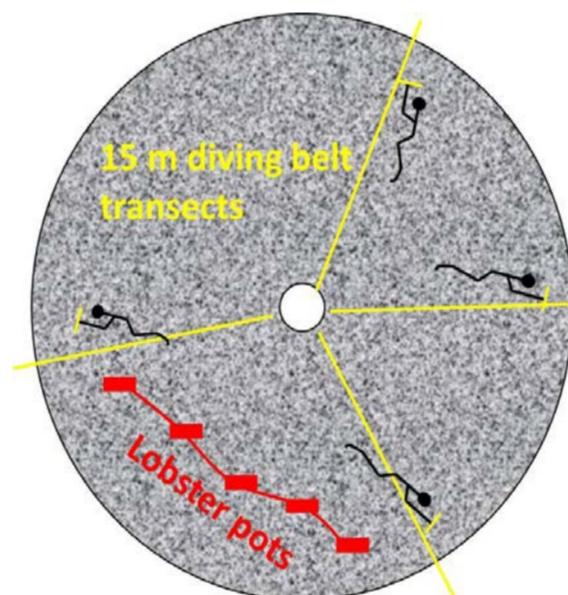


Elastomer tags (arrow) are injected under intersegmental membranes. Fluoresce revisable under UV light ≥ 5 yr.

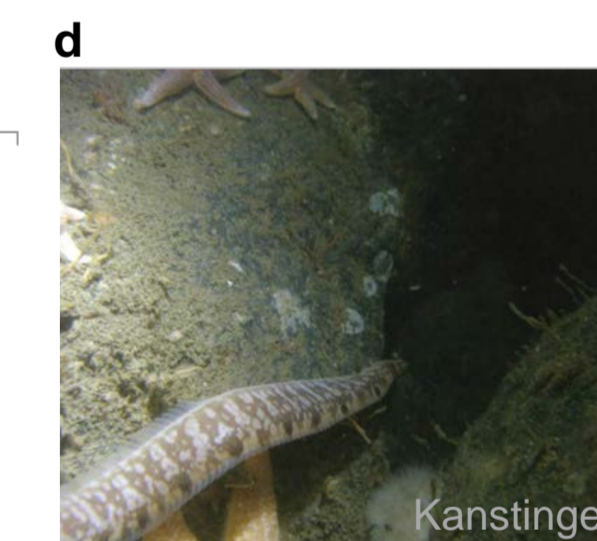
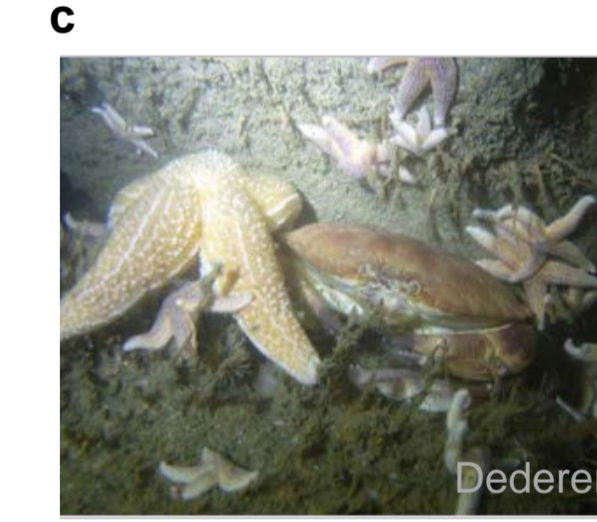
Baseline study in summer 2014: Surface supplied diving belt transects and pot fishery



Pot fishery and standardised diving transects were applied at scour protections for mobile demersal megafauna quantifications.

