Durlston Guillemot Report 2008

By Katie Black

Overall a fairly successful year, with another increase in the overall number of birds, with a few additional breeding pairs, especially to the seaward end of the upper ledge.

The camera was again used to study the numbers of birds, the breeding success and two days of feeding activity on a specified area of the upper ledge. Some recording was made via the DVD and snapshots were recorded through the computer (diagram 1a, 1b, 1c).

Unfortunately the DVD recording was not as useful as hoped because of the lack of ability to play the DVD back without saving it and the inability to play it on other machines. There is therefore virtually no footage from 2008, so the checking of the breeding success and chick positions could not be done.

The camera was also used to watch other species – 2 pairs of Razorbills were noted high up on the cliff – on one occasion a fish was brought into the site, which could indicate a chick at that site.

A pair a Shag were also discovered.

Breeding Report 2008

The year began surprisingly with eggs being laid very early – 2 were spotted on 18th April on frame 4, the weather on this day was not very good and the birds were not settled. These two eggs were abandoned later in the day (all the birds left the ledge) and the eggs were then eaten by Herring Gulls.

The next eggs were not seen until 24th April.

Some new sites were once again identified in frame 5 to the far right of the ledge.

Here the number of birds continues to be much higher than when the study was first begun in 1993.

This year site 3 on frame 1 produced a chick (the first since 2004 at this site, it was also inactive 1998-2003, while a chick was successfully raised in 1995. Details required on 1996 and 1997.

Productivity Index : This one of two recognised indices to calculate the success of the colony (the other being Breeding Index). It is based on regular recording of the activity of the sample site, looking for sites (both breeding and non-breeding), eggs, chicks and the dates the chicks leave the site. Diagram 2

$$\text{Productivity index} = \frac{\textbf{Total number of young fledged}}{\textbf{Total active + inactive sites}}$$

$$\frac{\text{no. sites – number inactive – number eggs lost}}{\text{no sites}} = \frac{23\text{-}4\text{-}2}{23} = \frac{17}{23} = 0.74$$

Unfortunately this index is less reliable than in the earlier years of the study, as less study was undertaken and checking chick positions via DVD could not be done (see above).

The productivity index is lower than in previous years but on par with other monitored sites around the country.

A factor in this would be that the amount of study was not enough to monitor all the sites identified – therefore the outcomes of many sites is unknown,

However failed sites are easier to notice and identify than successful sites – abandoned eggs are easier to see so in a small study (as this year) will become more prominent in the result.

The increased number of adult birds on the ledge in 2008 compared with 1993 is making the study more difficult as the birds are closer together so spotting eggs (laying dates) and the earliest appearance of chick is more difficult, this in turn makes the confirmation of fledging less accurate.

To overcome this a great deal more time would need to be spent monitoring the site, or the area monitored should be reduced once again. In the early years of the study both upper and lower ledges were studied, this has now been reduced to the upper ledge only. However the lower ledge may be the easier area to study in the future, this would though remove the ability to do like for like comparisons.

The counts undertaken of the number of adult birds on the upper ledge during the season are not deemed to be accurate or consistent enough to make any conclusion as to numbers present. The observation was made that the numbers were again high with the right end of the ledge (Frame 5) once again being heavily occupied in comparison to 1993 and even with 2000.

For future counts the training of work placements needs to be of higher quality if they are to continue to undertake these counts.

Tufty

For the 16th Year running 'Tufty' returned to 'his spot' just underneath the rock. Once again an egg was laid from which the chick successfully fledged.

During the Feeding study Tufty was noted as not being present first thing on Day 1, and was present on Day 2 from 17.00 –21.00. The absence of this bird and of other "identifiable" individuals should be recorded with more regularity when doing future feeding surveys.

