

character. They supply a link with the past that, once lost, can never be recovered. It is therefore incumbent upon us to know all we can about them before they vanish. . . . The forms we are allowing to be killed off, being almost without exception ancient forms, are just those that will teach us more of the way in which life has spread over the globe than any other recent forms; and for the sake of posterity, as well as to escape its reproach, we ought to learn all we can about them before they go hence and are no more seen."

The chief cause of the destruction of native birds is no doubt the introduction of foreign animals, against which the indigenous species are unable to contend successfully in the struggle for existence, especially under the changed conditions of life brought about by colonisation. Probably the chief factor in this work of destruction is the Norway rat, whose introduction was of course unintentional, but an inevitable incident of settlement. The insectivorous and other birds introduced (whether wisely or not it is not necessary now to discuss) by our various acclimatisation societies have, as it were, driven out and replaced many of the native species. These latter have succumbed to some general law of nature under which races of animals and plants yield to foreign invasion and rapidly disappear, the aboriginal races of man being no exception to this general rule. Where the causes themselves are recondite, it is, of course, difficult to find the means of counteracting them; but it is an observed law of nature that expiring races survive and linger longest in insular areas. That has been the experience of zoologists all over the world, the islands of Mauritius and Rodriguez presenting a striking instance in point. Here in New Zealand we have many similar evidences. The remarkable tuatara lizard (*Sphenodon punctatum*), supposed to be a survival from a very ancient fauna, and constituting, *per se*, a distinct order of reptilia, which years ago became extinct on the mainland (chiefly through the ravages of introduced wild pigs), still exists in very considerable numbers on the small islands lying off our coasts. The makomako, or bell-bird (*Anthornis melanura*), at one time the very commonest of our birds, although still plentiful in the South Island, has absolutely disappeared from every part of the North Island, but it still exists on the wooded islands of the Hauraki Gulf and Bay of Plenty, and on the island of Kapiti, in Cook Strait. The same remarks apply with almost equal force to the wood-robin (*Miro albifrons*) and the white-head (*Clitonyx albigapilla*), two species which have never inhabited the South Island at all. The stitch-bird (*Pogonornis cineta*), which forms a sort of connecting-link with the avifauna of Australia, was thirty years ago very plentiful in the woods surrounding Wellington, but it had long before disappeared from the northern parts of the Island. It is now extinct all over the mainland, but it exists in comparative plenty on the Little Barrier Island—presumably the only locality in the world where this species is now to be found.

All these facts and considerations point to the conclusion that if, an attempt is to be made to preserve these and other indigenous species, it must be by setting apart suitable islands for the purpose, and placing them under very strict protective regulations.

Assuming it to be granted that it is the duty of the Government to take the necessary measures, the next question is, what islands are the most suitable for the purpose?

After making careful inquiries on the subject, and reading much that has been written by the Chief Surveyor and other local authorities, I have come to the conclusion that the two best and most readily available islands are the Little Barrier at the north and Resolution Island at the south.

1. *The Little Barrier*.—This island is still in the hands of the Maoris; but the Government is in negotiation for its purchase, and, as I understand there is only a small amount at issue between the parties, I would strongly urge its immediate acquisition for the purposes indicated. Not only is the Little Barrier known to be the habitat of the stitch-bird, the white-head, the bell-bird, and the native robin (all of which have practically disappeared from the mainland), but it has a wooded surface, admirably adapted to the habits of such birds; it is easily accessible from Auckland; it would be difficult for any person to land and shoot birds there without at once attracting the attention of the many ships which are constantly passing in and out of the Hauraki Gulf.

2. *Resolution Island*.—This has now been proclaimed a reserve for native fauna and flora.

(1.) Resolution Island is just at a convenient distance from the mainland. It is of considerable extent, with good harbours having deep water and safe anchorage.

(2.) Several of the species that it is most desirable to preserve (such as kakapo and kiwi) are known to exist there already in considerable numbers.

(3.) It is believed to be the final refuge of the great flightless rail (*Notornis mantelli*), only three specimens of which have ever been obtained in New Zealand, two of these being now in the National Museum, and the other in the Royal Museum at Dresden. One of those in the British Museum (obtained by Mr. Walter Mantell in 1849) was caught by a party of sealers at Duck Cove, on Resolution Island, and the other was captured by Maoris on Secretary Island, opposite to Dea's Cove, Thompson Sound. The third was taken as recently as 1881 by a party of rabbit-hunters in the vicinity of Lake Te Anau. There is every reason to believe that this rare and interesting species still survives on the island which has now been set apart as a permanent Government reserve.

Looking to the interests involved—the great loss to the scientific world implied in the extermination of natural forms that do not exist elsewhere, and the importance, therefore, of saving them—it cannot be denied that a heavy responsibility rests on those who, while there is yet time and opportunity, may neglect to take the necessary steps for their preservation.

All that is wanted to rouse public interest in such a matter is actual knowledge of the facts. There is a strong sentiment always in the public mind against the final extirpation of any living species. As a proof of this one has only to read of the strong public feeling that exists in San Francisco in regard to the protection of the "sea-lions" frequenting the famous Seal Rocks lying off the shore, and of the universal regret with which the Americans regard the almost complete extirpation of the herds of bison, of which at the present day only a small remnant survives under Government protection within certain "reservations." It finds further expression in the lament of all true