

exploited the less usual food material, adult insects, and apparently very efficiently.

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### THE BREEDING AGE OF THE BLACK-BILLED GULL: RESULTS OF RINGING.

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Some information is now available about the breeding age of the black-billed gull (*Larus bulleri*) from ringing work carried out in the breeding seasons of 1950, 1951, 1952 and 1953 at a colony in the Ashley River, Canterbury.

Stead (1932) mentions that the black-billed gull takes two years to reach breeding age. Observations which I have been making on the plumage changes of this gull suggest that there is a pre-nuptial moult, of the body plumage only, prior to the adoption of the second nuptial plumage. This nuptial plumage seems to be found in about October of the bird's second year. From a consideration of the time taken to acquire "adult" plumage, it seems theoretically probable that breeding takes place for the first time during November-December of the bird's second year. According to Dwight (1925) this is what would be expected in a gull of this size and of such a plumage cycle.

During the 1952 breeding season, several ringed black-billed gulls were seen in and around the colony at the Ashley. On November 7 1952 amongst the hundreds of gulls in the colony, I saw three birds bearing 1950 rings and one bird with a 1951 ring. Several other 1950-ringed birds were also seen on this day by my companions. A bird ringed in 1950 with ring 10261 was seen to be sitting on a nest in one group of the colony while two other 1950 birds were seen sitting in another group. On November 15 a bird bearing ring 9909 was seen sitting on a nest with a clutch of three eggs and on the same day, a bird with ring 10114 was seen over a clutch of two eggs. It seems probable that 10114 was sitting on the same nest as 10261, but, although 10261 was seen again during the rest of the season, I was unable to associate it with any one particular nest. It is possible that there were other ringed birds present but owing to the size of the colony (approx. 1075 nests) and the destruction of some groups by floods before observations were complete, all the adult birds were not able to be observed closely.

Early in 1953 a report was received that a gull with ring 10206, ringed as a chick on December 3, 1950, was "found nesting, 11/1/53, incubating two eggs. No other nests in the vicinity," Waipara River, Canterbury, about two miles from the coast (see Bull, 1953).

Thus, while these observations may not be conclusive evidence of the time of sexual maturity of the black-billed gull, they are at least indications although all that may safely be said is that, during the 1952 season, a number of birds ringed as chicks in November-December of 1950 were seen to be sitting on eggs.

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