SOME ACCOUNT OF THE MUTTON BIRDS, OR SOOTY PETRELS (NECTRIS BREVICAUDUS), AS SEEN IN THEIR HOMES AMONG THE FURNEAUX ISLANDS, BASS STRAITS, TASMANIA, FROM NOTES TAKEN DURING A VISIT TO THE LOCALITY IN MARCH, 1891.

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My duties called me last March to undertake a trip to the Furneaux Islands. Before I started I was aware that one of the most interesting subjects for an ornithologist in that part of the colony would be the habits of the mutton bird. But the reality so far surpassed my expectations that I have ventured to lay before the Society some results of my observations. Mr. J. B. Walker has shown me allusions to the subject in old books of travel. Mr. Barnard has been good enough to furnish me with the second volume of the Tasmanian Journal, in which a short but excellent account is given of the habits of the sooty petrel, or mutton bird, by Mr. R. H. Davies. As the paper was written 45 years ago it may be worth while putting on record what I now propose to lay before you. These petrels choose islands where the soil is composed of a loose sand, covered in places by a bush with a blue flower called "barilla," where they congregate for the purpose of digging the holes in which they lay their eggs. I have heard of a rookery in Port Davey: and among the Hunters Islands they breed on Trefoil, Sheephead, Doughboys, and the Petrels. On the northern coast there used to be large numbers on Waterhouse Island, until the pigs kept by Mr. Barrett found them out, and destroyed such vast quantities that the birds deserted the place, and now there are just a few which are carefully preserved. In the Furneaux group they used to breed in much greater numbers than at present, and I venture to hope that the chief effect of this paper may be a timely movement by the Government to save from almost utter destruction an industry which adds distinctly to the wealth of the colony, and supplies a healthy article of food. At present the most important homes of these birds in the breeding season are Chappell Island (called usually "Hummocky," because of the hill in the centre), Little Dog and Big Dog Island, Green Island and Little Green Island, and Babel places are nothing more than low These sandy spots, from 300 to 1,200 acres in extent, with hardly a tree (except on Big Dog Island), and covered with long

vellow grass growing up to the waist. Most uninviting looking spots they appear to be. As you pass them in the day time you might fairly suppose that there was no living thing upon them except an occasional shag or a Pacific gull. I have thought that a sailor wrecked on one of these little wave-beaten spots might even starve if he slept soundly at night, ignorant that under his feet there lay concealed hundreds of thousands of birds, which, when eaten fresh, are among the most delicious of foods. About the middle of September the sooty petrels visit these breeding places, coming in at night and remaining some ten days, in order to dig their holes. They effect this with their feet, scattering the sand behind them in clouds. When this preliminary task is finished they leave their future nests for four or five weeks, and are not seen at all in the neighbourhood. In the middle of November they commence laying eggs. Mr. E. D. Atkinson has taken fresh eggs on November 21. Whether the males feed the mother birds during the period of incubation I do not know. But as the males return every evening it is probable that they do. Only one egg is laid by each female, and it is doubtful whether in the case of the egg being destroyed another is laid. I failed to enquire at what period the young bird is hatched out, but I gather that it must be at the commencement of January. On the 3rd of March I landed on Little Dog Island, and received my first introduction to these most interesting sea birds. At 6 p.m. not a mutton bird was in sight. Indeed, during the fortnight that I was cruising about in a boat I never saw a petrel in the day time anywhere. It is their habit to fly away to sea very early in the morning to distances 40 and 50 miles away, returning only when it is dusk. Whether they have long ago cleared the immediately surrounding waters of the food they require I cannot say; but it is a surprising fact that not one of the old birds is ever visible in the neighbourhood of their young throughout the day. Walking about on a rookery is a matter of no mean difficulty. The ground, always loose and powdery, is everywhere perforated with holes from two to three feet deep, about the diameter of a rabbit-burrow. Among the long grass it is almost impossible to prevent crushing down the sand and endangering the lives of the young birds by suffocation, at the same time falling headlong oneself. Just at sunset I was invited to go some two hundred yards up on to the higher ground—the island is only 200 acres in extent—in order to see the birds come in. I shall never forget that evening as long as I live. The sun was setting, leaving a broad belt of crimson on the western horizon, and soon the surroundin sea became almost invisible. Not a sound was heard except the rustling of the grass in the wind. There

