

Spawning index for Razor clams in the North Irish Sea

Sample date: latest sampling May 18th 2016

Sampling locations:

- Dundalk Bay
- Gormanstown
- Malahide

Samples supplied by: SFPA from Glenmar

Samples processed: latest May 23rd

Index reported: Gonad weight/Dry shell weight (Figure 1, Table 1)

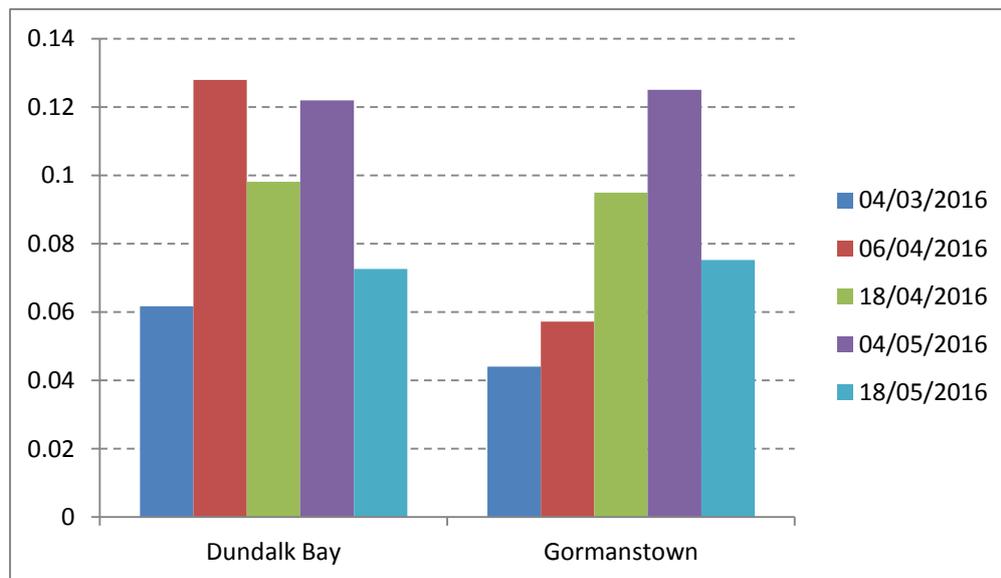


Figure 1. Gonad index values for Dundalk Bay and Gormanstown razor clam fishing areas on March 3rd, April 6th, April 18th, May 4th and May 18th 2015.

Table 1. Mean and standard deviation (N=number of clams) of the gonad index from Dundalk Bay and Gormanstown razor clams fishing areas on May 18th, May 4th, April 18th, April 6th and March 4th.

	18/05/2016			04/05/2016			18/04/2016			06/04/2016			04/03/2016		
	Mean	S.d.	N	Mean	S.d.	N									
Dundalk Bay	0.073	0.02	11	0.122	0.04	11	0.098	0.04	10	0.128	0.03	11	0.062	0.06	3
Gormanstown	0.075	0.05	10	0.125	0.07	10	0.095	0.04	10	0.057	0.04	2	0.044	0.02	4

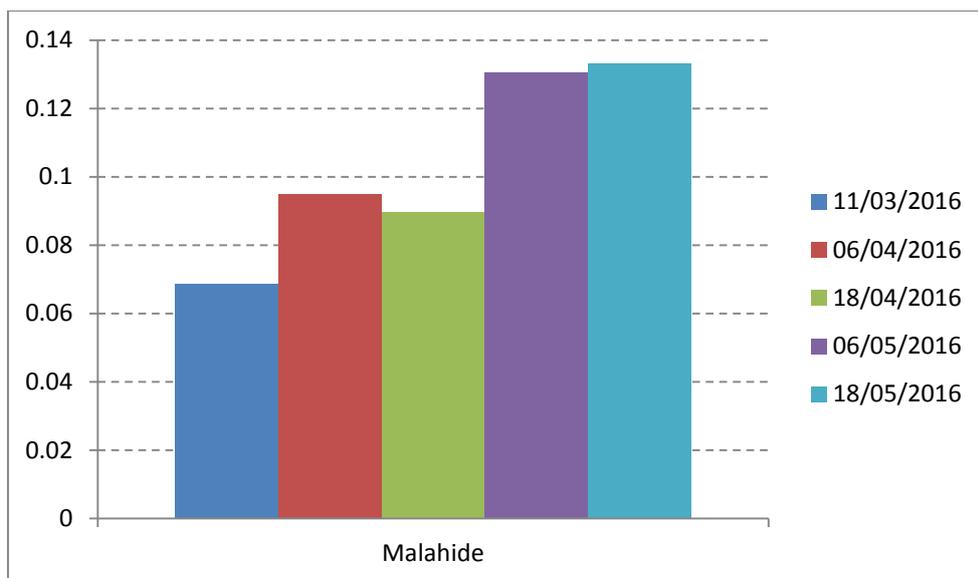


Figure 2. Gonad index values for the Malahide fishing area on March 11th, April 6th, April 18th, May 6th and May 18th 2016.

Table 2. Mean and standard deviation (N=number of clams) of the gonad index from the Malahide razor clam fishing area on May 18th, May 6th, April 18th, April 6th and March 11th 2016.