Tufty – in his usual position under the rock

Durlston Guillemots Details for 2008

10th April	343 adults, on upper ledge, including Tufty for 16th year
18th April	2 Eggs , very early laying and both eaten by Herring Gulls
24th April	Eggs seen – at least 2
26th May	1st chick hatched
2nd June	25 chicks on upper ledge, including Tufty's
5th June	Feeding Survey of Chicks (04.03 – 22.00) : 31 Chicks had 87 feeds
9th June	2nd Feeding Survey (04.30 -22.05) : 38 chicks had 123 feeds
22nd June	Chicks starting to leave
24th June	5 chicks left
30th June	177 adults in total,
7th July	32 adults and 2 chicks upper ledge
11th July	2 adults and 1 chick upper
12th July	No birds upper ledge
15th July	1 adult and 1 chick lower ledge
The season was a success with over 400 adults counted on a number of occasions on the two ledges, the chicks were fed at a good rate and mostly fledged successfully. The full report is yet to be produced.	

Feeding Study

Two days (5th and 9th June) were chosen to study the feeding activity that took place in a set area of the upper ledge (see diagram 3). The activity recorded was where adults brought food into the ledge and fed it to their chick, between 04.30 and 22.00 on both days – this was as close to 'dawn to dusk' as possible with the limitations of the light entering the camera.

Feeding Frame

The feeding survey results could not be fully analysed for changes in feeding rate compared with age of chick because the chick ages could not be identified from the records taken in the breeding survey (due to the reliance on the unsuccessful recording of DVD). The lack of recorded images also made checking of chick position difficult.

Feeding Survey Results

See Diagrams 4 – 10 for full records, tables and graphs.

Day 1 saw 87 feeds and Day 2 123. The two days were therefore significantly different with Day 2 being 1.4 times more active than day 1. The total size of feeds was almost identical (at 1.4 times), enabling the number of feeds and the length of the feeds (by bill length) to be equivalent.

The length of watching was only 5 minutes more on day two, so the days were the same for length of time watching and recording the activity, and average rate of feeding rose from 4.97 to 6.99 feeds per hour.

Day 2 also saw a rise in the number of chicks identified, from 32 to 39 with 1 chick (no. 35 day 1 and no. 8 day 2) not being fed at all during each day. Although identified as a site, number 32 did not have a chick, only a pair of birds. The average number of feeds per chick was only 1.15 times larger on day 2 and

this was not significantly different. The difference in age of the chicks could not be analysed due to lack of hatching date information.

A variation in the rate of feeding per hour during the day was noted, with a difference between the early morning (04.30-07.30) and the rest of the day with the late evening (19.30 –22.00) having a particularly low feeding rate. There was no significant difference found between the time periods across both days.

Of the identified fish, on day one, 7 out of 8 were Sprat, while on day 2 of the 21 identified items, 16 were Sprat, 4 were chunks of fish and 1 was a Sand Eel. Which makes 80% of total identified feeds being Sprat.

Conclusion

Day 2 was more active in total but with the increase in the number of chick identified the two days were similar with no significant difference with feeds (or number of bill lengths) per chick per hour.

There was a diurnal variation during the day with the early morning being more active than the rest of the day and the late evening being less active than the rest of the day.

The identification of the type of food brought to the chicks was difficult due to the speed at which the action took place, but the majority of feeds were of Sprat or similar fish. In previous years the majority of feeds have also been of Sprats.

Feeding surveys have been undertaken on three other occasions during the last 16 years – 1993, 1994 and 1995. Each of these studies have been carried out on the same section of the upper ledge, while this year (2008) the birds brought more individual feeds into the ledge than in previous years.

Comparison with the previous feeding studies that were undertaken on the same area of the ledge show a significantly larger number of chicks within the frame – over 30 compared with 20 (in 1995). The number of feeds per chick was higher in 2008 than in 1994 & 1995 but not than 1993. This increase in the number of chicks makes the birds more tightly packed and therefore it is more difficult to monitor and record the activity.

This increase in numbers also effects the Breeding survey where seeing the egg and the young chick is much more difficult and time consuming than in earlier years.