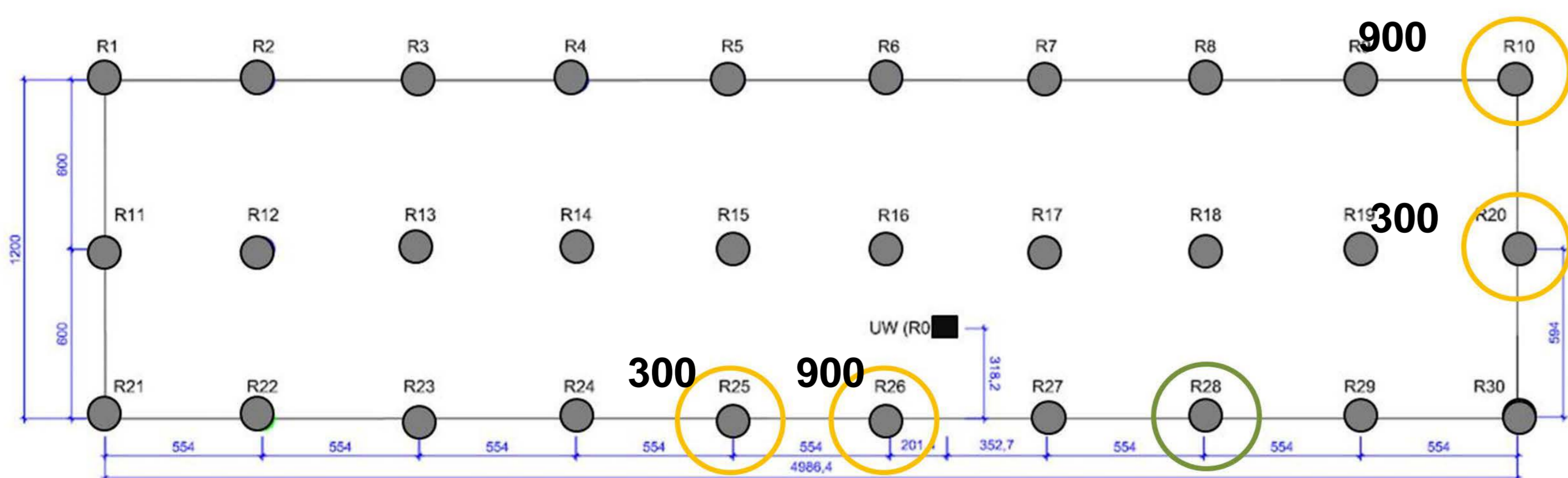


Results of pot fishery (a) diving transects (b). Megafauna community at the scour protections.

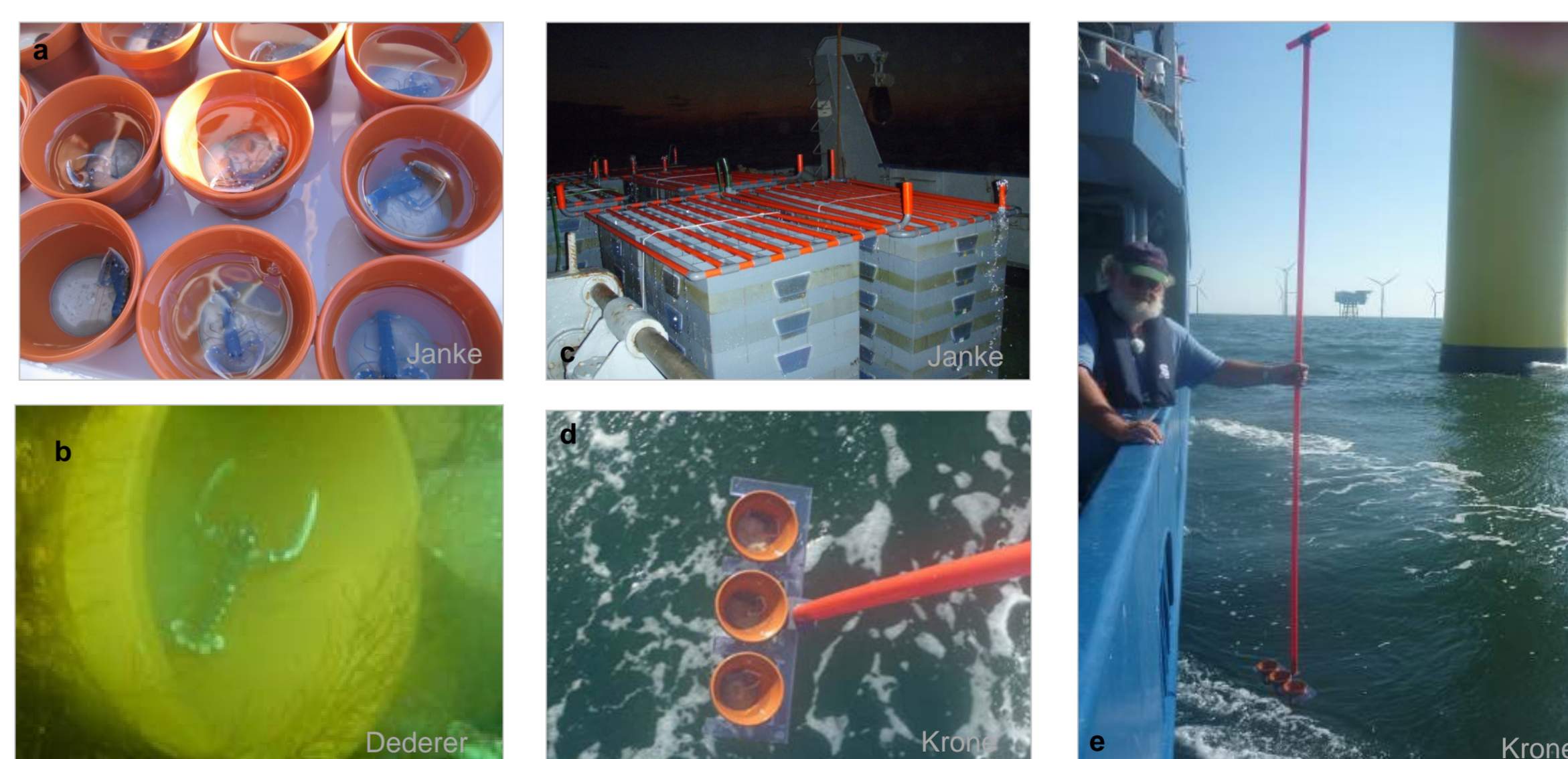


Dominant benthic species *C. pagurus* (c) and *P. gunnellus* (d) at the scour protections.

Experimental design and lobster release technique



2,400 marked juvenile individuals (total length 8-10 cm) were successfully released at four scour protections. Orange circle = release sites and numbers of lobsters released; green circle = reference site.



Each lobster were released in a personal flowerpot. The lobster hide inside the pot until it arrives the sea floor. This technique was successfully tested at Helgoland (a, b). The lobsters were transported over night (c) and released at *Riffgat* during neap tide in the morning (d, e).