	18/05/2016			06/05/2016			18/04/2016			06/04/2016			11/03/2016		
	Mean	S.d	N	Mean	S.d	N	Mean	S.d	N	Mean	S.d.	N	Mean	S.d.	N
Malahide	0.133	0.071	5	0.131	0.097	10	0.09	0.036	10	0.095	0.033	10	0.069	0.018	5

Interpretation:

Gonads of clams from Dundalk and Gormanstown were developing from March 3rd to April 18th. Dundalk clams had higher index values than Gormanstown on April 6th and presumably some razor clams in Dundalk Bay were close to spawning then. The index on April 18th was similar in both areas however the index value of the sample from Dundalk Bay was lower than on April 6th. On May 4th both areas had similar index values greater than 0.12. The maximum average reported values for this index from other clam fisheries (outside Ireland) is 0.2 in which case the majority of clams in both areas are close to spawning. There was a drop in index values in both areas between May 4th and May 18th which probably indicates that some spawning began between these dates.

In Malahide the values have increased overall from 0.069±0.018 on March 11th 1.33±0.071 on May 18th. The recent gonads examined from this area were fully developed and the beginning of spawning is thought to be imminent on the Malahide fishing ground.

Recommendations:

- As spawning seems to be occurring in both Dundalk Bay and Gormanstown during late May and given that gonads in Malahide samples appear well developed and close to spawning a fishery closure in June seems to be appropriate.

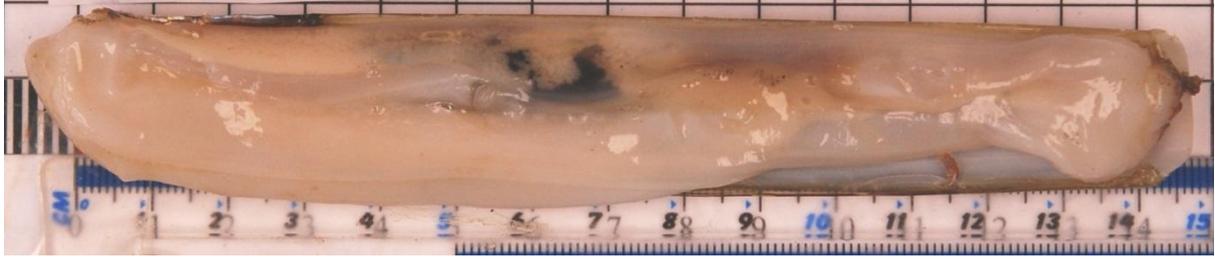


Fig 3. Image internal anatomy of a razor clam caught in Dundalk Bay on the 4th May showing the gonad overlying the digestive gland. Gonad index value = 0.14. This sample was frozen and thawed prior examination.

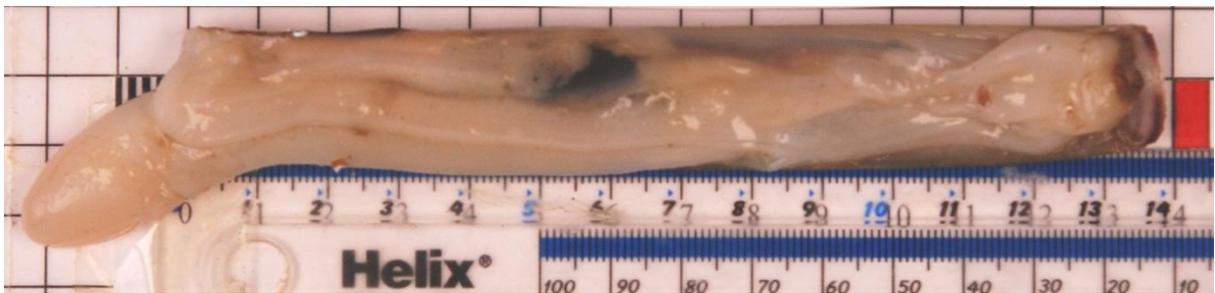


Figure 4. Image of gonad from a razor clam caught in the Gormanstown bed on the 4th May showing the gonad overlying the digestive gland. Gonad index value = 0.2 This sample was frozen and thawed prior to examination.

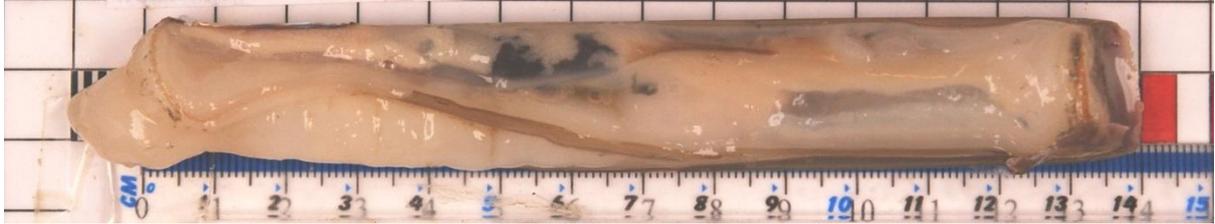


Figure 5. Image of internal anatomy of a razor clam caught in the Malahide bed on the 6th May showing the gonad overlying the digestive gland. Gonad index value = 0.2. This sample was examined fresh.