was no indication that there was a living thing on the island. There were no cries of sea birds. The stillness was Presently a single dark-winged form flitted across the island and vanished again into the gloom. In another ten seconds thousands upon thousands of birds seemed to spring like magic up out of the darkness from every quarter without warning or cry of any kind. And now backwards and forwards before my dazzled sight I saw these countless dark shadows shooting with lightning rapidity athwart the last of the evening light. Still no articulate sound was heard. Nothing but the whistle as if of bullet after bullet through the air, bewildering one with the sense of numbers and of mysterious rushing life. Repeatedly a bird would dash within an inch of my head, and then wheel like lightning to one side to escape a collision. So imminent seemed the danger of arriving at home minus an ear or a nose from contact with a sharp beak that I was fain to crouch down in the long grass to escape an accident. To sit down on the ground on that particular island was possible because there were no snakes. Nothing would have induced me to have taken up the same position in the month of March had I been upon the island called "Hummocky." But of this hereafter. The minutes passed, and still this dizzy, whirling, hurly-burly of creatures continued-silent, and even awe-inspiring. Sometimes they came in squadrons of hundreds, sometimes by tens. But still they came; each bird after a turn or two sinking with unerring instinct on to its hole, finding it in the long grass and in the darkness with a certainty which was truly marvellous. It was difficult to tear oneself away from this wonderful spectacle. But at length we returned to our tent, pitched near the water's edge but still among the bushes, and all night long as I lay trying to sleep I heard the cooing and cackling of innumerable birds feeding their young in their subterranean homes, some of them apparently within a yard of my ear. At length I fell asleep, and before I awoke, at 6 o'clock in the morning, there was not a bird to be seen on the island. All the old petrels had long ago sped away to their distant feeding places. I regretted that I had not witnessed their morning exit. In its way it is as striking as their homeward journey. For, as these birds cannot fly off the ground, especially in the long grass, each one has to walk either to the sea shore or else to the top of some rock before it can take its flight. In some cases this journey must have meant a distance of many hundred yards. Mr. Davies relates in his paper, read in 1846, that the sealers showed him the manner in which they caught the old birds for the sake of their feathers, stopping up all the tracks they made except one, which led to a pit into which they fell, and were suffocated by those that crowded after them. I am thankful to say this custom does not obtain at the present time. On every occasion when I could take the opportunity I used to take up my position upon the rookery to watch for that wonderful silent rush of birds after dusk. It never ceased to charm as well as to astonish.

I will proceed now to give you some statistics regarding the numbers of these birds, based on personal enquiries from those who live by this industry. On Chappell Island on Sunday morning, March 8, after morning service, I collected all the heads of families of the half-castes, and extracted the information I am about to put before you. But first to prepare you for some astonishing figures, I quote what has been said already on this question. Mr. Davies writes that so great were the numbers of the birds returning to Green Island that "night is ushered in a good ten minutes before the usual time." And again—"I have actually sailed through them from Flinders Island to the Heads of the Tamar, a distance of 80 miles." And Flinders calculates that he passed through a flock which must have been 40 miles long. We have fallen upon degenerate days. There are whole islands absolutely deserted now which formerly swarmed with these interesting and lovely creatures. Witness Gun Carriage, or Vansittart Island, as it is called. Not a single petrel ever breeds there now, because of the culpable negligence and cruel thoughtlessness of settlers in old days. They put cattle on the island, and I confess that my indignation rises when I think of the slow agonies endured by thousands of these defenceless young birds crushed to death in their holes under the heavy tread of bullocks. I stand amazed both at the cruelty of such conduct, and at the want of foresight among the farmers. For when once the cattle are regularly placed on one of these islands the birds desert it in a body; and there is no expedient by which they can be attracted back again. So far as it is known they depart never to return. When it is borne in mind that a man and his family can earn about £4 10s. a day for nine weeks in an industry on which he actually spends nothing, which only needs that it should be left severely alone until the moment for catching the birds has come, you will wonder how anyone can be so infatuated as to turn, say, some 20 head of cattle on an island which might otherwise produce 100,000 birds annually, to be sold at an average of 10s. a hundred. This infatuation has not ceased. The islands, some of them, are being ruined at this moment, and I earnestly trust that my voice, together with that of others, will succeed in saving a wonderful industry before it goes the way that the sealing industry has nearly gone, through sheer neglect of the dictates of common sense.

