

Devon Sea Fisheries Committee

Lobster Tagging Programme 2008 - 2009

In 2008 a Lobster Tagging Programme commenced to investigate the movement and growth of lobsters along the coast of North Devon and around Lundy Island. Natural England provided funding for the purchase of tags and for the bi-annual prize draw to encourage fishermen to return information on recaptured tagged lobsters. 1000 yellow streamer tags were purchased each with a unique 4 digit number. 11 days at sea tagging lobsters were achieved in 2008. 905 lobsters were tagged, 272 in the No Take Zone (NTZ) at Lundy Island. Those tagged in the NTZ and Marine Nature Reserve (MNR) around Lundy were juveniles, adults and berried females whilst in all other areas along the North Devon coast only those lobsters less than 90mm carapace length (DSFC minimum landing size - Byelaw 27) and berried lobsters were tagged. For each lobster tagged, carapace length was recorded together with the sex of the lobsters and the position it was returned to sea. Other information, for example, whether the lobster was crippled or soft and the colour of eggs if berried was also noted. Fishermen were given callipers to aid in measuring recaptured lobsters and they reported the location of recapture together with size, sex and reproductive status of females. If the lobster was once again returned to sea its position was recorded.

In 2008, 80 tagged lobsters were recaptured by fishermen. By October 2009, a further 127 recapture reports of yellow tagged lobsters were received. Out of the 905 lobsters tagged in 2008 this gives an approximate percentage recapture rate of 23%. Information gathered from these recaptures was used to calculate number of days the lobsters were at liberty between recaptures, growth rates, and the distances and direction moved by the lobsters were calculated by mapping the data on GIS.

Distance Moved km	Female lobsters	Male lobsters	Overall
Min distance	0.149 km	0.051 km	0.051km
Max distance	26.79km	28.38 km	28.38km
Mean	2.59 km	2.56 km	2.57km
Number of Lobster moving out of NTZ(up to July 2009)	6	1	7
Number of lobster recaptured (up to July 2009)	47	71	118
mean days at sea	145.24	139.57	125.55
Max number of days at Sea	386	361	386
Min number of days at sea	2	1	1
Range of growth increment	6-11mm	3-31mm	3-31mm
Mean growth	8.41mm	13.58mm	11.78mm
No. Lobsters showing growth	16	30	46
Number showing no growth	31	41	72

Table 1 Results of analysis of tagged recapture data (July 2009)

Results (analysed up to July 2009) so far indicate that most lobsters tagged and recaptured are moving only short distances averaging 2.57 km with a few more nomadic lobsters moving greater distances (max 28.38km). Only 7 lobsters tagged within the No Take Zone have been

recaptured outside though data are still being analysed. The range of growth of lobsters recaptures has been between 3-31mm (see table 1 above).

In June/July and September 2009, two further tagging programmes were completed. Natural England funded these programmes. A fishing boat (Walrus WY1) was chartered for the surveys and six strings of 35 pots were placed at locations around Lundy Island in the NTZ and MNR to replicate the location of survey strings from the previous year. Orange streamer tags were used each with a unique 4 digit number. In total 690 lobsters were tagged in the MNR in 2009 with 420 lobsters tagged in the NTZ. (A further 124 lobsters were tagged whilst surveying on board fishing boats along the North Devon coast). During the September survey 53 lobsters previously tagged in the June survey were recaptured. Some lobsters caught in the NTZ in the June survey showed signs of shell disease and a few were limp and moribund. After discussions with Cefas it was decided that one of their officers would accompany DSFC on the September tagging survey around Lundy. Haemolymph samples were taken from all tagged lobsters and a few whole lobsters were removed to assess the health of lobster population around Lundy Island.

Table 2 showing tagging totals for 2008-2009:

	Total No. Lobsters tagged	No of males tagged	No of females tagged	No of berried females tagged	No. lobsters tagged in NTZ	yellow tags recaptured	orange tags recaptured
2008	905	444	461	50	272	207	
2009	814	434	380	63	420		75
totals	1719	878	841	133	692	207(22.9%)	75 (9.2%)
%age of total		51.1%	48.9%	15.8% (of females tagged)	40.2%	16.40%	