

The Marine Fauna of North Haven

Jake Taylor-Bruce (LTV 2017)

The aim of the project was to make a record of the marine fauna of North Haven, as well as to compare the fauna found in two separate areas of the haven, the kelp forests at the cliffs edge, and the bed of eel grass that occupies much of the center of North Haven. This project came about as a result of discussions with both the wardens of Skomer Island and the staff of Skomer MCZ, where it was realised that there was very little record of the variety of species that could be found within these murky depths. It was helped in no small measure by my love of the sea and free diving!

The project had two main components, the first being the use of an underwater camera mounted on a metal frame that was placed on the sea floor. The camera was set on time lapse for around 45 minutes, taking one photo every half second. These photos could then be viewed as a film which showed all the fish species that had passed in front of the camera during the 45 minutes of recording while there was no human impact to scare or attract certain species. The second component involved myself snorkeling and diving along the kelp forest and noting the species that occurred there. By using these two separate methods I was able to observe not just larger fish species, but also much smaller species, both vertebrates and invertebrates in an effort to gain a reasonably accurate understanding of the underwater fauna of the bay.



Illustration 1: Sea Bass (Dicentrarchus labrax) seen on the underwater camera.

Over all the project was successful, not to mention interesting! A total of 75 species were recorded from 14 different phyla. The vast majority of these species were recorded while snorkeling and diving, with only a relatively small contingent being recorded on the camera. The camera did however record species that were not seen during snorkeling sessions on the same day, with sea bass being especially common on camera. Notable species included sea bass, and a small population of king scallop just off the kelp forest on the sandy floor. Of personal interest were the feather star (which marked the first time I have ever seen one), the jewel anemones which cover areas of rocky overhang with spectacular swathes of fluorescent colour and the ethereal twin spire fan worms, the tentacular crown of which resembles a ghostly white flower protruding from rocky crevices. Perhaps the most common species of vertebrate seen were the ballan wrasse and gold sinny, both of which could be found in abundance drifting silently through the kelp forests. On the invertebrate side, Ctenophores (comb jellies) far outnumbered anything else, with sea gooseberrys occurring in very large numbers during favorable conditions. The kelp forest recorded significantly higher numbers of species than were seen in the seagrass beds.

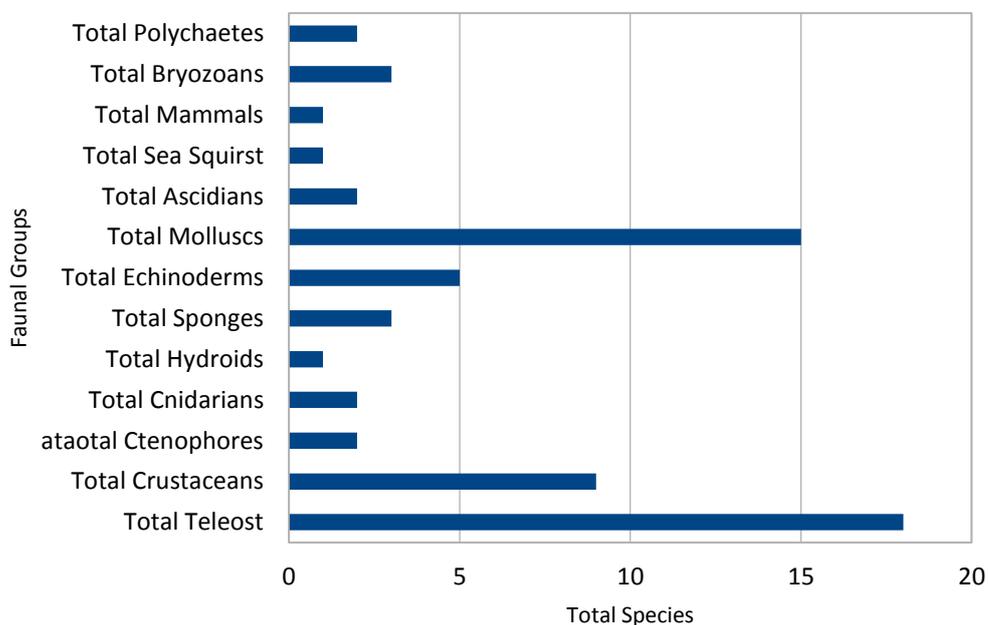


Illustration 2: Bar Chart showing the total number of species found in each group of organisms recorded.

While this project was both interesting to carry out and enjoyable for myself, there certainly were problems associated with it. In the seagrass bed the fragmented nature of the habitat, coupled with the jerky frame rate of the time lapse camera, meant that it was difficult to spot animals moving through the sea grass. Furthermore, the decreased visibility over the seagrass beds (likely due to the sandier substrate compared to the kelp forest) meant that it is possible that species were under recorded in a way that was not seen in the kelp forest. Future efforts may find a continual film better than time lapse (although this does come with its own difficulties); for some reason the camera stopped filming after 15 minutes. Further, due to the fact that I was diving without the use of a breathing apparatus, I was limited to 2-3 minutes of time when exploring underwater. This undoubtedly has led to a under recording of a number of species, particularly small well hidden organisms such as nudibranchs, or highly cryptic organisms, such as certain species of Innachus spider crab that were recorded in the sea grass beds. Certain species will have been under recorded due to my own unfamiliarity with them. A more detailed investigation on sponges for example would doubtless show a much greater diversity than the three recorded species.

Even with the above issues, this survey project clearly shows that the waters of North Haven support a wonderful diversity of life, and that the sea surrounding Skomer hold just as many treasures as the island itself.

My thanks go to both the wardens of Skomer Island (Ed and Bee) for facilitating this project, as well as to the staff of the Skomer MCZ, for allowing me to use their underwater camera and mount.