On that Sunday morning I learnt that on Chappell Island (which has an area of 1,200 acres, including rocks and sand patches) there were, in 1890, 21 families at work catching the young birds for some eight weeks, beginning about the 18th day of March. They caught and salted 204,000 birds. I asked-"Did you take them all?" "No, that is impossible. We go over the holes twice, and find just as many the second time as the first. At least 100,000 young birds must escape. When the time comes for their flight the sea is covered with them." Let us consider that 100,000 young petrels then escaped. This brings our total of young birds to 304,000, neglecting those which meet with untimely deaths. Now, each pair of mutton birds lays but one egg. Therefore at the lowest computation (putting aside all barren pairs and those which had lost their eggs or young) there must have been 608,000 old birds. But this is not all. The 21 families of half-castes on Chappell Island live entirely on these birds during their season. I made a calculation with them which showed that from six to ten birds a day is the ordinary allowance for a man: and besides the human beings to be fed there are three or four kangaroo dogs to each hut, who all have to be supported on the same diet. In the two months of their stay these people ate at least 26,000 young birds. And, lastly, the parents of these young ones so eaten amounted to 52,000. So, then, we are well within the mark when we say that on any night in February there were in 1890, on Chappell Island alone, 990,000 petrels. We are accustomed to be told of the wondrous wealth added to our food resources by salmon, which cost nothing but a little watching, and come back from the sea ten times the size they went for the sake, apparently, of feeding maukind. I submit that the mutton birds are a case equally in point. That the young fresh birds are delicious eating I can testify. They taste like a very fresh herring as we know that fish in the Old Country. Broiled or fried it is a dish to set before a king. When salted they are unquestionably nutritious, and probably quite as healthful also, for delicate persons, as cod liver oil. A little barren treeless hummock in our seas produced then last year £1,020 in cash. Destroy that rookery by letting some dozen cattle roam over it and a few sheep and what is the result in the eyes of any reasonable person? What a loss to the wealth of the colony? On this very island there is a farmer who owns 40 acres of land. This he stocks with cattle and sheep. His fence runs right across the track from the only good harbour to the largest cluster of huts. The half-caste lads pull down a panel sometimes. The cattle roam over the rookeries. I have seen them there myself, and I have thought, while viewing the present state

of things with regret, how easily the island could be saved

from the destruction which is impending.

But to return to numbers. Little Dog Island is in private hands on a Government lease. Three families each take some 27,000 birds off patches of 40 acres in each case. To those interested in the condition of the ground for walking I make the following calculation: -On 40 acres here there must have been 40,000 holes occupied by birds, besides deserted nests. One party on Big Dog Island collected last year 40,000 birds. This island does carry cattle, but it is quite different to the other rookeries. There is a large wood at one end, and the ground is a great deal harder, the birds breeding only at one end of the island. Babel Island probably contains more birds than any of these other places. It is at the S.E. of Flinders. But the snakes are so terrible here that even the half-castes do not like working on it. families, however, have attempted it this year. If we take the birds on these four little islands we shall be below the mark when we compute that on any night in February there are two million six hundred thousand sooty petrels asleep upon them.

