

Tits were trapped. These were all fairly small birds, one having a wing measurement and another a tail measurement below the British range. Possibly they were Irish birds, which are somewhat smaller than our own.

Great Tits were the last to arrive on the island, appearing on October 9th. From that date until the 15th ten to fifteen were recorded daily. The bill size suggests that these were of the British race.

NOTES ON NESTING SEA BIRDS

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(1) SHAG

One hundred and thirty-one pairs. Twenty-nine nests were located at 'new' sites not occupied during the previous three years. Thirteen out of thirty-one nest sites 'new' in 1956 were re-occupied this year. Eighteen nest sites first found in 1955 were reused this year. The remaining seventy-one nest sites have been used in all years from 1954 to 1957 except for three nest sites which were abandoned in some of the intervening years. There was a high rate of breeding success among Shags this year.

(2) GUILLEMOT

The Devil's Chimney has been selected for special study because it suffers no human disturbance and yet the whole rock is easily visible for counting. Before the eggs are laid counts have to be made at a long range, or the birds start flying off, so the degree of accuracy is not very great before May 2nd when the first eggs were seen. The following are the results of counts on the Chimney :

Date	Time	No. Adults	Date	Time	No. Adults	No. Chicks	No. Eggs
Feb. 26	0855	c. 113	May 21	1000	115		
Mar. 1, 6 12	0.845-0900	0	June 3	1300	113	} 3	c. 85
March 22	1320	c. 80		1500	112		
April 6	1040	0		1600	122		
Apl 19, 30	1415-1430	0	June 5	2030	111		
May 2	0955	97	June 23	1100	118	67	7
	1430	31	June 26	1400	140		
May 3	1620	74	July 2	1000	124	24	1 new
May 7	1100	102	July 8	1800	6		
May 13	0915	107	July 10	1130	0		

The count of eggs on June 3rd was in part an estimate as some birds during the four-hour watch had not shifted sufficiently for the object of their broodiness to be seen. But such close sitters were presumed to be incubating eggs and from the number of chicks counted on June 23rd it is believed that the egg count was fairly accurate. An interesting feature of the count has been the consistency of numbers throughout the incubation and chick rearing stage.

The number of adults present also remained much the same throughout the day and there was no sign of both parents being present overnight when a count was made at 2030 hours on June 5th. In fact it was evident during the four-hour watch on June 3rd that the changeover between numbers of a pair was fairly rapid. The increase in numbers on June 26th was possibly due to the presence of both parents of chicks that were ready to fly; as a great many chicks were seen doing the wing flapping/jumping in the air exercise and also giving the penetrating 'que-wee, que-wee, que-wee . . .' call which is the contact note used between chick and parent on the sea. On July 2nd when about two-thirds of the chicks had left, there were 124 adults present and much activity and sexual excitement apparent. Many attempted mountings and probable matings were observed and a bridled bird was present which had not been seen previously. Throughout incubation and fledging no mating or attempted mounting had been observed and it seems likely that these birds present on July 2nd were non-breeders or unsuccessful breeders.

No predators were seen to attack the rock when the full colony was in residence but on July 8th when only six adults were left, a Herring Gull stood on the stack and it seems fairly certain that late chicks or eggs are taken, most probably after being deserted by the parents.

St James's Stone has been taken as another area of special study as adults are fairly easily trapped here. It was hoped that trapping could be done without serious disturbance, but it seems this was a vain hope. Two counts made in the St James's area where adult Guillemots are trapped, showed that on June 9th twenty-nine eggs and eighteen chicks (including one dead) were present, while on June 21st there were no eggs and twenty-four chicks. It is fairly certain that none of the chicks present on June 9th had left by June 21st (though some may have been taken by predators) as the only one considered old enough to ring on the 9th was still present on the 21st. If all the early chicks survived only seven chicks out of twenty-nine eggs had been hatched after June 9th and survived until 21st. There were no unhatched eggs left and it seems that twenty-two eggs or very young chicks must have been taken by predators after the June 9th visit. In view of the possibility that these losses were a direct consequence of the visit, it is proposed to approach the rock to trap adults only when the chicks are old enough to take cover under the available boulders.

(3) KITTIWAKES

This species had a disastrous breeding season in all colonies between Gannet's Rock and North Light except Puffin Gully. Whether the predator is Carrion Crow, Greater Black-backed or

Raven, it seems very necessary that it should be eliminated. The following are the depressing results :

12/7/57	Gannets' Rock	13 nests	no eggs or chicks
12/7/57	Gannets' Gully	97 nests	no eggs or chicks
16/7/57	From Kittiwake Gully to North end	98 nests	32 chicks

Date	Type of Count	Kittiwake Gully	Puffin Gully
14/5/57	No. of occupied nest sites	169	280
8/6/57	No. of occupied nests (i.e. eggs or chicks)	106	311
10/7/57	Number of chicks in nests	49	237
	No. juveniles seen on wing		

The figures for the number of occupied nests in June are not directly comparable with those recorded for the previous two years (*Tenth Annual Report*, p. 37) as this year nests were only considered to be occupied if they contained eggs or young or a closely sitting bird presumably brooding one or the other. Previously a complete nest with adults present was counted as occupied. The complete lack of success at Gannet's Rock and Gully is probably largely due to predation of eggs as on May 30th large numbers of Kittiwake egg shells littered the slope adjoining Gannet's Gully. It looked to be more like the work of a Carrion Crow than a gull. From Kittiwake Gully and the nests below North Light chicks too young to fly were disappearing up until July 16th. The number of chicks reared at Puffin Gully was very similar this year to last when 234 were counted on July 11th, this is by far the most concentrated colony and it seems that numbers must provide some defence against predation.

At Shutter Gully the Kittiwakes were relatively successful, the mean number of young fledged per nest being 0.91. On May 16th there were fifty-seven occupied nest sites ; on June 5th sixty-seven occupied nests, i.e. with birds sitting closely and on July 15th sixty-one chicks including two on the wing. Fourteen nests contained two chicks the remainder one.

RINGING IN 1957

One thousand, seven hundred and twenty-three birds of forty-seven species were ringed during the season. Eight hundred and ninety-eight of this total were sea birds. Colour marking of all adult Shags trapped has been continued and all nesting Shags for 1957 have been marked with a B.T.O. ring on the left leg and a red ring on the right leg. Nestling Guillemots have been marked with a B.T.O. ring on the left leg and a brown ring on the right leg.

Fairly large numbers of migrating birds were trapped in the spring but early autumn migration was poor, particularly in September, but October was an unusually productive month.