

The native ground-lark, with its zigzag flight, does not care a straw for the sparrow-hawk that can shoot like an arrow, though when he catches a bush bird out in the open it is almost certain death for it. I only saw him try a lark once, and then he was so badly beaten that while he was having a rest the lark actually chirruped a song in his face, and he said nothing, but flew away to the bush: and I suppose it is the same in the sea.

The covering of the penguin's fin demonstrates the transition from true scales at one end to feathers at the other; and the creature itself demonstrates the transition from a sort of a fish to a sort of a bird, while its jumping ideas suggest another transition which I should not like to mention. But I heard that there is one sort of penguin that has already started a pouch for hatching its egg, so that there is no knowing what it might mean with time and opportunity! Though they can run a little with one leg after the other, they lose their balance that way, and, like true Australasians, seem to get on best with the kangaroo's ideas. Supposing the world changed its balance a little, as it has often done before, and left the penguins' fertilised islands under a tropical sun, fruit might become more plentiful than fish, and that would be their opportunity to learn to jump about the country after bananas. Then, to prevent them getting lazy like the dodos, some of the seals might find fish so scarce that they would not be above going ashore and playing wolf after penguins to make them step out a little and clear off the bad jumpers. After that they would be a benefit to each other, because the lazy penguins would get eaten and the lazy seals would starve, while the smart ones would escape and survive. And thus they could go on getting swifter and swifter each generation, till they would become as smart as dingos and kangaroos.

A sudden change of balance in the world would account for the great quantity of bones now about the Arctic islands, and for the frozen mammoth whose skin we saved. It would also account for the periodic extinction of Old-World forms by which we classify our geologies; and then a slow return would account for all sort of changes in plants and animals.

It is quite probable that hunger drives many animals to change their food; for I heard that cows eat fish-heads in the Orkney Islands, and I know that a dog will live well on bread and biscuits, though he is a typical flesh-eater. I should not wonder if hawks first arose through the ablest and boldest among starving parrots eating their weaker fellows, for we have an instance in transit now in the case of the kea. In like manner, as the fruit islands gradually become cooler they would only produce grasses in abundance, and the old fruit-eaters would be compelled to change or disappear; and if the change came as slowly as it has in our historical period the simple law of variation and survival would be ample to produce all sorts of changes in animals. For instance, if the gorilla's country gradually got cooler and there were no men, those that learned to make the best nests and keep themselves warm would have the best chance to rear children and survive; and, as the climate got cooler still, in another hundred thousand years those that learned to put away a store of food for winter would also have the best chances. And once he learned to store food he would have time to think and improve his mind for another long period. I saw the orang-outang in the Melbourne Royal Park in 1884 putting away a store of food for itself. It would also cover itself with an old sugar-mat every time it came down out of its tree until it got another biscuit, which it would smell and taste, and, if satisfactory, climb up and put away in a box that was there for that purpose. The keeper told me that it would only eat at intervals, just like a Christian, so I do not see where the link is missing. All that the orang wanted was to be gradually starved out of its trees by the failure of the fruit, and be compelled to live on roots and seeds, and then be slowly adapted for walking on the ground like man. No animal alters by choice—not even the men with all their sense and inducements—but all are forced to alter by changing circumstances; and there is force enough in a slowly changing climate to account for alterations in plants and animals until they become perfectly fitted for their places according to the law.

Time was evidently never taken into account in drawing the plans for things in this world, and in reality it may only exist with its start and finish in our limited imaginations. But we have it written plainly in the stones and in the bones that when word came down, one of the orders given was "Change to improve or die." We know also that there were many residents here that disappeared, probably because they disobeyed. So I wonder what we are doing. Getting ready for another flood, I think, because nothing else would be so effective against the amount of fiery fighting material we have now on hand, except a sufficiently low temperature. We have the best of evidence that the climate of Greenland was once down as far as Italy, and why not again, when we know that great cycles are the order of the universe?

THE YELLOW-CRESTED.

The yellow-crested penguins come here in squads or families. The first to arrive at Pigeon Island come to what we call "South Cave" about twelve days before any others that I know of.

The occupants of the caves come first, and then those that make their nests under logs and trees in the bush. They all go in and keep quite silent, so that you might go round in a boat and not know that there was a penguin in the sound until about a fortnight after they come, though there may be hapus of some hundreds every half-mile of coast. They do not care for dry caves unless there is fresh water right at the door, and a pool or stream seems to be a necessity for their rookery in the bush.

South Cave appeared to be fully occupied this year on the morning of the 29th June, though there were none in it two days previously; but it was the 22nd July before we got eight eggs, though there were over fifty pairs of penguins in it. If we take the first egg she will lay the other in the same nest, but when we take the two fresh eggs the nest is deserted, and I think, she lays no more for the season; but she may do so. The second egg is not laid until three or four days after the first.