Perhaps it will interest the members of the Society to hear of another feature of these islands. I remarked that no one on Chappell Island was ever seen without a stick or a gun. It was an ominous sign, betokening the presence of snakes. These creatures do not live apparently on mutton birds, but on mice, which abound there. The young men spend Sunday morning sometimes in killing snakes. Two parties the other day started out to see how many they could get-one party brought in 100, the other 70. Nor did any one in the islands to whom I mentioned this think it an extraordinary case. One man, old Mr. Smith, the half-caste, told me that his party one year threw into a heap the snakes they killed in the two months in the course of their work, and that they numbered 600. When you consider that a man in his prime can take 1,000 birds out of 1,000 holes, in any of which there may be snakes, it indicates the nerve that is needed for this industry. As a matter of fact they rarely touch a snake by accident. There are sure signs of their presence; nor are they often in the holes where the young birds are; and these inhabited holes have also their signs. At the same time a girl of 16 pulled out two snakes in one day a year or two ago; but, then, she was inexperienced, Sleeping on the ground among the bushes on Chappell Island on that Sunday in a hut without a door, and open on every side along the ground, I was not surprised when, after an hour, I heard my companion mutter, "I am too nervous to sleep here: I am off to the boat." For my own part, though I braved it out, I was glad when the first streaks of dawn appeared in the east. Chappell Island is bad enough, but the half-castes say that Babel is so bad that, though a moderate fortune awaits them there, they do not care to go. I may add that so barren are these hummocks that every family commences operations by stacking wood for two months, loading their boats on Flinders Island, and filling casks of water. There is neither water nor fuel in these places. I have spoken of petrels and of snakes on these islands. I could a tale unfold about another inhabitant, exceeding in numbers even the mutton bird, but I forbear. I merely allude to the dread subject of fleas. I leave to your imagination, which you may actively employ without easily overstepping the bounds of reality, the details of this theme which in that neighbourhood you can by no means put away from your thoughts—and feelings.

What practical proposals, then, can be made for the due protection of mutton birds? I have discussed the question with magistrates in the islands, with all the half-castes, and with white settlers. I think I may say that there is complete unanimity among them all. There is no doubt what should be done. One and all call for restriction. On one occasion, a fine, stalwart fellow, a half-caste, and one of the best boatmen in the world, was urging restriction. What he really said was—"I wish, sir, when you return to Hobart, you would put strychnine upon them." What is the sort of

"strychnine" we want?

First: The wisest plan would be for the Government to resume possession of the mutton bird islands. Some are now let on lease, such as Little Dog and Big Dog. One is in a sense reserved for the half-castes, namely, Chappell Island. But on this island two white families own small patches of land, which they have bought. In both cases I believe they are honourable men, and have no wish to go beyond their rights. Why should they not be bought out? It would be but a trifling sum, and the islands afterwards would be a regular source of revenue. Some islands, like Babel, are practically untouched by anyone.

Secondly: If resumed by Government, why should not a license be taken out by every person who wishes to "bird"—so much for an adult, say, 10s., and a lesser sum for the younger members of the family? At least £100 a year could be received at once from this source of revenue. But even if the Government does not resume possession (and I, for one, earnestly trust they will take them entirely into their own hands), still the points, which are simply dictates of common

sense, are these-

(a.) That there be a close time for these birds, just as there is a close season for quail: At present there is none.

(b.) That no egging be permitted. The waste in past years, and even at this time, is terrible, and there is practically

nothing gained by the taking of the eggs, whereas the number of birds is materially lessened. Formerly they were eaten in large numbers. Mr. Davies states that an officer of the old settlement on Flinders saw a woman eat 52 eggs in one day. As they are as large as ducks' eggs that was a first-rate performance.

- (c.) That a fixed day should be gazetted before which no one should be allowed to touch a bird. Persons differ whether it should be March 15 or any date up to March 20. There is great need for such an order. Families on Chappell Island have no recognised spaces on the rookery. They begin upon the same day, each near his own hut, and work outwards and upwards as they please. If one man begins too early the others are compelled to work in self-defence. There is no need to fix the close of the season. The birds arrange that by flying clean away about the middle of May, and not returning till September.
- (d.) No fatting should be permitted. Fatting means taking the immature bird before it is ready for salting, and boiling it down for the oil. As 200 birds make about a gallon or so of oil, which brings 3s., and as those 200 birds a week or two later would sell when salted for £1, the unwisdom of the former operation is obvious.
- (e.) No cattle or sheep should be permitted on these islands. Big Dog Island may be an exception, but there is no question the other little islands should be protected. I know how many in this colony are enrolling children in Bands of Mercy in order to teach them to be gentle and kind to all animals. I have heard of a "Dicky Bird Society," which exists for similar purposes. I invoke the aid of all such in the cause of the gentle and inoffensive "volla"that is the native name for the sooty petrel or mutton bird. I invoke the aid also of all who have been fascinated by the exquisitely graceful flight of these birds as they soar and wheel round the passenger steamers that ply round our coasts. The mode of killing them for the industry is painless; one twist of the neck and they are dead. A single pressure on a gland in the stomach after death and the oil escapes at the mouth and is caught in a vessel. This is legitimate, and not barbarous, for we must kill in order to But it shocks all our finer feelings to think of cattle trampling upon hundreds of young birds, which die and rot uselessly in their holes.
- (f.) An order should be issued against fires, except between May and September. It is, of course, difficult, but not impossible, to get the grass to burn in winter. At any other season it means ruin to the industry and death to the petrels.

