

THE EXTINCTION OF MAN

It is part of the excessive egotism of the human animal that the bare idea of its extinction seems incredible to it. "A world without us!" it says, as a heady young Cephalaspis might have said it in the old Silurian sea. But since the Cephalaspis and the Coccothœus many a fine animal has increased and multiplied upon the earth, lorded it over land or sea without a rival, and passed at last into the night. Surely it is not so unreasonable to ask why man should be an exception to the rule. From the scientific standpoint at least any reason for such exception is hard to find.

No doubt man is undisputed master at the present time--at least of most of the land surface; but so it has been before with other animals. Let us consider what light geology has to throw upon this. The great land and sea reptiles of the Mesozoic period, for instance, seem to have been as secure as humanity is now in their pre-eminence. But they passed away and left no descendants when the new orders of the mammals emerged from their obscurity. So, too, the huge Titanotheria of the American continent, and all the powerful mammals of Pleistocene South America, the sabre-toothed lion, for instance, and the Machrauchenia suddenly came to a finish when they were still almost at the zenith of their rule. And in no case does the record of the fossils show a really dominant species succeeded by its own descendants. What has usually happened in the past appears to be the emergence of some type of animal

hitherto rare and unimportant, and the extinction, not simply of the previously ruling species, but of most of the forms that are at all closely related to it. Sometimes, indeed, as in the case of the extinct giants of South America, they vanished without any considerable rivals, victims of pestilence, famine, or, it may be, of that cumulative inefficiency that comes of a too undisputed life. So that the analogy of geology, at anyrate, is against this too acceptable view of man's certain tenure of the earth for the next few million years or so.

And, after all, even now man is by no means such a master of the kingdoms of life as he is apt to imagine. The sea, that mysterious nursery of living things, is for all practical purposes beyond his control. The low-water mark is his limit. Beyond that he may do a little with seine and dredge, murder a few million herrings a year as they come in to spawn, butcher his fellow air-breather, the whale, or haul now and then an unlucky king-crab or strange sea-urchin out of the deep water, in the name of science; but the life of the sea as a whole knows him not, plays out its slow drama of change and development unheeding him, and may in the end, in mere idle sport, throw up some new terrestrial denizens, some new competitor for space to live in and food to live upon, that will sweep him and all his little contrivances out of existence, as certainly and inevitably as he has swept away auk, bison, and dodo during the last two hundred years.

For instance, there are the Crustacea. As a group the crabs and lobsters are confined below the high-water mark. But experiments in air-breathing

are no doubt in progress in this group--we already have tropical land-crabs--and as far as we know there is no reason why in the future these creatures should not increase in size and terrestrial capacity. In the past we have the evidence of the fossil Paradoxides that creatures of this kind may at least attain a length of six feet, and, considering their intense pugnacity, a crab of such dimensions would be as formidable a creature as one could well imagine. And their amphibious capacity would give them an advantage against us such as at present is only to be found in the case of the alligator or crocodile. If we imagine a shark that could raid out upon the land, or a tiger that could take refuge in the sea, we should have a fair suggestion of what a terrible monster a large predatory crab might prove. And so far as zoological science goes we must, at least, admit that such a creature is an evolutionary possibility.

Then, again, the order of the Cephalopods, to which belong the cuttle-fish and the octopus (sacred to Victor Hugo), may be, for all we can say to the contrary, an order with a future. Their kindred, the Gastropods, have, in the case of the snail and slug, learnt the trick of air-breathing. And not improbably there are even now genera of this order that have escaped the naturalist, or even well-known genera whose possibilities in growth and dietary are still unknown. Suppose some day a specimen of a new species is caught off the coast of Kent. It excites remark at a Royal Society soirée, engenders a Science Note or so, "A Huge Octopus!" and in the next year or so three or four other specimens come to hand, and the thing becomes familiar. "Probably a new and larger

variety of Octopus so-and-so, hitherto supposed to be tropical," says Professor Gargoyle, and thinks he has disposed of it. Then conceive some mysterious boating accidents and deaths while bathing. A large animal of this kind coming into a region of frequent wrecks might so easily acquire a preferential taste for human nutriment, just as the Colorado beetle acquired a new taste for the common potato and gave up its old food-plants some years ago. Then perhaps a school or pack or flock of Octopus gigas would be found busy picking the sailors off a stranded ship, and then in the course of a few score years it might begin to stroll up the beaches and batten on excursionists. Soon it would be a common feature of the watering-places--possibly at last commoner than excursionists. Suppose such a creature were to appear--and it is, we repeat, a possibility, if perhaps a remote one--how could it be fought against? Something might be done by torpedoes; but, so far as our past knowledge goes, man has no means of seriously diminishing the numbers of any animal of the most rudimentary intelligence that made its fastness in the sea.

Even on land it is possible to find creatures that with a little modification might become excessively dangerous to the human ascendancy. Most people have read of the migratory ants of Central Africa, against which no man can stand. On the march they simply clear out whole villages, drive men and animals before them in headlong rout, and kill and eat every living creature they can capture. One wonders why they have not already spread the area of their devastations. But at present no doubt they have their natural checks, of ant-eating birds, or what

not. In the near future it may be that the European immigrant, as he sets the balance of life swinging in his vigorous manner, may kill off these ant-eating animals, or otherwise unwittingly remove the checks that now keep these terrible little pests within limits. And once they begin to spread in real earnest, it is hard to see how their advance could be stopped. A world devoured by ants seems incredible now, simply because it is not within our experience; but a naturalist would have a dull imagination who could not see in the numerous species of ants, and in their already high intelligence, far more possibility of strange developments than we have in the solitary human animal. And no doubt the idea of the small and feeble organism of man, triumphant and omnipresent, would have seemed equally incredible to an intelligent mammoth or a palæolithic cave bear.

And, finally, there is always the prospect of a new disease. As yet science has scarcely touched more than the fringe of the probabilities associated with the minute fungi that constitute our zymotic diseases. But the bacilli have no more settled down into their final quiescence than have men; like ourselves, they are adapting themselves to new conditions and acquiring new powers. The plagues of the Middle Ages, for instance, seem to have been begotten of a strange bacillus engendered under conditions that sanitary science, in spite of its panacea of drainage, still admits are imperfectly understood, and for all we know even now we may be quite unwittingly evolving some new and more terrible plague--a plague that will not take ten or twenty or thirty per cent., as plagues have done in the past, but the entire hundred.

No; man's complacent assumption of the future is too confident. We think, because things have been easy for mankind as a whole for a generation or so, we are going on to perfect comfort and security in the future. We think that we shall always go to work at ten and leave off at four, and have dinner at seven for ever and ever. But these four suggestions, out of a host of others, must surely do a little against this complacency. Even now, for all we can tell, the coming terror may be crouching for its spring and the fall of humanity be at hand. In the case of every other predominant animal the world has ever seen, I repeat, the hour of its complete ascendancy has been the eve of its entire overthrow. But if some poor story-writing man ventures to figure this sober probability in a tale, not a reviewer in London but will tell him his theme is the utterly impossible. And, when the thing happens, one may doubt if even then one will get the recognition one deserves.