

## Juvenile Lobster Habitat Preference Experiment Update

### Project Aim

In order to investigate the deployment of gabions as a habitat enhancement tool, a preliminary experimental study will be conducted. This preliminary study will determine the correct size of aggregate required to replicate the desired crevices for settlement of Early Benthic Phase European lobster *Homarus gammarus*.

### Current Progress

Construction of the tank and filtration system was completed on 22<sup>nd</sup> October 2014, comprising of two separate circulatory systems. Two separate systems allow for easy maintenance, protection against the failure of one system and reduces the outbreak of disease and cross contamination. Both systems were cycled for a period of two weeks before the introduction of juvenile Stage 8<sup>1</sup> lobsters grown at Lamb Holm Lobster Hatchery. One adult lobster was also placed in each tank during this two week period to encourage bacteria growth. All Trial gabions containing the 4 types of aggregate were cycled for 4 weeks in lobster ponds, allowing the colonisation of natural epifauna before introduction to the closed experimental system.



Figure 1. Arrangement of Aggregate Types

A total of 536 stage 8 juvenile lobsters were introduced on the 5<sup>th</sup> November 2014 (Fig 2). 67 lobsters were placed in each tank with a total of 8 tanks being used (Fig 3) and one gabion of each aggregate size in each tank. Weekly 5 minute timed searches are carried out of each aggregate in each tank. The numbers of juveniles observed across each aggregate type is recorded and used as an indication of preference. One monthly night observation will also take place to investigate nocturnal movements. These observations will be carried out for the duration of the trial period (six months).

Additional parameters are monitored daily including: Ammonia, Nitrite, Nitrate, Ph. and Water Temperature to ensure system stability.

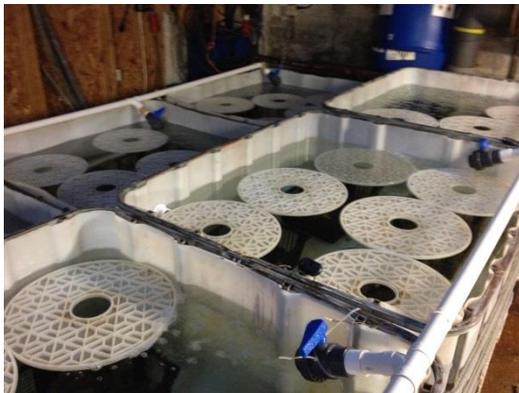


Figure 2. Juvenile lobsters are acclimated to tank water temperature



Figure 3. 67 Lobsters are randomly released into each tank

1: Stage 8 refers to a juvenile lobster that has been grown for 8 weeks within the hatchery environment.