

BLACK-BACKED GULL BREEDING AT HIGH ALTITUDES

• By W. R. B. Oliver, Wellington.

Although the breeding places of the black-backed gull are mostly at sea level or very near thereto, this species sometimes breeds at considerable heights on the mountains. Black-backed gulls are frequently encountered at high altitudes. I have had them flying overhead while I was standing on the top of the Blimit, above Arthurs Pass at an altitude of 6,000 feet, but I did not find any nests in the region of the pass. There is a record of a nest having been found at a height of over 5000 feet near Lake Wakatipu. Stead (Life Hist., N.Z. Birds, 45, 1932) gives the flat tops of mountain ranges as one of the breeding stations of the black-backed gull and refers to an extensive colony on the Rock and Pillar Range in Central Otago at an altitude of 3,000 feet. We may speculate on the causes of these coastal birds breeding on the mountains. The sea coast in south-west Nelson and northern Westland is now mostly settled and there is a road close to the shore. This probably caused the gulls of this region to abandon the coast as a breeding resort and to transfer to the open spaces on the Paparoa Range.

In February, 1949, and again in January, 1952, with Mr. A. R. Thompson, of Greymouth, I visited Mount Davy at the south end of the Paparoa Range. From Greymouth this mountain is seen to have steep forest-covered slopes and a truncated but sloping top of rock scantily covered with scrub plants. When wet and reflecting the sun's rays this rocky surface sometimes looks as though it was covered with snow, which, indeed, in winter time is actually the case. In one locality where the surface is slightly hollow and retains some soil, there is a patch of tussock which, surprisingly, contains a number of introduced plants, including Yorkshire fog, brown top, sweet vernal, poa, sorrel and gorse. The height above sea level of this nearly bare slope is from 2,500 to 2,800 feet. It is fairly extensive as it stretches for more than a mile along the mountain top. On this rocky slope, including the tussock, black-backed gulls have established a breeding colony. As the season was late on both my visits it was difficult to estimate the number of nests, but I thought there must be between 100 and 200 while some 300 adult birds were present. Mr. Thompson thought the figures should be higher. The date of the visit was January 7, 1952.

The nests were of two types: high ones, that is a foot or so high, and low nests with the rim a few inches above the surrounding rock or peat. The soil is probably always more or less boggy and the bases of the high nests were wet and rotting. The material used for the nests consisted of sticks and leaves of such mountain plants as were about. The bulk of the material was tufts of the grass *Danthonia australis* and there was a considerable proportion of moss which kept green on the soggy nests. Moss covered the ground in many places and one could see where the birds had got beakfuls of it for their nests. The white leaves of the mountain daisy (*Celmisia semicordata*) showed conspicuously on the nests, and there were stems of *Hypolaena* and *Forstera* and twigs of manuka, which, as very stunted plants, exists on this inhospitable mountain top. Lichens added to the nests made them look as though they had been purposely decorated.

In a few of the nests there were eggs. On January 7 I noted four nests with one egg each and three nests with two eggs each. There were numbers of fledglings hiding among the rocks and shrubs. One attempted to fly but was promptly set on by an adult bird which gave it some savage pecks and so forced it to the ground where I suppose the parent thought it to be more safe. They had shown a good deal of resentment at our presence.

It is evident that most, if not all, the food required for the young gulls is brought from the coast, five or six miles away in a straight line. We found pipi shells, whole valves and broken into small pieces, and we gathered a gastropod shell (*Neothais*). There were also sheep bones, some with sawn ends, evidently retrieved from back yards in Greymouth. The introduced plants mentioned above were probably brought unintentionally from the coast, and if so they show that seabirds can transport seeds from the lowlands to the mountain tops.