(q.) Chappell Island, in consequence of the cattle that have been on it, would be the better for a year of rest. All agree as to this. But the question arises, "Where shall the half-castes go for this one year?" Could they attempt Babel? Could they go to some of those islands off Wilson's Promontory, which are said to swarm with birds, and no one touches them? I am told there are not even boat harbours in them. At any rate, Chappell Island, as being in some sense reserved for the half-castes, merits our chief attention. There need be no difficulty in carrying out these arrangements. Under the direction of the worthy magistrates in the islands and the well-known police constable everything could be at once arranged. If it is asked why such obvious regulations have not been made long ago, I answer that perhaps the chief reason is that never have these islanders recorded a vote for a member of Parliament. There has been no polling station, no registration office for them. have wondered why a would-be member for Ringarooma (in which district the islands are included) has never bestirred himself to get fifty solid votes from the Furneaux Islands, votes which would be gladly given to anyone who would advocate their just claims and protect their industries.

If anything I have said leads to a greater interest in one of the most beautiful of our sea birds, and indirectly helps to foster a useful industry, and further the cause of humanity in the protection of the "yolla" or sooty petrel, through the instrumentality of the Royal Society, I shall have deemed it an honour as well as a privilege to have put this paper before

you this evening.

DISCUSSION.

Mr. Morton said that the value of the mutton bird industry had never been so prominently brought before the notice of the Society since Mr. Davis read a paper on the subject, which was printed in the Tasmanian journal. He looked upon it as a matter which might very well engage the attention of the Fisheries Board. He would very much like to find out from statistics whether this wholesale destruction of the petrel had decreased the numbers. As far as he was able to gather they had not decreased. It was plain, however, that were cattle were introduced the birds had disappeared and gone to some other place. Viewed as an important industry, he thought these birds should be protected, especially as it was thought necessary to protect quails, which brought no revenue into the country, but merely provided sport.

Mr. Bernard Shaw said that there was already an Act of Parliament enabling the Executive to deal fully with the matter. It was passed last session, and there did not appear to have been sufficient time to prepare the necessary regulations. Under that Act the Governor-in-Council was empowered to make regulations fixing a close season for the birds, preventing the introduction of cattle and sheep to certain islands, the lighting of fires, and various other matters to which His Lordshp had referred in his paper. He considered that interference in these matters was beyond the functions of the Fisheries Board. The Act to which he had referred gave ample powers to make all the regulations necessary, and he hoped that before next season there would be a complete set of regulations in operation.

Mr. ALFRED J. TAYLOR said that before Bishop Sandford left the colony he brought this matter under the notice of the Society, and pointed out that a valuable industry was being destroyed. He had also referred to the fact that the oil of the bird had been found valuable as a medicine in cases of

consumption.

Mr. K. M. Johnston said that having visited these islands on several occasions he could corroborate His Lordship's description of the return of the birds. It was a glorious sight to see the multitude of birds returning, and he was glad to see that steps were being taken to see what could be done to protect these birds. In regard to the destruction of the birds, he thought this arose not only from the destruction of the birds, but also of the mounds in which they burrowed.

HIS LORDSHIP briefly replied, expressing pleasure at the fact that legislation had been initiated in the direction indicated, and hoping that the necessary regulations would be framed to protect what he regarded as an important

industry.