

They build their nests under banks or under leaning trees, in such positions that the rats cannot get at them, and it is probably this precaution that allows them to be so plentiful in this rat-infested forest.

The female is also a little artist in trying to decoy away intruders from her nest. I have seen her tumbling about in the bed of a dry creek as if she was wounded or in great distress, but I did not run after her, for I had learned all about that little ruse, but I soon found her nest of four young ones at my elbow. Yet the plan must often be successful in deceiving the sparrow-hawk, perhaps, or it would not be acquired and retained, for it is a common little trick with a great many birds.

Just now, in June and July, 1901, I cannot find a female tit, though we have been out alternately for several days looking for one, and we have noticed their scarcity for a month back, while males are quite plentiful. The males are always more plentiful, but I never missed the females before, probably because I never wanted one.

SEA-SHAGS (*PHALACROCORAX*).

On our way out, on the 5th October, we spent a day on Anchor Island, and went about a mile along the lake to the south end, to where the shags have their rookery near the overflow creek. We counted sixty big white-breasted shags, but there may have been twice that number, for many were going and coming. There were three nests of the little black-and-white-necked river-shags, out of which we got ten fresh eggs. But the big shags seem to be laying and hatching all the year round, for I have not yet seen any of their breeding-places deserted. We saw them feeding their big young ones on the 20th June last, at Three Islands, in Breaksea Sound. Not half of those nests here appeared to be occupied, but we got three eggs out of each of three of the big ones, and in another we saw four eggs. In some of those we could hear the chickens, while others were white and clear. The nests were built of sprigs, and new ones are added to them until they are three stories high in favourite places, and several are to be found in one leaning tree, but all were over the water, so that the young would not be hurt when they fell down. I tried to lift off part of an old nest with a forked stick, but found it firmly fixed, notwithstanding its rude appearance. There were young ones in all stages up to full-grown, some of which I hunted down out of the nest to see if they had learned to swim, or required teaching like seals; but one of them, taking alarm, went straight down under water, and took quite a long dive for his very first trial, and when he came up he washed his beak and shook his wings with delight at the new experience. If a baby seal has to be patiently taught to swim, does it not suggest an absence of instinct and a claim for reason like men? Though there were generally three young shags in the nest when little, there were only one or two when grown up. But this caused no wonder when we saw the rude way they jostled each other every time the mother came with food, and the very little platform they had to fight upon. This seemed arranged to rear only the vigorous; but then the site of the rookery was evidently chosen with such contingencies in view, for there were several flat rocks out in the water and numerous big leaning snags, where the ousted and wind-fallen could clamber out and be as comfortable as in the nest. One of those I tried to hunt down, but only made it sick with fright, for it disgorged a fish and then held on tight, as if it thought that sufficient sacrifice for the moment. When the mother came with food to the big young ones in the water the competition was very severe, for they appeared to attack her, flapping and chasing her about until she allowed one of them to thrust its head down her throat—so it appeared at a distance of 30 yards—and I can imagine it must be a leathern throat to allow a prickly fish to be pulled up by the tail. While one was gulping its fish, the other chased the mother, who dived and gave it quite a long hunt before she yielded to its frantic efforts. She may enjoy its cleverness or may do this for schooling, for we need not suppose that her duty ends when she stuffs them with food.

At a little distance were a company of old shags, performing a comedy of their own, at intervals. They would start by setting up their tails as high as they could get them, and shaking the points of the wings over their backs, at the same time drawing back their heads until the beaks pointed upwards. Then, with a few croaks, they would all start a peevish cry, increasing in melancholy as they brought their heads forwards, until, with outstretched necks and distended throats, they shook their heads in a perfect agony of grief about something—perhaps more fish from their mates. When there were a dozen of them at this, timing each other for the last squall, it was a queer chorus, but in keeping with the ridiculous attitudes which I suppose were all grace and music to them.

We saw no other birds on this lake but a sparrow-hawk that sat above some of the nests waiting for a chance for a young one. We watched him sitting there for a long while without understanding details, but saw the shags, half frightened and fightable, stretching out their necks towards him. Thus I think they may protect each other's nests during the owner's absence. A hint this of how a race may be exterminated when their numbers are greatly reduced.

In going along the lake we saw many old totara-trees that had been barked in their young days, and sometimes could see the marks of the blunt stone axe that had been used by the Maoris to strip them. Some were stunted, old, slow-grown trees that may have been barked five hundred years ago. One of the men on the schooner, who talks Maori, says those tubes of bark may have been used for eel-pots, also for roofing.

We saw where a pig had recently barked the butt of a *Panax arboreum*, so one of them at least survived a couple of years.

SEALS.

In olden times, no doubt, seals were very numerous, and when all travelling towards their breeding-islands at one season the old natives may have followed them, or steered the course the various parties were going, and thus dispensed with chart and compass and provisions, for even